

# Adobe® After Effects®

version  
**4.0**

## New Feature Highlights

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The ultimate tool for  
motion graphics and  
visual effects

When Adobe After Effects software stepped on the scene in 1993, it sparked new business and creative opportunities in video and film. This innovative program introduced the first professional-quality compositing, 2D animation, and visual effects tools for the desktop. Established design and effects facilities, including broadcast television stations, motion picture production studios, and post-production houses, could suddenly afford to give desktop studios to all of their creators, freeing them to experiment with ideas more easily and cost effectively. And, equally as important, a new range of people—independent producers, multimedia authors, graphic designers, business video professionals, and eventually Web designers—could afford to own powerful, precise production tools that let them create professional motion graphics and visual effects.

Adobe After Effects transformed the business of motion graphics and visual effects and won an immediate following. It secured the devotion of this following by offering a thoughtfully designed, high-quality, reliable toolset. With every major release of Adobe After Effects—including its debut on the Windows platform in 1997—the priority has been to give users more control and flexibility in their work. Each version has introduced well crafted features that make it easier for users to work creatively and productively as they design for film, video, multimedia, or the Web. Adobe After Effects 4.0 software for Power Macintosh, Windows 98, and Windows NT 4.0 continues this tradition, delivering these compelling benefits:

- **Tighter integration with Adobe products.** After Effects 4.0 works seamlessly with Adobe's professional graphics and video software, including Adobe Photoshop®, Adobe Illustrator®, and Adobe Premiere®. With this new integration, users can better perform a wide range of tasks for their motion graphics and visual effects, such as preparing layered files for animation, creating fine typography, and more.
- **Greater creative control for precise results.** With the new masking capabilities in After Effects 4.0, users can now create multiple masks on any layer. The program introduces adjustment layers, which let users apply effects to multiple layers at once. It also provides new warping and simulation effects, professional audio-processing and audio effects capabilities, and numerous enhancements to existing visual effects. Plus, the Motion Tracker offers new refinements in its tracking controls.
- **Enhanced productivity and extensibility.** One of the challenging aspects of compositing and animation is visualizing how a sequence will look in its final rendered form. Now Adobe After Effects 4.0 is offering RAM Preview, so users can load frames in memory and play them back in real time. In addition, After Effects 4.0 caches frames to make it much faster to move around the Time Layout and other windows. It also offers an innovative new user interface, an expanded API, faster project rendering, and many other workflow touches.

No matter what task users are doing—compositing, motion graphics, visual effects, nonlinear editing, 3D animation, graphic design repurposing, or multimedia and Web animation—they'll find the tools they need in Adobe After Effects 4.0. This document describes the key new features in After Effects 4.0 and shows why this version is an important investment for new and longtime users.

### Two Versions for Two Audiences: The Standard Version and the Production Bundle

Adobe After Effects serves two distinct audiences with slightly different needs: motion graphics designers and visual effects artists. Motion graphics designers spring from print, Web, and broadcast design backgrounds. They produce a range of content from show opens and bumpers to commercial spots and Web animations. Often, these designers develop motion graphics as only one aspect of their creative business (though it may quickly become a compelling one). Visual effects artists tend to be dedicated to creating visual effects for television and motion pictures. These artists often perform intricate keying, motion control, and visual effects tasks that require even more precise control.



#### Top Five Features in Adobe After Effects 4.0

- **Tighter Adobe Integration.** Enjoy new integration with Photoshop, Premiere, and Illustrator for a smoother workflow and easier learning curve. For details, see page 2.
- **Enhanced Masking.** Add up to 128 masks to each layer. Combine, stroke and fill, or transform these masks, and animate them over time. For details, see page 4.
- **Adjustment Layers.** Apply effects to multiple layers at once with the versatile adjustment layers. For details, see page 5.
- **New Visual Effects.** Work with sophisticated new warping and simulation effects that expand creative possibilities. For details, see page 5–6.
- **RAM Preview.** Review creative sequences, including visual effects, in real time without rendering the project. For details, see page 11.

To meet the needs of these two groups of users, Adobe After Effects is available in two versions. The Standard version provides all of the core compositing, 2D animation, and effects tools that motion graphics professionals need. The Production Bundle version includes all of the same tools that the Standard version offers, plus sophisticated keying, motion control, distortion, and audio effects. The beauty of After Effects is that the software grows with people's businesses. Designers can invest in the Standard version today because it fulfills their technical needs and fits their budgets, and then upgrade to the Production Bundle version at any time as their work expands in scope or range.

## Tighter Integration with Adobe Products

Adobe Systems designs its professional software to work exceptionally well together for one simple reason: It helps users learn the programs faster and work more effectively. After Effects 4.0 software offers a number of new features that enhance its integration with other Adobe products. The program imports files from Photoshop, Illustrator, and Premiere as layered compositions for easy editing, and it incorporates tools, palettes, and other appropriate features from these programs. In the fast-paced world of motion graphics and visual effects design, this integration saves time and money. What's more, it encourages people from more traditional graphic design backgrounds to add motion to their design repertoire.

