

# Adding Motion



*Motion enhances and enriches the effect of still image files in a video program.*

*Premiere's Motion feature lets you move, rotate, distort, and magnify a variety of still image and video files.*

In this lesson you'll create a 10-second advertisement for a flower shop. You'll learn how to animate a still image using Premiere's Motion dialog box and a variety of motion settings. In particular you'll learn how to do the following:

- Set and change a motion path.
- Adjust the motion timeline.
- Adjust the zoom, rotation, delay, and distortion settings.
- Create a traveling matte from still images.
- Load a saved motion path.

## Getting started

To begin, you'll open an existing project and apply different motion and transparency settings to the clips. Make sure you know the location of the files used in this lesson. Insert the CD-ROM disc if necessary. For help, see "Using the Classroom in a Book files" on page 4.

To ensure that the Premiere preferences are set to the default values, exit Premiere, and then delete the preferences file as explained in "Restoring default preferences" on page 5.

- 1 Double-click 10Lesson.ppj from the 10Lesson folder to start Premiere and open the file.
- 2 When the project opens, choose File > Save As. If necessary, open the appropriate folder on your hard disk and type **FlowerAd.ppj**, and then click Save.

## Viewing the finished movie

If you'd like to see what you'll be creating, you can open and play the finished movie.

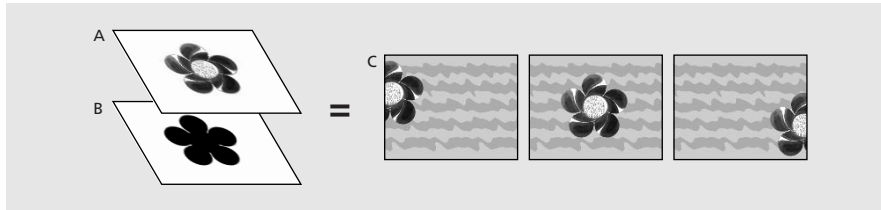
- 1 Choose File > Open and select 10Final.mov in the Final folder inside the 10Lesson folder.

The movie opens in the Source view of the Monitor window.

- 2 Click the Play button (▶) to view the movie.

## Applying a motion path to a still image

Premiere's motion controls let you create a motion path to animate any still image or video clip. Here you'll add a simple motion path to Forget.psd, a Photoshop file containing an alpha channel. For information on alpha channels, see "Understanding transparency and superimposing" on page 87.



*A. Photoshop file B. Alpha channel in Photoshop file C. Alpha Channel transparency key type and motion applied*

## Applying transparency

Let's begin by adding Backdrop.mov to the Source view, previewing it, and then adding it to the Timeline.

- 1 Drag Backdrop.mov from the Project window to the Source view of the Monitor window and click the Play button.
- 2 After you preview it, drag Backdrop.mov from the Source view to the Video 1 track, aligning it with the beginning of the Timeline.

Now you'll add Forget.psd to the Timeline and apply transparency. First you'll move the edit line to a new position, and use it to align the clip in the Timeline.

- 3 Drag the shuttle slider in the Program view of the Monitor window to about 0:00:00:15.

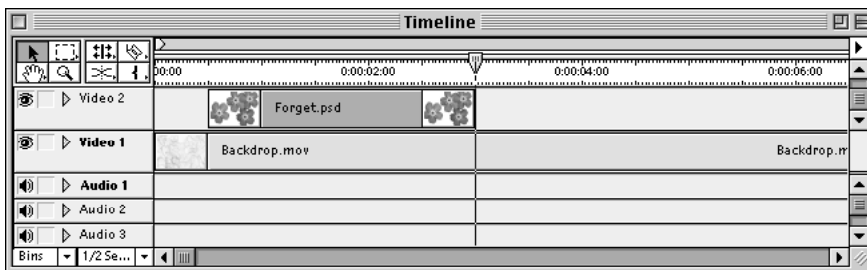


- 4 Drag Forget.psd from the Project window to the Video 2 track, aligning its In point to the edit line.
- 5 Move the shuttle slider in the Program view to about 0:00:03:00.



00:00:03:00    Δ 10:00

- 6 Drag the right edge of Forget.psd to the edit line. Resizing a clip like this is an easy way to change the duration of a still image.



