How to use the Motion effect

You will frequently use the Motion effect in Adobe Premiere CS4. It adds drama to static and moving images by letting you change image sizes, make images fly anywhere on (or off) the screen, and rotate them. You can make those adjustments in either the Program Monitor or the Effect Controls panel.

The Motion effect is one of dozens of video effects available in Adobe Premiere Pro. Video effects can add special visual characteristics or provide unusual feature attributes to clips. You will work with many video (and audio) effects in later projects.

The Motion effect has six options that enable you to change the effect's behavior over time by using keyframes. Here's a rundown:

- *Position:* The screen location of the clip's anchor point (its center unless you change the anchor-point position).
- *Scale* (changes to Scale Height if Uniform Scale is not selected): The size of the clip. The slider has a range from 0% to 100%, but you can use the numerical representation to increase the clip size to 600% of its original size.

  Note: The Scale percent refers to the clip perimeter, not its area. For example, selecting 50% creates a quarter-screen size clip. That is, each edge of the clip shrinks to one-half its original length, reducing its area to 25% of its original size. Selecting 25% (each side is one-fourth its original size) means the clip area shrinks to 6.25% (or one-sixteenth) of its original size.
- *Scale Width:* Deselect Uniform Scale to make Scale Width active. This lets you change the clip width and height independently.
- *Rotation*: Rotates the clip on its anchor point (its center unless you change the anchor point position). The maximum number of rotations allowed in either direction is 90. Rotation values are represented by degrees, number of rotations, or a combination of both. For example, the rotation value for a 450° counterclockwise rotation is (–1)x(–90)—one full counterclockwise rotation plus one-quarter counterclockwise rotation. Negative values are counterclockwise, positive values are clockwise.
- *Anchor Point:* The center of the rotation (the initial default setting is the center of the clip). You can set the clip to rotate around any point in the clip or screen, including a clip's corner, or around a point outside the clip like a ball at the end of a string.
- *Anti-flicker Filter:* Useful for images that contain high-frequency detail such as fine lines, hard edges, parallel lines (moiré problems), or rotation. Those characteristics can cause flickering during motion. The default setting (0.00) adds no blurring and has no effect on flicker. Set the Anti-flicker Filter value to 1.00. That adds some blurring, which helps eliminate flicker.
- To complete the tasks in this guide, you only need to have one video clip. It's best if you perform these tasks sequentially.

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Examining Motion effect characteristics

1. Start Adobe Premiere Pro, start a project, import a video clip, and drag that clip to the Video 1 track in the Timeline panel.
2. Drag the CTI anywhere in the clip to display the clip in the Program Monitor.
3. In the Program Monitor, select 25% from the View Zoom Level menu (**Figure 1**).

   Shrinking the clip display makes working with the Motion effect in the Program Monitor easier.
4. In the Program Monitor frame, make sure there are no scroll bars on the screen (expand the frame if necessary).

   The Program Monitor should look like **Figure 1**.
5. Select the clip in the Timeline panel.
6. Click the Effect Controls panel tab.

   The Effect Controls panel appears (**Figure 2**).

   Note: Motion is one of three *fixed* video effects automatically applied to all video clips. The other two fixed video effects are Opacity (controls clip transparency) and Time Remapping (changes clip speed).
7. If the Effect Controls time ruler is not visible, click the Show/Hide Timeline View button.

   Note: If the Show/Hide Timeline View button is not visible and active, widen the panel.