### Enhanced Integration with Adobe Photoshop

More than 95 percent of the people who work with Adobe After Effects rely on Adobe Photoshop as their primary image-editing and graphic design tool. These designers use Photoshop to prepare layered images for animation, edit images, create backgrounds, paint frames, and perform other tasks that support their After Effects work. To better meet the needs of these users, Adobe After Effects 4.0 imports layered Photoshop 3.0–5.0 files as compositions and offers other important new integration enhancements. After Effects 4.0 software:

- Preserves adjustment layers on import. Users can apply adjustment layers in Photoshop 4.0 and later files to modify the color and tonal qualities of any layers that appear below them. Adjustment layers affect an image without permanently modifying it. On import, adjustment layers appear as another layer in the Time Layout window and modify all the layers positioned below them. For more details on the new adjustment layers feature in Adobe After Effects 4.0, see "Adjustment Layers" on page 5.
- Maintains Photoshop 5.0 layer effects. Users can apply drop shadows, inner shadows, inner and outer glows, bevels, and embossing to layers as nondestructive layer effects in Photoshop 5.0. Then, when they import them into After Effects, the program preserves those effects as an effect property, which users can maintain, modify, or delete.
- Offers a free transform mode that works like the free transform tool in Photoshop. When users create masks, they can turn on the free transform mode to quickly scale or rotate those masks. They can also transform selected points on a mask or on multiple masks.
- Pastes paths from Adobe Photoshop. Users can then use them as masks or as paths for certain effects, such as Path Text. For more details about working with masks, see "Flexible New Masking Capabilities" on page 4.
- Provides new color adjustment effects. These effects match the color adjustment filters in Photoshop.
- Adds new transfer modes, including Color Dodge, Color Burn, and Exclusion. The list of transfer modes now available in After Effects exactly matches what's available in Photoshop 5.0.
- Provides a revised pen tool that works like the pen tool in Photoshop 5.0 (and in Adobe Illustrator). The new pen tool in After Effects appears in a pop-out tool palette in the toolbox, and includes tools for adding and deleting points and changing the path direction.

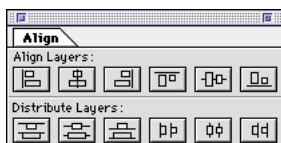


### Enhanced Integration with Adobe Illustrator

When After Effects users need to add fine typography or graphics to their motion graphics and visual effects, more than 70 percent of them turn to Adobe Illustrator. These users favor Illustrator because of its sophisticated typographical controls and illustration capabilities, and they're constantly inventing new ways

to incorporate Illustrator files into After Effects compositions. That's why this release delivers key features that will help these users. For example, users can now:

- Import layered Adobe Illustrator files as compositions. Users can choose to preserve multiple layers on import, to select and import a single layer in a multilayered file, or to merge layers on import. In addition, After Effects maintains stroked text, incorporates RGB colors from Illustrator 7.0x and 8.0, imports gradient meshes from Illustrator 8.0, and more.
- Copy and paste paths from Adobe Illustrator into Adobe After Effects to use as masks or as paths for certain effects, such as Path Text. For more details about working with masks, see "Flexible New Masking Capabilities" on page 4.
- Align and distribute layers with the new Align palette. This palette works the same as the Align palette in Adobe Illustrator 7.0x and later. Users can align or distribute layers along a vertical or horizontal axis.



Align layers...



or distribute them easily with the new Align palette.

- Position and edit footage precisely using the new rulers and guides. The Composition window now offers rulers and guides that work like those in Adobe Illustrator and other Adobe programs. Users can hide or display rulers that display measurements in pixels. They can define the look and color of ruler guides, drag those guides from the rulers to help with positioning, and then lock those guides in place. Layout grids have been enhanced so users can specify their color, line type, and spacing. For example, users can specify that gridlines appear every 100 pixels. Media now snaps to the grid or to guides for precise positioning.

#### Enhanced Integration with Adobe Premiere

Adobe Premiere and Adobe After Effects play vital and complementary roles in many users' suite of video-editing tools, so it's a priority to ensure their smooth integration (more than 50 percent of After Effects users own Premiere). Users can now:

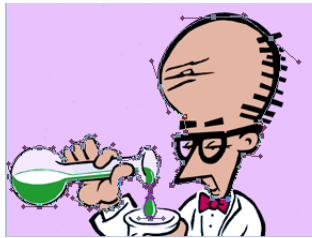
- Import Adobe Premiere 5.x projects as compositions. After Effects imports edited Premiere clips as individual layers and arranges those layers in the appropriate time-based sequence in the Time Layout window. The program translates Premiere bins into folders in the Project window, and it creates named, solid layers in the Time Layout window to indicate where transitions and filters fall.
- Use third-party Adobe Premiere 5.x audio plug-ins in After Effects. Adobe After Effects 4.0 supports audio-processing plug-ins from third-party Adobe Premiere 5.x developers. This integration enhances the new audio-processing capabilities in After Effects 4.0. For more information about these new audio capabilities, see "Audio Effects" on page 7.

## Greater Creative Control for Precise Results

Motion graphics and visual effects artists value tools that help them realize their creative ideas quickly and precisely. Adobe After Effects 4.0 software fulfills this need with its versatile new masking capabilities, efficient adjustment layers, and rich array of new visual effects. These effects include warping effects, such as Bézier Warp, Mesh Warp, Smear, and Reshape. Particle Playground lets users create intricate particle effects using dots, text, and composition layers. An array of professional-quality audio effects and audio-processing tools greatly enhance the sound effects users can create. The Production Bundle version also introduces some smart changes to the Motion Tracker to enhance users' creative control. Together these new features give users a whole new range of creative possibilities while supporting their productivity.

### Flexible New Masking Capabilities

One of the most powerful new features in Adobe After Effects 4.0 is its completely revamped approach to masking. Masks are critical because they allow the designer to control what is visible or hidden on different layers. In the past, After Effects users were confined to creating one mask per layer. Now, with Adobe After Effects 4.0, users can add multiple masks to every layer, thereby gaining extraordinary new design capabilities.