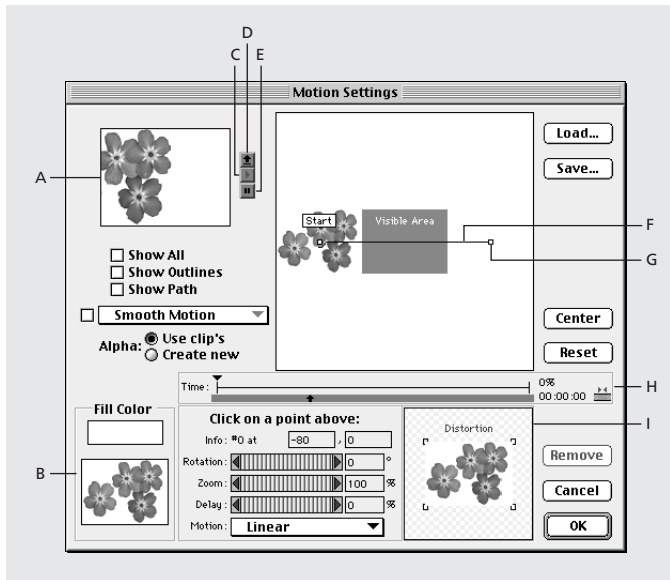
- 7 Select Forget.psd in the Timeline and choose Clip > Video > Transparency.
  - 8 Choose Alpha Channel for Key Type. Make sure the page peel icon (▣) is selected so that you can preview the effect.
- When Forget.psd was saved in Adobe Photoshop, the white background was saved as an alpha channel, which is easy to key out using either the Alpha Channel or White Alpha Matte key type.
- 9 Click OK to accept the transparency settings and close the dialog box.

## Applying motion

Now let's add motion.

- 1 With *Forget.psd* still selected in the Timeline, choose **Clip > Video > Motion**.
- 2 If necessary, click the Play button by the preview thumbnail to view the motion.

Notice the default motion is straight, as represented by the horizontal line in the upper right panel. This line is called the *motion path*. If you were to click OK without making any changes, the selected clip would move in a horizontal line.



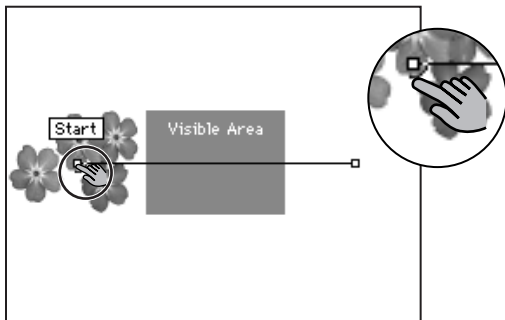
A. Motion thumbnail B. Fill Color area C. Play button D. Collapse icon (Mac OS only) E. Pause button F. Motion path G. Motion point H. Motion timeline I. Distortion area

- 3 Make sure the Alpha option under the motion thumbnail is set to Use Clip's, and then select Show All to see a preview of the motion superimposed over *Backdrop.mov*.

When you select Use Clip's, Premiere uses the clip's alpha channel for transparency. When you select Create New, Premiere uses the clip's frame as the transparent border, so a white box surrounds the image.

Notice that each end of the motion path has a small box, called a *motion point*. You use motion points to change the direction and shape of the path.

- 4 Position the pointer on the start point of the motion path. The pointer icon becomes a pointing finger icon.



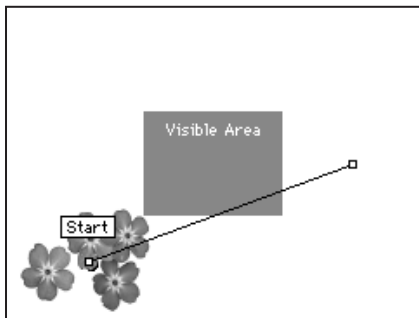
Notice that if you position the finger directly over a point, the finger icon turns gray, and if you position it over the path, it turns white. Clicking while the finger icon is gray selects a motion point and clicking while the finger icon is white creates a new motion point.

*Note: The finger icon may flicker when you position it over a point along the motion path because of the constant screen redraw in the preview window or because of memory-related issues. Pausing the preview may help control the flicker.*

- 5 Click the Pause button by the motion thumbnail to stop the preview from playing and to preserve memory.