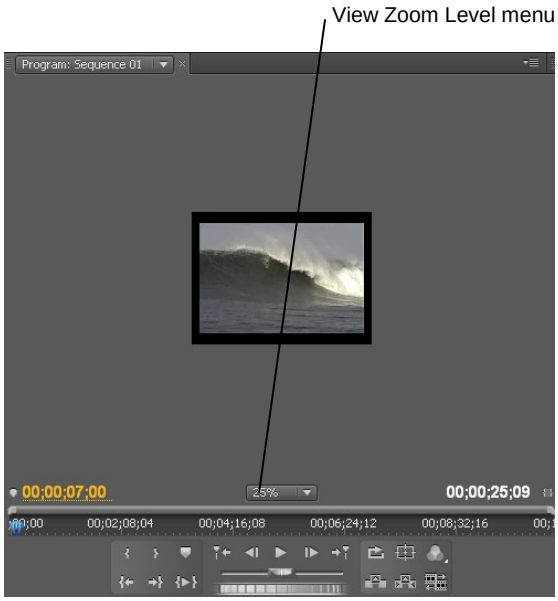

Figure 1 Program Monitor

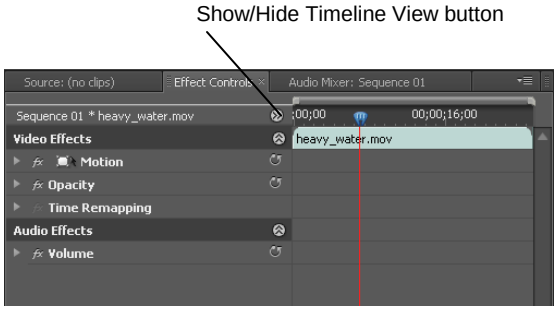

Figure 2 Effect Controls panel

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8. Click the clip inside the Program Monitor screen.

A bounding box appears around the clip (**Figure 3**). The box includes a centered anchor-point cross hair and handles.

The Motion effect is now activated (highlighted—white letters on a gray background) in the Effect Controls panel. With the Motion effect activated, any change you make to the clip in the Program Monitor shows up in the Effect Controls panel.

Note: Clicking "Motion" in the Effect Controls panel is the other way to activate the effect.

9. In the Effect Controls panel, expand the Motion parameters (**Figure 4**).

Note: The Motion effect parameters are Position, Scale, Scale Width, Rotation, Anchor Point, and Anti-flicker Filter. You work with all but Anti-flicker in the upcoming tasks.

Figure 3 Motion effect bounding box and handles in Program Monitor

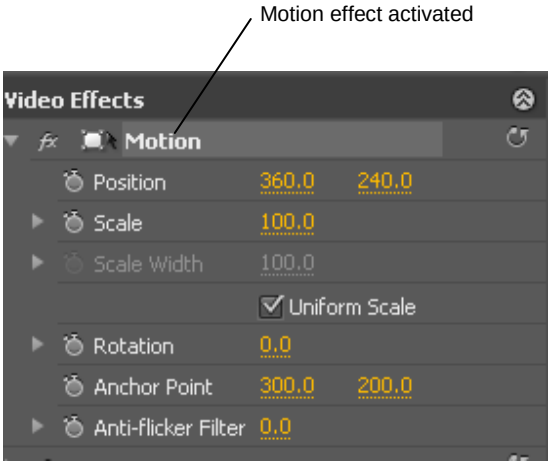

Figure 4 Motion effect parameters

How to set and adjust Motion effect Position values and keyframes

1. Continue where you left off in the previous task.
2. Click anywhere on the clip's bounding box in the Program Monitor, drag this clip around, and note how the Position values in the Effect Controls panel change.
3. Drag the clip until its anchor-point cross hair is directly over the upper-left corner of the screen (**Figure 5**).

   Note: The Position values in the Effect Controls panel should be 0.0,0.0 (or close to that, depending on where you placed the center of the clip).
4. Drag the clip to the lower-right corner of the screen.

   The Position values change to 720, 480, the standard NTSC DV screen size (720 x 480 pixels).

   Note: Adobe Premiere Pro uses an upside-down X/Y axis for screen location. The upper-left corner is 0, 0. X and Y values to the left and above that point, respectively, are negative. X and Y values to the right and below that point, respectively, are positive.
5. Drag the clip completely off the screen to the left (**Figure 6**).
6. Fine-tune that adjustment by changing the Position values in the Effect Controls panel to –360, 240 (**Figure 7**).

   The center of the clip is now 360 pixels to the left of the screen frame. Because 360 is half of 720 (a full clip width), the right edge of the clip lines up with the left edge of the screen frame.
7. In the Timeline panel, drag the CTI to the beginning of the clip.
8. In the Effect Controls panel, switch on the Position parameter keyframes mode by clicking the Position Toggle Animation button (**Figures 7 & 8**).

   A small line appears in the stopwatch icon, and a keyframe is added to the clip in the Effect Controls time ruler.