Draw up to 128 masks on any layer. To let a background texture show through this image, three masks were drawn on the image layer with the pen tool.

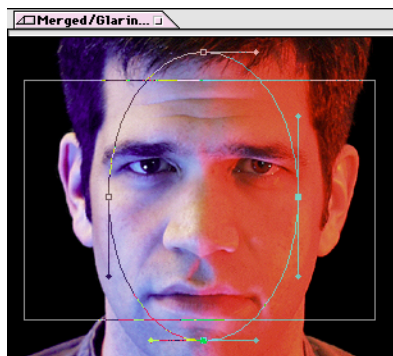
With After Effects 4.0, users can:

- Create up to 128 open or closed path masks on every layer using the rectangle, ellipse, or pen tool. Closed paths modify the alpha channel of a layer to create transparencies. Open paths let users add unique elements to their projects, such as text paths or audio waveforms, and then animate them over time.
- Name the individual mask layers in the Time Layout window to keep track of them.
- Copy and paste existing masks from Adobe Illustrator or Adobe Photoshop. That way, users can reuse masks they've already set up in one of these programs.
- Edit paths easily with the revised pen tool, which makes it easy to add or delete points, manipulate handles, change the path direction, and otherwise edit the shape of the masks.



With the revised pen tool, it's easy to move path points and adjust path handles to edit a mask shape.

- Combine masks on a layer using operations like Add, Subtract, Intersect, Difference, Lighten, and Darken.



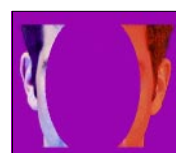
Build unusual mask shapes using combination operations, such as Intersect and Subtract.



Add



Difference



Subtract



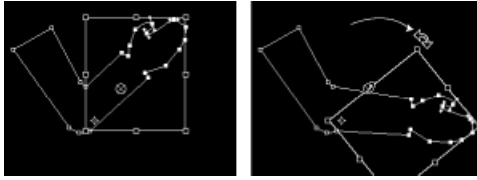
Intersect

### New Production Bundle Features

When the initials PB appear next to the name and description of a new After Effects feature, it indicates that the feature is available only in the Production Bundle version.

**PB**

- Rotate and scale the mask using the free transform mode, which works like the free transform tool in Photoshop. In free transform mode, users can manipulate one or more masks, or one or more points on a mask path, with precise results.



Switch to free transform mode to rotate or scale part or all of a mask.

- Apply effects to masks to create a special look and feel. Users can apply these effects to masking data: Stroke, Fill, Path Text, Audio Waveform, Audio Spectrum, Reshape, and Smear (all of these effects are described in more detail later in this section). A user could, for example, draw an unusually shaped path and then animate text along it with the Path Text effect.



a. A stroke applied to a closed path

b. A stroke applied to an open path

c. A stroke and fill applied to a closed path

- Position masks precisely in the Layer window using the new grids and guides. (Masks snap to grids and guides.)

Smooth interpolation between mask shapes. Users can also create impeccable animations in which one mask shape transforms into another over time. After Effects 4.0 produces these smooth animations by offering improved interpolation between different mask shapes. The enhanced interpolation works this way: Say a user wants to animate a square mask turning into a star over time. The user sets the first keyframe and draws a square with four points. The user then sets a second keyframe and draws a star with ten points. When the user sets the second keyframe, After Effects calculates the number of points in that mask and goes back to the first keyframe and adds six more points to the square. The animation can unfold smoothly because the points map, allowing the square to transform easily into the star.

### Adjustment Layers

The new adjustment layers in After Effects 4.0 offer users tremendous control, making it easier and more efficient for users to experiment with effects. These adjustment layers work like those in Photoshop 4.0 and later: Users can turn any new or existing layer into an adjustment layer. Any effects applied to an adjustment layer apply to all the layers that appear beneath it, giving users a quick way to adjust layers globally. Adjustment layers also allow users to create unusual effects. Users can animate the effects applied to adjustment layers to change over time. They can combine adjustment layers and masks to create protection mattes, which apply effects to selected areas on a set of layers. Users can even animate protection mattes with some eye-catching results. For example, a user could make part of an image blurry and then bring it into focus.

### Warping Effects

Adobe After Effects 4.0 expands its toolkit with four versatile new warping effects: Bézier Warp, Mesh Warp, Smear, and Reshape (all available in the Distort submenu on the Effect menu). Here is a brief look at how these effects work:

- PB** Bézier Warp (Production Bundle only) Bézier Warp applies a dozen control handles to an image. Users can then manipulate those handles (much as they would move the handles on a vector path in Adobe Illustrator) to warp the image over time. Users could, for example, use this effect to wrap a label on a bottle. Or they could use it to correct the distortions sometimes caused by a wide-angle lens.



Bézier Warp



Mesh Warp

**PB** Mesh Warp (Production Bundle only) Mesh Warp works similarly to Bézier Warp but with far greater control. Users can lay a grid down over an image area and then move parts of that grid to warp large or small areas of the image. Users set the number of columns and rows in the grid to determine how fine a level of control it supports. The grid appears in the Comp window where users can interactively manipulate it with complete ease.

**Smear** (Standard and Production Bundle versions) This effect fits its name, allowing users to define an image area and then smear it over time. Users accomplish this by creating two masks of arbitrary shape: a source mask and a boundary mask. Users then arrange these two masks on a layer and define a number of parameters that control how they interact, such as whether the source mask scales and rotates. To produce the final effect, users offset the source mask, causing the portion of the image inside the boundary mask to stretch and follow the source mask's edges. A user could, for example, take the profile of someone's face and smear the nose to make it appear to grow.