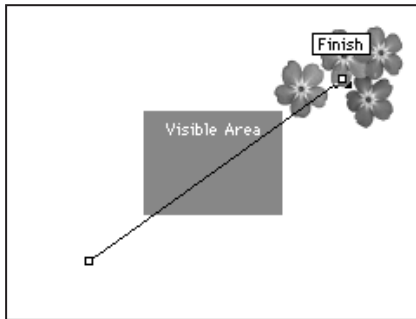
The motion thumbnail requires memory in order to display the motion settings. Leaving it active all the time may slow your system's performance. Pausing the preview increases the memory available for other functions in Premiere.

- 6 Drag the first motion point to the lower left corner so that the image is just outside of the Visible Area.



The Visible Area represents what you can see on-screen. Any points or paths outside this area will not be fully visible when you view the video program. When you want clips to gradually enter or exit the screen, place points outside the Visible Area.

**7** Drag the last motion point up to the top right corner so that the entire image is outside the Visible Area.



*Note: In Windows, the last point on the motion path is labeled End, rather than Finish.*

**8** Click the Play button by the motion thumbnail to view the motion. When you're finished viewing, click the Pause button.

## Adding points and distorting an image

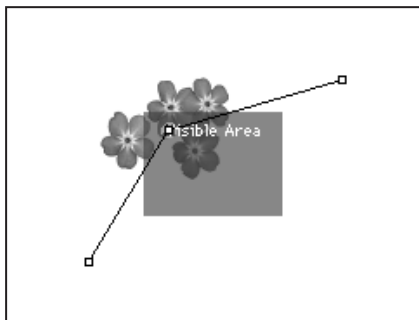
You can add motion points to the motion path in two ways:

- Click directly on the path and drag the point to the desired location.
- Click anywhere along the motion timeline to add a point; then move the point on the motion path.

To move points in space, move them on the motion path; to move points in time, move them on the motion timeline.

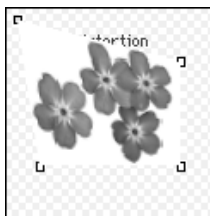
You'll add points and move the path using both methods.

- 1 Click the motion path about one-third of the way from the start point to make a new point, and drag it to the top left corner of the Visible Area.

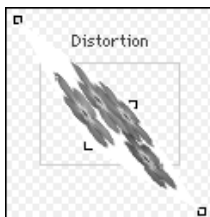


While the point is still selected, you'll distort the image.

- 2 In the Distortion area, drag the top left corner point up and to the left.



- 3 Drag the bottom right corner point down and to the right.
- 4 Drag the top right corner point toward the center of the Distortion area, and then drag the bottom left point toward the center of the area. The image should look something like this:



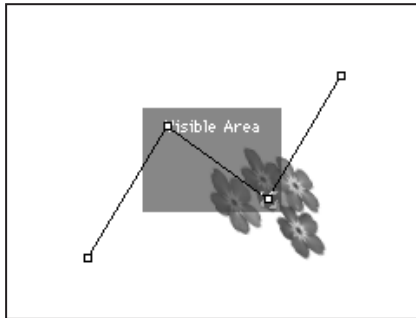
The clip will gradually return to its original shape.

- 5 Click the Play button to view the motion, and then click the Pause button.

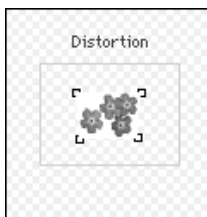


You'll end the distortion effect sooner by adding another point and returning the clip to its original shape, although smaller, in the Distortion area.

- 6** Click about two-thirds of the way across the motion path to make another point; then drag it down to the lower right corner of the Visible Area.



- 7** While this point is still selected, move the corner points of the clip in the Distortion area back to their original square positions, but make the clip about one-third of its original size. Use the picture below as a guide.



- 8** Click the Play button in the motion thumbnail to preview the changes.



- 9** Click OK to close the Motion Settings dialog box.

- 10** Save the project.