   Note: This keyframe toggle animation step is slightly different from the way you add keyframes to the audio Volume effect. For audio, the toggle animation mode is initially on by default. The video effects keyframe mode is switched off initially.
9. In the Timeline panel, drag the CTI to the center of the clip.
10. In the Program Monitor, drag the clip to center it on-screen.

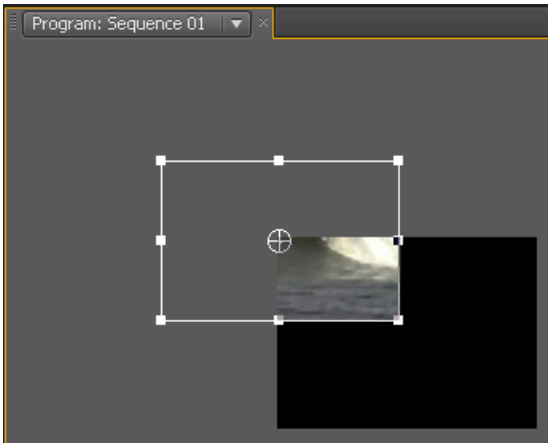

Figure 5 Motion effect bounding box in the Program Monitor

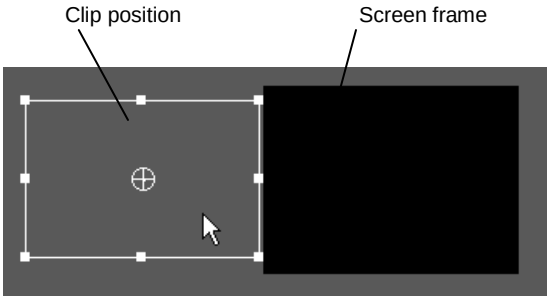

Figure 6 Drag the clip off the screen

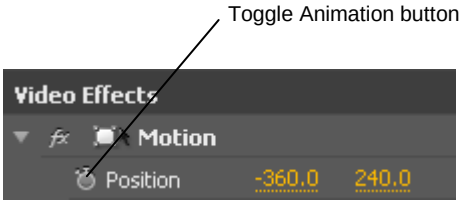

Figure 7 Motion effect Position values

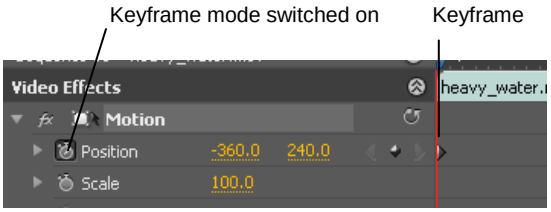

Figure 8 Motion effect with a keyframe

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11. In the Effect Controls panel, fine-tune the clip's location by setting the Position values to 360, 240.

Moving the CTI to a new location in the clip and changing values adds a Position keyframe.

12. In the Timeline panel, move the CTI to the end of the clip (press Page Down and then the Left Arrow key).

13. In the Effect Controls panel, change the Position values to 360, –240.

That puts the clip completely above the screen and adds a third keyframe. You have created a path (if you don't see the path in the Program Monitor, click Motion to switch on its display). Make note of a few things:

The Program Monitor will look similar to **Figure 9**. Macintosh users see all three keyframes. On Windows computers, only keyframe immediately before and after the CTI are shown.

14. In the Timeline, drag the CTI to the beginning of the sequence. As you drag, watch the motion path in the Program Monitor.

15. In the Program Monitor, click the Play button.

The clip slides smoothly on-screen from the left and then moves off the top.

Note: if your clip does not play, you may need to render it. Select Sequence > Render Effects In Work Area.

16. In the Program Monitor, drag the center keyframe (the four-point star in the middle of the screen) down and to the left (**Figure 10**).

17. Play the clip and note that it moves slowly until the middle keyframe and then speeds up.

Note: By moving the keyframes, you changed their spatial locations and thereby the distance the clip traveled between keyframes. But you did not change the time between keyframes, so the clip moves faster between clips that are farther apart and slower for those closer to each other.