**PB** Reshape (Production Bundle only) Reshape lets users fit an image inside a shape—for example, a user could morph a face into a square to create a blockhead or squish a face into a bottle. This effect uses three masks on a layer to achieve its results: a source mask, a destination mask, and a boundary mask. The boundary mask determines what part of the image moves or doesn't move (anything outside the boundary doesn't move). The source and destination mask then determine how the image warps over time. After Effects uses correspondence points on each mask to set the interpolation. Users can change which points correspond and how they interpolate for finer control over the end results.

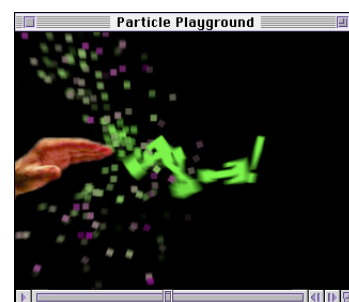
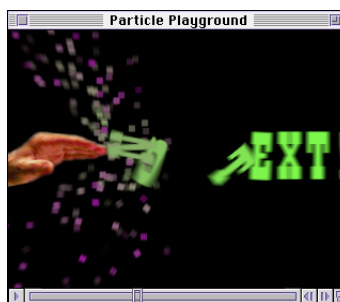
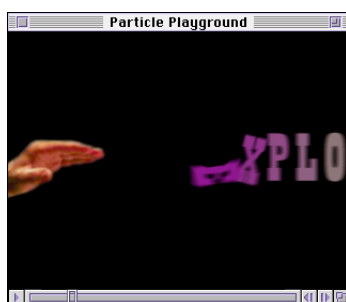


Reshape Effect

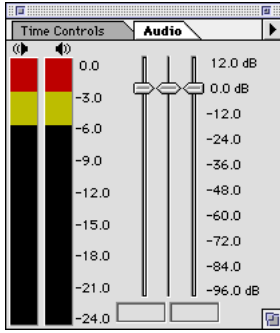
## **PB** Particle Playground

Adobe After Effects 4.0 introduces a powerful new tool, called Particle Playground (available in the Simulation submenu on the Effect menu). Particle Playground allows users to animate a large number of similar objects so that they move independently and yet produce a consistent group behavior overall. For example, users could efficiently create realistic animations of swarming bees, falling leaves, flocking birds, exploding fireworks, and other similar effects. Previously, users could only create these effects by animating each object independently.

The Particle Playground provides two particle generators: The Grid generates a plane of particles, and the Cannon generates a stream of particles. By default, these particles are dots. However, in After Effects 4.0, users can replace the dots with a specific composition layer or with text. Users can then set a range of properties, such as Gravity and Kinetic Friction, which affect how the particles behave overall, and they can add layer maps that affect how individual particles behave. Combining nested compositions with this effect gives users even more control. A user could, for example, set up a behavior for one bee in a swarm, and then have it grow to three bees, and then ten bees, and then thirty bees, and so on. Particle Playground opens up a whole new range of effects for After Effects users to add to their design repertoire.



With the Particle Playground, users can create an extraordinary range of effects using dots, layers, and type (this is distinctly different from other particle systems, which produce only synthetic particles like mercury blobs or molten lava).



Audio palette

## Audio Effects

Adobe After Effects 4.0 delivers a range of new audio-processing capabilities that make it possible for users to produce professional-quality sound for their projects. After Effects offers a revamped audio interface, more quality controls, and a new set of audio effects. Users will now find VU meters with peak and clip indicators in the Audio palette. After Effects 4.0 also offers audio looping, audio time remapping, and high-quality downsampling with support for settings from 8 kHz to 48 kHz (Mac OS) or 96 kHz (Windows). After Effects even makes it easier for users to review audio by providing significantly faster audio scrubbing.

In addition, After Effects 4.0 provides high-quality audio effects that can produce a range of sophisticated sounds. Both the Standard version and the Production Bundle version of After Effects include these effects:

**Backwards**, which reverses an audio clip so that it plays from the last frame or keyframe to the first frame or keyframe.

**Bass & Treble**, which lets users make basic adjustments to audio tone.

**Delay**, which repeats the sound in an audio clip after a specified period of time.

**Stereo Mixer**, which pans from the left speaker or channel to the right speaker or channel, and vice-versa.

**PB** The Production Bundle also includes these audio effects:

**Flange & Chorus**. Flange adds depth and character to a sound by applying a copy of it at a frequency slightly offset from the original. Chorus adds depth to vocals or single instruments—making a single voice or instrument sound like many—by applying copies of a sound at times slightly offset from the original.

**High-Low Pass**, which removes high and low frequencies (respectively) to enhance a sound, create special effects, or protect audio equipment.

**Modulator**, which provides precise control over audio delay and modulation by creating a variety of echo and chorus effects.

**Parametric EQ**, which lets users isolate specific frequency ranges and fine-tune those ranges.

**Reverb**, which simulates a spacious or acoustically live interior.

**Tone**, which lets users create simple tonal sounds such as a “swoosh,” a door bell, or a cacophony of beeps.

## Render Effects

Adobe After Effects 4.0 includes a new range of Render effects that create synthetic elements for projects. In After Effects, most effects manipulate another layer. Render effects, on the other hand, generate elements, such as lines, filled objects, audio waveforms, and other synthetic objects, which users can animate and manipulate in other ways. These effects include:

**Audio Spectrum** Users can display the spectrum of an audio layer and even draw it along any shape of path. This effect is popular in commercials, space-age television shows, and other venues where users need to simulate behavior on a computer screen.