***Fine-tuning the position of a point on the motion path***

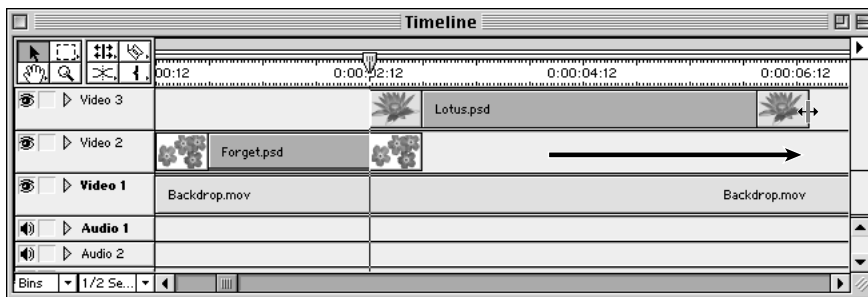
The Motion Settings dialog box lets you set coordinates for each point on the motion path using the Info boxes (just below the motion timeline). The coordinates you enter are specified at the resolution of the sample image (80 x 60 pixels) but scaled at output time to the project output size. A 1-pixel shift at the sample size scales up to a 4-pixel shift if the project output size is 320 x 240, or to an 8-pixel shift if the output size is 640 x 480. You can type fractional decimal values to reposition points with finer precision than 4- or 8-point increments. For example, typing 1.75 in the first text box results in a horizontal shift of 14 pixels at 640 x 480 resolution. To derive the correct value to type for the direction you want to move, first divide the appropriate output dimension (for example, 640) by the corresponding sample image dimension (80), and then divide the distance you want to move (for example, 14 pixels) by the result.

—From the Adobe Premiere User Guide, Chapter 9

## Applying motion settings and transparency

Now you'll animate Lotus.psd using the motion path, zoom, and rotation options. First, though, you need to add Lotus.psd to the Timeline and apply transparency.

- 1 Move the edit line to 0:00:02:15, using the timecode in the Monitor window's Program view as a guide.
- 2 Drag Lotus.psd from the Project window to the Video 3 track, aligning its In point to the edit line.
- 3 Move the edit line to about 0:00:06:15.
- 4 Drag the right edge of Lotus.psd to the edit line.



- 5 Select Lotus.psd in the Timeline and choose Clip > Video > Transparency.

Lotus.psd was created in Adobe Photoshop with a blue-green background (Red = 0, Green = 255, and Blue = 255). With this color, you could make the background transparent using the Blue Screen, Green Screen, Chroma, or RGB Difference transparency key types. See “Applying the Blue Screen transparency key type” on page 262 or “Applying the Chroma transparency key type” on page 265 for more information on these key types.

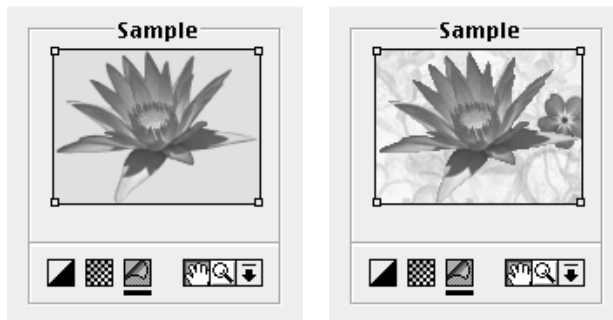
The RGB Difference key type includes the option to add a drop shadow to the remaining opaque image, so we’ll use it on Lotus.psd.

**6** Choose RGB Difference for Key Type.

**7** In the Color area, click the blue-green background of the thumbnail to select it as the transparent value.

Make sure the black and white icon (■) is selected under the Sample area so that you can clearly view the transparency effect.

**8** Move the Similarity slider to 60 to increase the range of colors affected by the key type. Click the page peel icon (📄) to view the transparency in relation to the other clips in the Timeline.



*Sample area before and after moving Similarity slider.*

**9** Select Drop Shadow. Notice the new shadow that appears on the remaining opaque image (the flower).

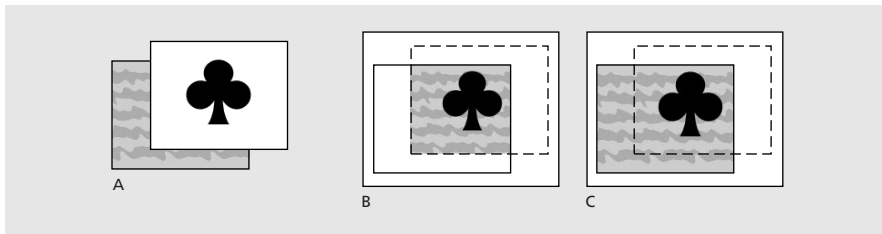
**10** Click OK to close the Transparency Settings dialog box.