18. In the Effect Controls panel time ruler, drag the center keyframe most of the way to the right (**Figure 11**).

19. Play this clip and note how much more slowly it goes at the beginning and how much faster at the end.

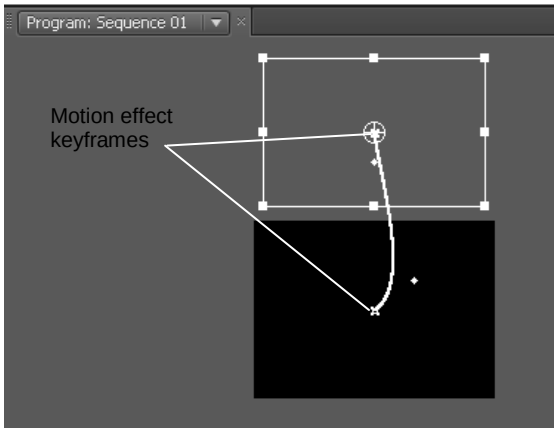

Figure 9 Motion Bezier curve in the Program Monitor

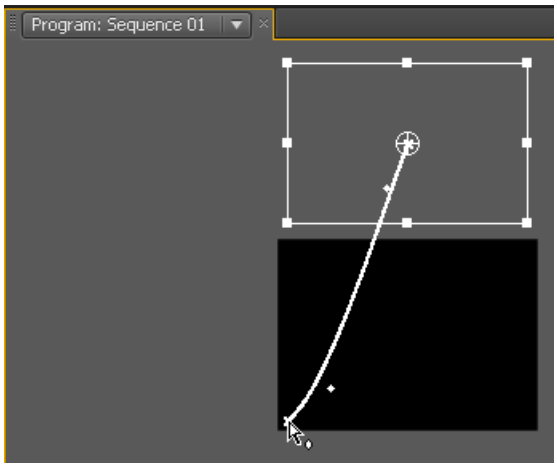

Figure 10 Motion effect keyframe

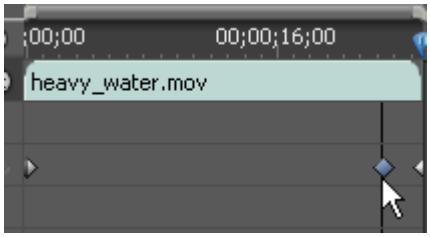

Figure 11 Effect Controls panel time ruler area

How to change clip size and set position values

You can use the Motion effect to shrink or expand a clip while it is in motion or in place. For example, you can start a clip full-screen and then shrink it to reveal another clip on a lower video track in the sequence. You can start a clip as a small dot, have it grow onto the screen, and then shrink and slide it off the screen.

Note: If you have not completed the first task, "Examining Motion effect characteristics," complete steps 1–7 of that task and then start this task.

1. If you are continuing where you left off in the previous task, you need to remove the Motion effect parameters you added to the clip. (Otherwise, go to step 2.)
   - In the Effect Controls panel, click the Toggle Animation stopwatch for Position to remove the keyframes. Click OK (Windows) or Yes (Mac OS) to confirm deleting the keyframes.
   - Click the Reset button to return Motion to its default setting (**Figure 12**).
2. In the Effect Controls panel, do the following.
   - In the time ruler, drag the CTI to the beginning of the clip.
   - In the Motion effect parameters area, click the Position Toggle Animation stopwatch to switch on keyframes.
   - Change the Position values to 0.0, 0.0.

   Those actions add a Position keyframe to the beginning of the clip in the Effect Controls time ruler area and center the clip in the upper-left corner of the Program Monitor screen (**Figure 13**).
3. In the Effect Controls panel, do the following:
   - Expand the Scale parameters to reveal its slider (**Figure 14**).
   - Click the Scale Toggle Animation stopwatch to turn on keyframes.
   - Drag the Scale slider to zero.

   Those actions add a Scale keyframe at the beginning of the clip in the Effect Controls time ruler and set the clip size to zero for the in point of the clip.
4. In the Effect Controls time ruler, drag the CTI about a third of the way into the clip and then click the Motion effect Reset button (**Figure 15**).

   That creates two keyframes for Position and Scale at the CTI location, using Motion's default settings: the clip at full size and centered in the screen (**Figure 16**).