**Audio Waveform** Users can display the waveform amplitude of an audio layer and draw it along any shape of path. This effect is as popular as the Audio Spectrum effect and is used in similar ways.

**Beam** This effect simulates a laser, giving users control over the location of the beginning and ending point, the length of the laser, the amount of time it takes for the laser to shoot out from the beginning to the ending point, and more.

**Stroke** This effect determines the color and thickness of the stroke on a path or mask.

**Fill** Users can fill a path, such as a mask, with a color.

**Line** Users can instantly create a line, controlling its thickness and length.

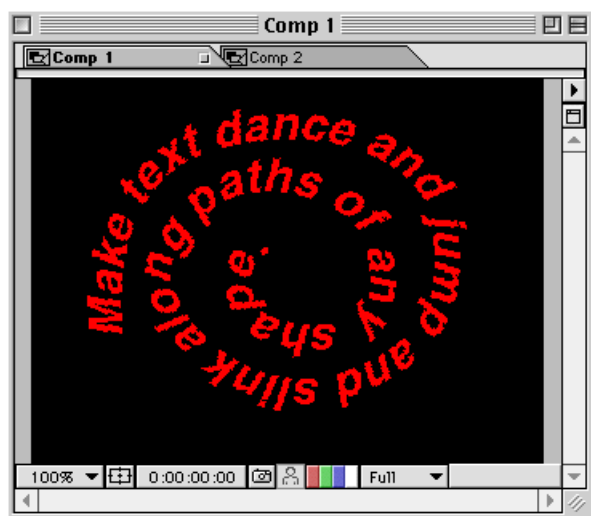
**Fat Ellipse** Users can instantly create an ellipse, controlling the width, height, and stroke thickness of this object.

## Adjust Effects

Adobe After Effects 4.0 offers more color adjustment controls through its new Adjust effects. These color adjustment controls match the ones in Adobe Photoshop in purpose and design, and affect how colors appear in a layer. They include **Channel Mixer**, which modifies a color channel using a mix of the current color channels; **Color Balance**, which changes the amount of red, green, and blue in a layer; **Curves**, which adjusts the tonal range of an image; **Levels**, which modifies a single color or alpha channel; **Hue/Saturation**, which adjusts the hue, saturation, and lightness of individual color components in an image; **Posterize**, which specifies the number of tonal levels in each channel of an image; **Threshold**, which converts grayscale or color images to high-contrast, black-and-white images; and **Brightness & Contrast**, which adjust the brightness and contrast of the entire layer (Brightness & Contrast is a carry-over from After Effects 3.1 but has been redesigned to work like the same controls in Photoshop).

## Basic Text and Path Text Enhancements

Text plays a vital role in many projects that users create. After Effects users need to produce text overlays, titles, and more. Adobe After Effects 4.0 is introducing a number of enhancements to its Basic Text and Path Text plug-ins to make it easier and more efficient for users to design and animate text in their projects.



**Basic Text Enhancements** The Basic Text plug-in now offers a Show Font option, so users can see the font as they style the text in the dialog box. Users can also specify settings for tracking, leading, and vertical text orientation.

**Path Text Enhancements** The Path Text plug-in shows off the new masking capabilities in After Effects 4.0, taking advantage of open masks to animate text along any shape of path. Previously, users were restricted to animating text along single-segment bézier curves, circles, and other shapes that could easily be defined with four points. Now users can animate text along paths shaped in a spiral, in a crisscross, in a freeform path—basically along any shape of path they can imagine. They can even copy and paste masks from Illustrator or Photoshop for their Path Text animations. What's more, users can change the shape or position of the path over time to create unique text animations.

Create any shape of path and then animate text along it.

## New Transform Effect

When users set up their compositions, they must plan for how the program's rendering order will affect their final results. After Effects follows this standard order (called the visual rendering pipeline) when rendering movies: masks, effects, and transformations. Sometimes users want to create a visual effect that cannot be achieved using the default rendering order. For example, a user might want to apply a rotation (a transformation) before applying a drop shadow (an effect). With After Effects 4.0, the user can apply the new Transform effect (available in the Perspective submenu on the Effect menu). This new effect lets users circumvent the rendering pipeline by applying transformations—position, rotation, skewing, scaling, opacity, and more—to layers as effects. Users can even apply the Transform effect to adjustment layers to affect all of the layers that appear beneath it.

## **PB** Improvements to Motion Tracker (Production Bundle Version Only)

The Motion Tracker allows users to isolate and track the motion of a single element on a layer and apply the keyframes generated to another layer for a precise match. Production Bundle users will find a number of enhancements to this powerful tool in After Effects 4.0.

The Motion Tracker now offers two types of Corner Pin tracking: a new version called Affine Corner Pin (3-point tracking) and an improved version of Perspective Corner Pin (4-point tracking). The new Affine Corner Pin lets users simultaneously track three points in one layer with three points in another layer. The position of the fourth inactive point is determined by the three active points. As the points on the second layer move, the points on the first layer change to simulate skewing, scaling, and rotation, but not

perspective. Parallel lines remain parallel, and relative distances stay the same. For example, a user might want to replace a background in footage shot with a handheld camera. If the camera zoomed in and out during the shooting but stayed perpendicular to the background, then the user doesn't need to go to the trouble of tracking perspective with 4-point tracking. Instead, the Motion Tracker can use Affine Corner Pins to calculate the relative movement between feature regions and track points, creating a correctly scaled background.