## Applying motion to a clip with a colored background

Now you’ll apply motion to Lotus.psd. Because this clip has a colored background, you’ll need to adjust the Fill Color in the Motion Setting dialog box.

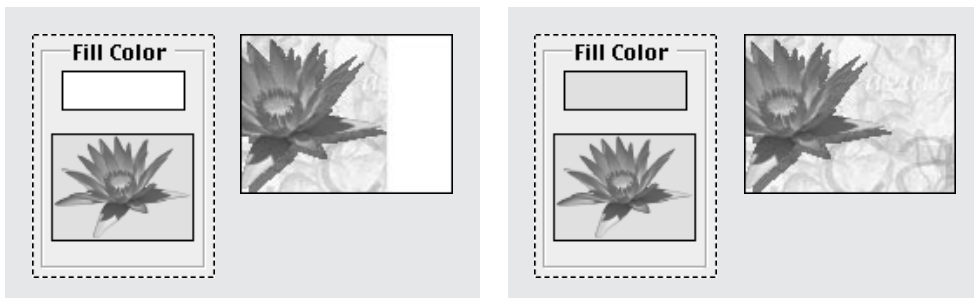
- 1 Select Lotus.psd in the Timeline, if it's not already selected.
- 2 Choose Clip > Video > Motion.
- 3 Click the Play button if necessary, and make sure Show All is selected so that you can see the clip on the lower track as you preview the motion.

Notice that as the clip moves across the screen, a white background follows and precedes it. By default, Premiere uses white to fill the area around the clip's frame when the frame does not fill the screen. Because you applied transparency to a color other than white, the white fill area is not transparent. The Fill Color option lets you select the color Premiere uses for the fill area so that it appears transparent.



*A. Clip with a transparency value other than white B. Before choosing the motion Fill Color  
C. After choosing the motion Fill Color*

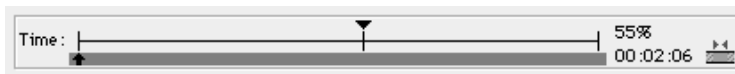
- 4 Position the pointer on the clip thumbnail in the Fill Color area. The pointer turns to an eyedropper tool (👉).
- 5 Click the blue-green background to select it. If necessary, click the Play button and notice how the white box disappears from the preview, which now displays with a completely transparent background.



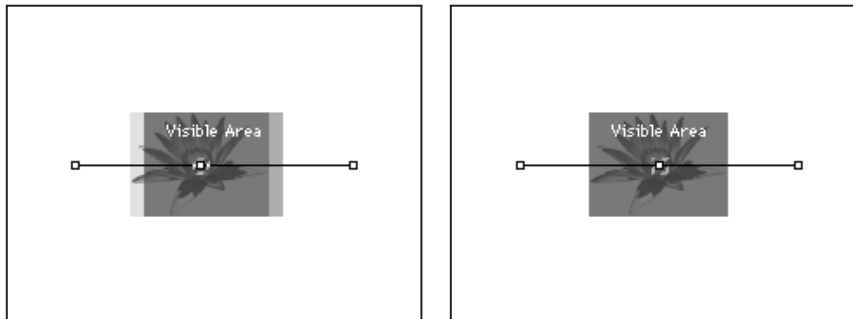
## Applying zoom and rotation

Now you'll add points to the motion timeline and apply zoom and rotation. When you add points directly to the motion timeline rather than to the motion path, you can select the exact time you want the effect to occur.

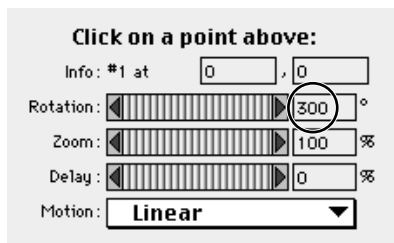
- 1 If necessary, click the Pause button to stop the preview.
- 2 Position the pointer over the middle of the motion timeline and when the pointer turns to a solid triangle icon click and drag until the motion timeline percent is at 55%; then release the mouse to make a point.



- 3 Click the Center button to position the new point directly in the center of the Visible Area. This button centers the point visually, but not chronologically.



- 4 With the point still selected, type **300** in the Rotation text box. One complete rotation is 360 degrees. By entering 300, you're rotating the image almost one full rotation.



**5** Press Tab to move to the Zoom text box and type **180**, and then press Tab again. A zoom value of 100% represents the original size of the clip. Entering a zoom value of 180, increases the image size by 80%.