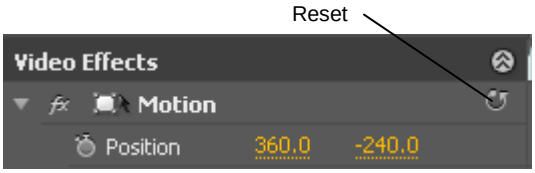

Figure 12 Motion effect Position values

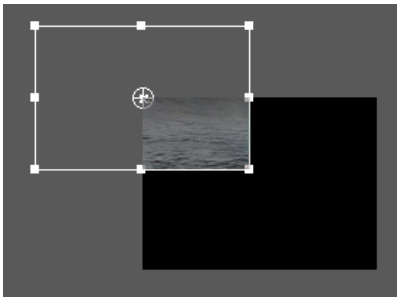

Figure 13 Program Monitor

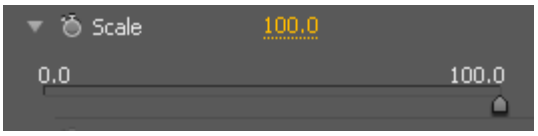

Figure 14 Motion effect Scale values

Figure 15 Motion effect Reset button

Figure 16 New keyframes for position and scale.

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5. Drag the CTI about two-thirds of the way into the clip and click the Add/Remove Keyframes button for both Position and Scale **(Figure 17)**.

   Note: You could also have clicked Reset again.

   That adds two more keyframes, with the same Motion parameters as the previous two (**Figure 18**).

6. Move the CTI to the out point of the clip (press Page Down and then the Left Arrow key) and change the Position values to 720, 480 (centered in the lower-right corner of the screen).

7. In the Program Monitor, drag a clip bounding-box corner handle to shrink the clip all the way down to the center cross hairs (**Figure 19**).

   Note: Macintosh users will see the entire motion track including all keyframes.

   The Motion effect Scale parameter is set to zero. The Effect Controls panel time ruler should look like **Figure 20**.

   Note: To change the scale of only one dimension (height or width), deselect Uniform Scale in the Effect Controls panel and then drag a side (not a corner) handle.

8. Play this clip.

   The clip should start as a tiny dot at the upper left, expand to full-screen in the center, hold there for a while, and then shrink to a dot in the lower-right corner.

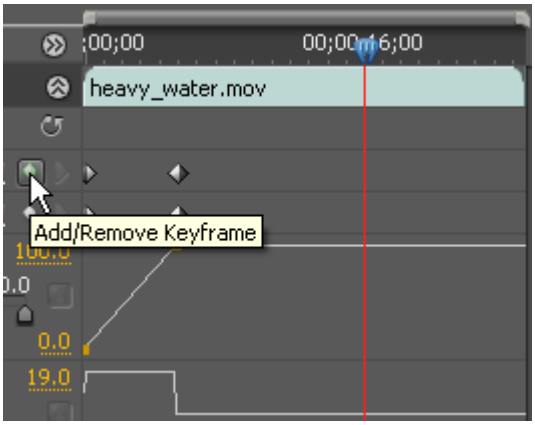

Figure 17 Add/Remove Keygram buttons

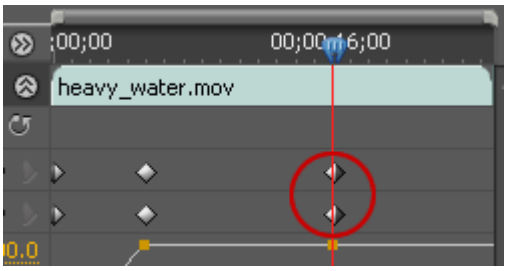

Figure 18 Motion effect Position and Scale keyframes

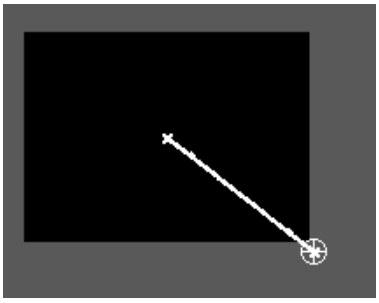

Figure 19 Program Monitor Motion track

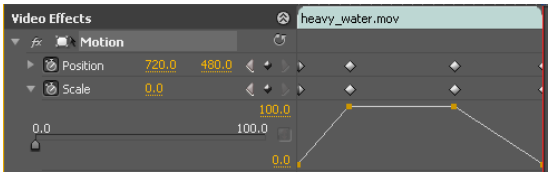

Figure 20 Effect Controls panel Motion parameters

How to set and adjust rotation

While clips are shrinking, expanding, and moving, they can also rotate. This task explains how to accomplish this.