With the improved Perspective Corner Pin, users track points in a shot and apply derived transformations to other points offset from the track points for even finer control. For example, let's say a user needs to replace a billboard on a bus, but the edges of the billboard are partially obscured by shadows or objects. With the enhanced Perspective Corner Pin, the user could define four feature regions that are distinct and easy to track, and then move the track points to the four corners of the billboard. The Motion Tracker would then calculate the relative movement between the original feature regions and the track points to create a precise perspective for the new image appearing on the billboard.

The Motion Tracker offers other improvements that add up to finer creative control: Users can choose a new edge enhancement option to make tracking more accurate when working with low-contrast layers. Another new feature, called adaptive tracking, lets users determine how much of the original frame and the following frame are used for matching. Users can blend a percentage of the second image with the first image, and they can blur or enhance images before processing the match. Users can now track using luminance and saturation as well as RGB values. They can also track backwards in time.

#### More Flexible Copying and Pasting of Keyframes

Copying keyframes from one property to another property of the same type has long been a common way to reuse keyframe values. For example, users could copy Position keyframes and paste them into another Position property to quickly set one layer to precisely follow another layer. Adobe After Effects 4.0 greatly expands this ability, allowing users to copy keyframes from one property into other properties of different types, as long as those properties have the same dimensionality. Here's an example of how this works: Let's say a user wanted to set a layer to grow and shrink to the change in volume of their music. The user could set keyframes for the audio levels and then copy those keyframes into the scale property, instantly setting up that relationship. What's more, users can copy keyframes from one effect into a different effect for an efficient workflow. This capability speeds up the animation process, freeing users to focus on other tasks.

#### Additional Enhancements

Adobe After Effects 4.0 also features other enhancements that improve how users interact with some existing effects. Here's an overview of what users will find:

- Adobe After Effects introduces a new transition effect—the Iris Wipe.
- The Stylize effects category includes a new effect called Motion Tile, which creates tiled images with a motion blur applied.
- Blur effects now have separate horizontal and vertical controls for more precise specification.
- The effects buffer has been expanded to prevent clipping. This means that effects, such as blurs, glows, and perspective, can now exceed the boundaries of their layers.
- The Motion Sketch plug-in is now available in the Standard version of After Effects. This handy tool makes it as easy to draw an animation path as it is to sketch an idea on paper.
- Users can now specify an anchor point when they set a new composition frame size in the Composition Settings dialog box. Users can resize from the center out or from a corner or midpoint along any edge of a composition frame.

#### Enhanced Productivity and Extensibility

Adobe After Effects 4.0 software delivers productivity enhancements that make it an efficient tool for motion graphics designers and visual effects artists working in demanding post-production environments. The emphasis is on churning out the best quality possible in the shortest amount of time. After Effects directly supports these users with RAM Preview, which allows users to quickly preview their projects in real time; its innovative new user interface; and faster, more efficient interactions in all of its work areas.

## Innovative Adobe User Interface

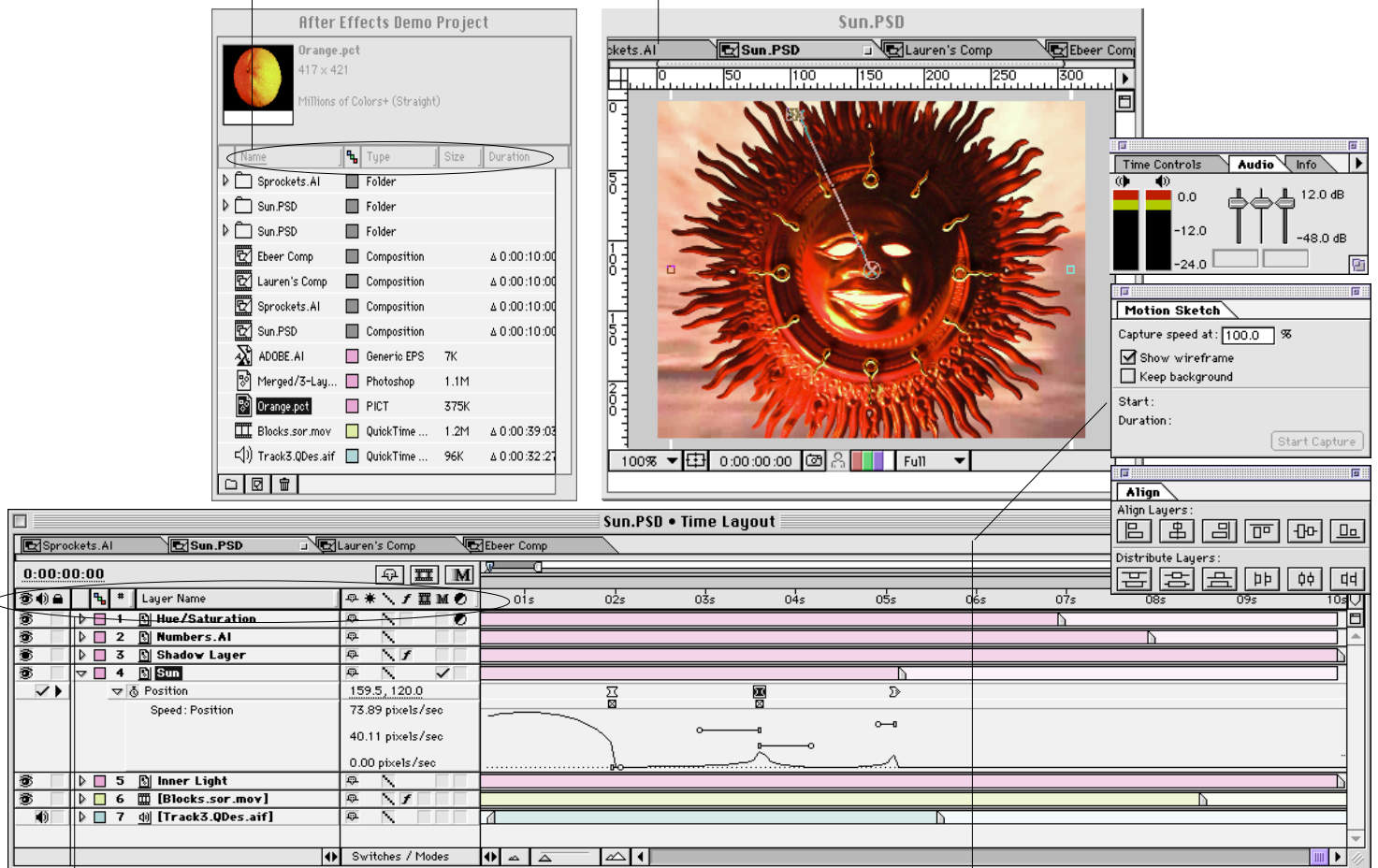
Adobe After Effects introduces an elegant new interface that will streamline users' workflow. Here is a quick overview of what users will find and how it helps them:

### New Project Window

The new Project window in Adobe After Effects more closely resembles the Project window in Adobe Premiere. Users can display and sort on more than a dozen predefined and several user-defined columns of information, including Name, Type, Size, File Path, Color Label, Duration, Date, Log Comment, and more. Users can resize, reorder, hide, or show these column types. Users can also organize related media in folders in the Project window.

### Tabbed Windows

Longtime After Effects users will find the same familiar workspace, but now it's presented in tabbed windows that users can organize together for a tidier work environment. By default, all Comp, Footage, and Layer windows open as tabs in separate containers. However, users can consolidate them in a single container. In addition, each composition has its own tab in the Time Layout window. Tabs behave intelligently—if a user clicks a composition tab in the Time Layout window, the associated Comp tab jumps to the front of its container.



### Revised Time Layout Window

The Time Layout window presents a revised look and feel beyond its new tabbed window interface. Features are organized in panes, which can be resized or repositioned at any time. One of the most important changes in the Time Layout window is the new label color that appears next to each layer name. Now users can assign specific color labels to different layers in their compositions and then treat layers that share colors as a unit. For example, a user could assign a green label to all video files and then select and shy them all in one quick step.

### Adobe-standard Keyboard Shortcuts

Adobe After Effects 4.0 introduces some new and revised keyboard shortcuts, which more closely match the shortcuts for similar commands in Photoshop, Premiere, and Illustrator. In addition, the Macintosh version now offers easier access to common commands through context-sensitive menus—users simply press Control and click an item to display these menus. (These context-sensitive menus are similar to the right-click menus in the Windows version.) The Macintosh version also offers tool tips that match the tool tips in the Windows version and an online Help system.

### Tabbed Palettes

After Effects 4.0 has adapted Adobe's popular tabbed palettes from Photoshop, Illustrator, and Premiere. The Info, Time Controls, and Audio windows are now tabbed palettes. The Time Controls palette offers new looping, audio, and shuttle controls that give users a finer level of control over how they scrub and play back their compositions. It also provides the new RAM Preview button for playing back compositions in real time. The Audio palette has been updated to include new VU meters with peak and clip indicators. The program also presents several new palettes that put more functionality at users' fingertips: Align, Motion Sketch, Wiggler, and Smoother (the last three present features previously available in modal dialog boxes). Users can combine palettes into a single container or drag them apart. They can also minimize them and then tuck them away on-screen for easy access.

#### Tip

Longtime users can also simulate their old work environment by turning off the tabbed window preference in the General Preferences dialog box.

### Real-time RAM Preview

One of the challenges of designing anything in motion is visualizing how it will look in its final form. While playback controls are helpful, they don't capture the final experience. In the past, users could only see these results by rendering and watching interim versions of their compositions—a sometimes time-consuming process. With Adobe After Effects 4.0, that review process is considerably faster.



Time Controls Palette

After Effects 4.0 introduces a new feature called RAM Preview, which allows users to play back their compositions in real time without rendering them. All a user has to do is open the Time Controls palette and click the RAM Preview button. After Effects then loads as many frames as possible into RAM and plays them back in real time. Users can even press the Audio button in the Time Controls palette to preview audio along with the video. The Info palette tracks the number of frames being loaded for playback.

### Improved Frame Caching for Faster Interactions

Adobe After Effects 4.0 offers faster interactivity by caching frames as users work. Basically, After Effects can respond more quickly to user input because it doesn't have to rerender or retrieve cached frames that meet the selection criteria. For example, a user could create a composition, play it back part way, and then rewind and play it again. The second playback will work more quickly because After Effects simply presents cached frames. The bottom line is that users can interact with their footage in the Project, Comp, Layer, and Time Layout windows more rapidly for better productivity.

### Expanded API for Easier Extensibility

Adobe After Effects 4.0 introduces a more flexible, powerful API for third-party plug-in developers. These developers now have more control over the data types they use and more flexibility in how they present this information to their users. What does this mean for After Effects customers? They'll have access to a broader range of plug-ins, including a whole new category of audio plug-ins. Plus, the user interfaces for these plug-ins can be more flexible, giving users more intuitive and productive tools.