**6** Preview your edits in the motion thumbnail, and then click the Pause button.



Notice how the flower begins rotating clockwise as it moves from the first point to the second point and then turns counter clockwise as it moves from the second point to the last point. Because the first and last points on the motion path have rotation values of 0 (zero), the flower must rotate to 300 degrees by the time it reaches the second point and then return to 0 degrees by the time it reaches the last point; thus creating a backwards rotation effect between the second and last point.

Now you'll edit the first point of the motion path.

**7** Select the Start point on the motion path and click Center.

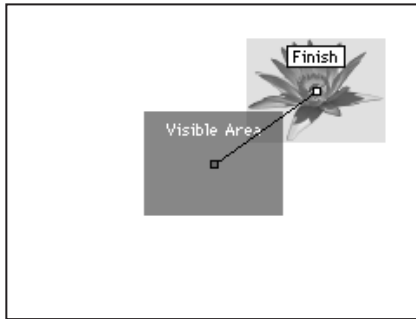
***Note:** Remember that the finger icon turns gray when it is over a point on the motion path. If the icon is not gray, each click will create a new point rather than select an existing point.*

**8** Type **0** in the Zoom text box, and then press Tab.

**9** Click the Play button by the motion thumbnail and notice how the clip now zooms in from 0 to 180% in the center of the Visible Area. Click the Pause button to stop the preview.

Now let's move the last point of the motion path out of the Visible Area, making the clip move off the screen.

**10** Drag the last point of the motion path to the top right corner so the image is just outside of the Visible Area.



**11** With the last point still selected, type 150 in the Rotation text box; then press Tab.

**12** Preview the effect by clicking the Play button by the motion thumbnail.

This effect may not be too obvious, but the 150 degree rotation on the last point slows down the spinning flower as it leaves the Visible Area. The image now only needs to return to 150 degrees instead of 0 while traveling from the second point to the last point.

## Adjusting points on the motion timeline

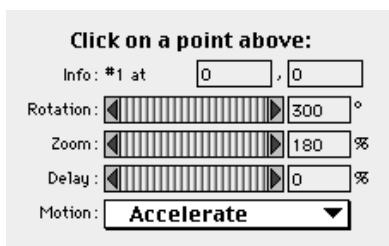
You can adjust the speed of motion effects by changing the Motion or Delay option, or by moving the points on the motion timeline.

Here you'll make the zoom effect on the second point appear more realistic by accelerating it with the Motion option.


**1** Select the second point on the motion timeline. (The points appear as short vertical lines.)

***Note:** When selecting a point on the motion timeline, make sure the pointer appears as a finger icon before clicking. If the pointer appears as a triangle, each click will create a new point rather than select an existing point.*

- 2 Choose Accelerate from the Motion menu at the bottom of the dialog box. Click the Play button to preview the results.



The motion now speeds up as the flower approaches its full magnification of 180%.

 When you zoom out of a point, use the Decelerate Motion option to make it appear more realistic. The Linear option keeps the motion at a constant rate between two points.

Now you'll adjust the points on the motion timeline to increase the speed at which the clip moves off the screen.

- 3 Click the Pause button to stop the preview.

- 4 Drag the second point on the motion timeline to the left until it is at 46%.

Now the time it takes the flower to get from the first point to the second point is less than what it takes to get from the second point to the last point.



- 5 Click OK to close the Motion Settings dialog box, and then save the project.



- 6 Drag the work area bar over Forget.psd and Lotus.psd, and then press Enter (Windows) or Return (Mac OS) to preview the new motion settings.

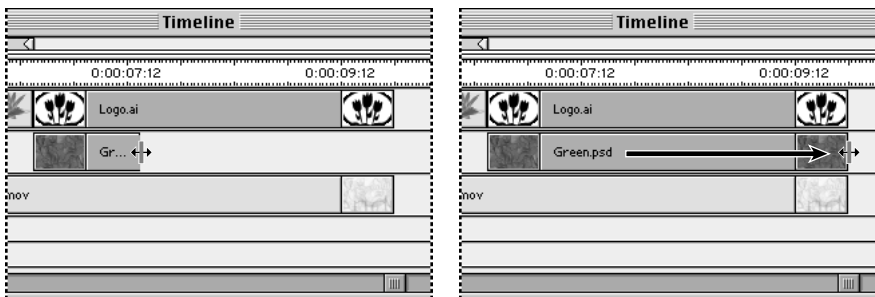


## Creating a traveling matte

Traveling mattes are moving track mattes. You can create a traveling matte by using a still image with applied motion or by using a black-and-white or grayscale video clip. The motion applied to a still image can be as simple as a zoom or it can be complex, involving rotations, distortions, and delays.