### QuickTime and Other File Format Support

Adobe After Effects 4.0 now provides equivalent support for QuickTime across its Macintosh and Windows versions. Both versions ship with QuickTime 3.0. After Effects 4.0 also ships with four file format plug-ins that were previously available on the Adobe Web site. These plug-ins expand the range of file formats available to include importing and exporting JPEG, Cineon, and SGI files and exporting animated GIF files.

### Other Workflow Enhancements

Adobe After Effects 4.0 packs in a number of small enhancements that all add up to big productivity wins for users. Here's a sample of these improvements:

- After Effects now offers continuous rasterization with faster, smoother results. So, for example, users can import and animate an Adobe Illustrator file, and then play it back more quickly.
- Recent footage and recent projects are now listed on the File menu with complete path information. No more hunting for files!
- Importing multiple files is easier and faster because Adobe After Effects removes files from the import list as users select them. This feature is especially helpful when working with files that have similar names.
- After Effects 4.0 can now recognize specific image sequences because it parses both the numbers and words in the name. For example, 3D animators often render projects as Targa sequences with names like this: 001ProjA.tga, 002ProjA.tga; 001ProjB.tga, 002ProjB.tga; and so on. After Effects can distinguish among these files to import the correct group, even if those files are stored together in the same folder.

### Added Value in the Box

Adobe After Effects 4.0 packs exceptional value into its software package. Here's an overview of what users can expect to see in both the Standard and Production Bundle versions:

- Adobe After Effects 4.0 software, plus these other useful programs:
  - Adobe Acrobat® Reader software for viewing Portable Document Format (PDF) files
  - Accom DDR plug-in
  - Adobe Type Manager® software
  - QuickTime 3.0 software for Macintosh or Windows
  - Tryout versions of Adobe products and demonstration versions of compatible third-party products

**SYSTEM REQUIREMENTS\*****Power Macintosh**

- PowerPC<sup>®</sup> processor (required); multiprocessor (recommended)
- Mac OS version 7.6.1 or later
- 32 MB of application RAM (required); 64 MB or more of application RAM (recommended)
- QuickTime 3.0 software or later
- CD-ROM drive
- 80 MB of available hard-disk space (required for installation); 500 MB or larger hard disk or disk array (recommended for ongoing work)
- 16-bit or greater color display adapter (required); two monitors, 16-inch or larger, with accelerated 24-bit video (recommended)

**Windows 98/Windows NT 4.0**

- Intel<sup>®</sup> Pentium<sup>®</sup> processor (required); Pentium II or multiprocessor system (recommended)
- Microsoft<sup>®</sup> Windows 98, Windows NT 4.0, or later operating system
- 32 MB of RAM (required for Windows 98) or 64 MB of RAM (required for Windows NT 4.0); 64 MB or more of RAM (recommended for Windows 98) or 96 MB or more of RAM (recommended for Windows NT 4.0)
- QuickTime 3.0 software or later
- CD-ROM drive
- 80 MB of available hard-disk space (required for installation); 500 MB or larger hard disk or disk array (recommended for ongoing work)
- 16-bit video card (required); 24-bit or greater video display card (recommended)

\* System requirements are subject to change prior to the product shipping.

- Training and support materials, including:
  - Adobe After Effects 4.0 User Guide* and *Adobe After Effects 4.0 Quick Reference Card*
  - QuickTime tour of Adobe After Effects
  - Adobe After Effects 4.0 Software Development Kit
  - Adobe Technical Notes
  - Learning resources, including Adobe certified trainers, service providers, and more

In addition, the Production Bundle offers this extra value:

- The Motion Pack for finely controlling motion in animations
- The Keying Pack for creating sophisticated keying effects
- The Distortion Pack for creating sophisticated time-based effects (includes three of the new warping effects—Bézier Warp, Mesh Warp, and Reshape—as well as the Particle Playground effect)
- The Audio Pack for performing professional-quality audio processing and audio effects (includes the new Chorus & Flange, High-Low Pass, Modulator, Parametric EQ, Reverb, and Tone plug-ins)

## Availability and Pricing

In the United States and Canada, Adobe After Effects 4.0 for Power Macintosh, Windows 98, and Windows NT 4.0 is expected to ship in the first quarter of 1999. The following table summarizes the estimated pricing for the Standard and Production Bundle versions of After Effects 4.0 (full and upgrade versions) in the United States and Canada.

Selected Version of Adobe After Effects 4.0	Suggested Retail Price (in U.S. dollars)
Production Bundle, Full Retail	\$2,195
Standard Version, Full Retail	\$995
Production Bundle Upgrade*	\$199 for first 90 days, \$299 thereafter
Standard Version Upgrade*	\$199 for first 90 days, \$299 thereafter
Upgrade* from Standard version of After Effects 3.x to Production Bundle version of After Effects 4.0	\$795 for first 90 days \$1,295 after 90 days

\* Only registered customers can upgrade their version. Registered customers in the United States and Canada who purchase After Effects 3.1 after version 4.0 is announced are eligible for a free upgrade. Upgrades are available only on CD-ROM.

French, German, and Japanese versions are expected to ship in the second quarter of 1999. Information about the French, German, and Japanese versions, as well as pricing, upgrade, and support policies for these countries, will be announced separately.

## About Adobe Systems

Adobe Systems Incorporated, the award-winning provider of graphics and publishing solutions, gives you the power to make your ideas stand out exactly as you intend. Whether you work in a design studio, an office, or at home, Adobe's software, images, type, and printing technologies offer you a seamless workflow for creating and distributing graphically rich communications in print and electronic media.

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