First let's add two more clips to the Timeline.

- 1 Drag Logo.ai from the Project window to the Video 3 track, aligning its In point with the end of Lotus.psd.
- 2 Drag the right edge of Logo.ai until its Out point snaps to the end of Backdrop.mov.
- 3 Drag Green.psd from the Project window to the Video 2 track, aligning its In point with the In point of Logo.ai.
- 4 Drag the right edge of Green.psd until its Out point also snaps to the end of Backdrop.mov.



## Applying transparency to traveling matte clips

When creating a track or traveling matte transparency effect, always apply the Track Matte key type to the clip located below the matte in the Timeline. Here you'll apply the Track Matte key type to Green.psd so that it will play through the black area (matte) in Logo.ai, which is located above it.

- 1 Select Green.psd in the Timeline and choose Clip > Video > Transparency.
- 2 Choose Track Matte for Key Type. Make sure the page peel icon is selected.

Notice how Green.psd becomes the background and Backdrop.mov (the video program's background) displays through Logo.ai's matte. We want to reverse this effect so that the background remains constant throughout the video program and Green.psd plays through Logo.ai's matte.

**3** Select Reverse Key.



*Before and after selecting Reverse Key.*

**4** Click OK, and then save the project.

## Applying preset motion settings

You can save motion settings and use them repeatedly on different clips and in different projects. Here you'll load a previously saved motion file and apply it to Logo.ai.

**1** Select Logo.ai in the Timeline and choose Clip > Video > Motion.

**2** Click Load and double-click Logomoti.pmt in the 10Lesson folder.

A motion path appears in the Visible Area.

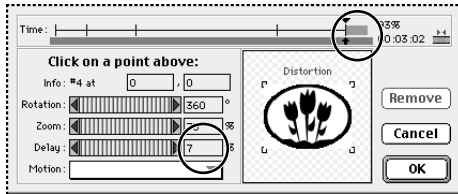
**3** Preview the motion by clicking the Play button.

**4** Click the Start point on the motion path (remember to click only when the finger icon turns gray, otherwise you'll create a new point). Notice the different settings for Rotation, Zoom, and Delay.

**5** Press Tab to move to each point along the path.

The motion path begins with a zoom value of 450%, shrinks to 37% by the second-to-last point, and ends at 75%. The block at the end of the motion timeline represents a delay on the last point.

6 Click the last point on the motion timeline to see the details of the delay setting. Notice that the delay is set to 7%.



7 Click OK to close the Motion Settings dialog box.

8 Save the project.


## Delaying a point on the motion path

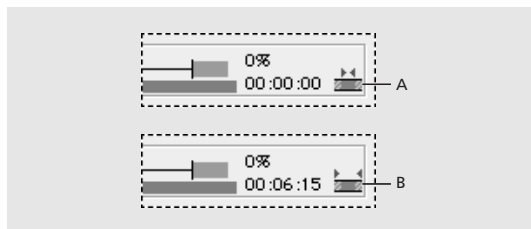
Let's preview the motion in the Monitor window and then make some changes to the delay.

1 Drag the work area bar over all the clips in the Timeline; then press Enter (Windows) or Return (Mac OS) to preview the project.

Currently, the logo reaches its final position right before Background.mov stops playing. We want the logo to appear at its last motion point sooner, and remain there longer, so a longer portion of Background.mov plays after the logo stops moving. To achieve this effect, we'll increase the length of the delay on the last point to one-half second, or 15 frames.

2 Select Logo.ai in the Timeline and choose Clip > Video > Motion.

You'll use the motion timeline's time display (  ), located to the right of the motion timeline, to set the delay in the Motion Settings dialog box to exactly 15 frames.




*A. Time display showing the timecode for the clip*

*B. Time display showing the timecode for the entire project*

The time display shows you whether the motion timeline timecode represents the timecode for your entire project or for the selected clip. Using this information, you can determine the exact time at which a motion effect occurs in the video program or the video clip.

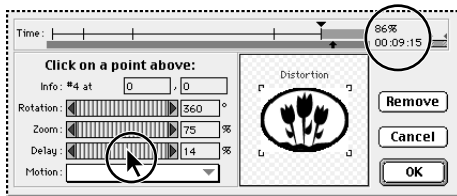
Let's set the time display to show the timecode for the entire project, which is 10 seconds long. Once it's set, you can accurately set the delay to 9 seconds 15 frames, which is one-half second in from the end of the project.

The time display (  ) is currently set to show the timecode for the selected clip.

**3** Click the time display's red arrows to display the location of the selected motion point in relation to the timecode for the entire project (  ).

**4** Select the last point on the motion timeline, and notice that the time display reads about 00:09:22. The delay setting stops all motion at this point, and the image remains constant for the last 8 frames of the project.

**5** Drag the Delay tread until the time display reads 00:09:15. The Delay text box should be at approximately 14%.



**6** Click OK to close the Motion Setting dialog box, and then save the project.

**7** Press Enter (Windows) or Return (Mac OS) to preview the project.



## Exporting the movie

If you were really creating an advertisement to be broadcast on television, your clips would all be 640 x 480 resolution so that they would display optimally on a NTSC monitor. Your project Timebase would be 29.97, and you'd export your project using a hardware codec and print the final movie to video tape.

However, because 640 x 480 resolution files require an exceptional amount of hard disk space to store and memory to edit, we kept the tutorial files to 240 x 180 resolution. You'll export this project using this smaller file size, a 15 fps Timebase, and a software codec.

- 1 If necessary, click the Timeline title bar to activate it, and then choose File > Export > Movie.
- 2 Click Settings.
- 3 Choose QuickTime for the File Type, and Entire Project for the Range.
- 4 Deselect Export Audio, and then click Next.
- 5 Select Cinepak for the Compressor.
- 6 Choose 15 for the Frame Rate.
- 7 Click OK to close the Export Movie Settings dialog box.
- 8 Type **FlowerAd.mov** for the File name, and then click Save to export the movie. Premiere displays a status bar providing the estimated time it will take to process the movie.

When the movie is complete, it opens in a separate Clip window.

- 9 Click the Play button to play the movie.

## Printing to video

When you want to print your finished movie to video tape, you use the Print to Video option. This option lets you display the movie at full screen on your computer monitor. If your movie is not in full screen resolution (640 x 480) you can zoom the movie to fill the screen, or you can display it at its smaller resolution with a black border.

- 1 With the Clip window still active, choose File > Export > Print to Video.

**2** Enter 1 second for Color Bars, 1 second for Play Black, and then select Full Screen (Windows) or Zoom Screen (Mac OS). Click OK.

The movie plays at full screen on your computer or peripheral monitor. Because your movie is not full resolution (640 x 480), it appears pixelated or jaggy.

**3** Choose File > Export > Print to Video again and don't select Full Screen. Now the movie plays in high resolution at its smaller size.

## Exploring on your own

Take a few minutes to experiment with the project and try out some of your new skills. Here are some suggestions:

- Change the motion path for Forget.psd so that it continually rotates along the path. Save the path as a file.
- Create a one- or two-word title for the flower advertisement. Place the title at the beginning of the project in the Video 3 track and change the duration so it ends when Lotus.psd begins. Add motion to the title, making it zoom in from 10% to 100%.
- At different points along Logo.ai's motion path, set the Motion to Accelerate and Decelerate and notice the effects.
- Apply a zoom effect to Backdrop.mov using only the Center button and the distortion area.

## Review questions

- 1** Under what circumstances would you need to use the Fill Color setting in the Motion dialog box?
- 2** When should you accelerate a motion path?
- 3** If you want to set a point on the Motion timeline that matches a specific time in the clip, should the time display's red arrows be close together or far apart?
- 4** What are two different ways to add points to a motion path?
- 5** How do you convert a track matte to a traveling matte?
- 6** How do you adjust the time between two points on the motion path?

## Answers

- 1 When your clip has a colored background, such as blue.
- 2 When your image zooms in to a larger size.
- 3 Close together.
- 4 Clicking on the motion path and clicking on the motion timeline.
- 5 Add motion to the clip that has the track matte applied.
- 6 Move the point on the motion timeline. The farther the points are from each other, the longer the time between them.