1. Continue where you left off in the previous task.
2. In the Effect Controls panel, drag the CTI to the beginning of the clip and click the Rotation Toggle Animation stopwatch.

   That sets a keyframe for Rotation with 0.0° (the default value) as the starting point (**Figure 21**).
3. Click the Go To Next Keyframe button for either Position or Scale to move the CTI to the second keyframe in the time ruler (**Figure 21**).
4. In the Program Monitor, hover the pointer just outside a handle of the clip's bounding box until the pointer turns to a curved double-arrow. Drag the bounding box clockwise two full rotations (**Figure 22**).

   In the Effect Controls panel, the Motion effect Rotation parameter should have a value close to 2x0.0°. You can fine-tune that figure by typing a value.
5. Click the Go To Next Keyframe button for either Position or Scale to move the CTI to the third keyframe, and click the Add/Remove Keyframe button for Rotation.

   That adds a keyframe, with the same value as the preceding keyframe.
6. Move the CTI to the out point of the clip (press Page Down and then the Left Arrow key).
7. Expand the Rotation parameters and then set Rotation to its default value of 0.0° (**Figure 23**).

   Instead, you could drag the Rotation circle counterclockwise twice but it's not easy to arrive at exactly 0.0°

   Note: Even though you previously used the rotation tool on the clip's bounding box in the Program Monitor, you can't now because the Scale is zero at the out point of the clip (the clip has been shrunk to a point) and there are no bounding box handles to move.
8. Play this clip.

   It rotates clockwise twice, holds, and then rotates counterclockwise twice.

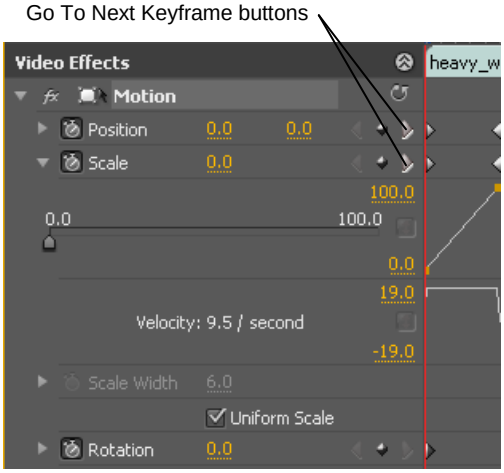

Figure 21 Motion effect Rotation parameter

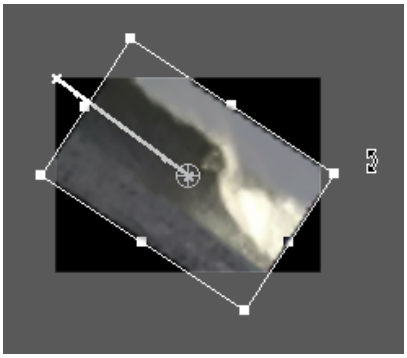

Figure 22 Rotation tool

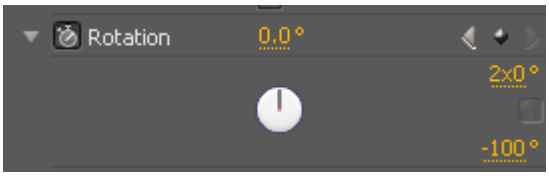

Figure 23 Rotation control and keyframes

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How to set and adjust the anchor point

Most of the time you will probably want to leave the anchor point in its default location in the center of the clip. But there are plenty of exceptions. For example, some logos are off-center within the clip. If you want to rotate a logo around its center (instead of around the center of the clip), you need to move the anchor point to the center of the logo.

1. Continue where you left off in the previous task.
2. Return the CTI to the beginning of the clip.
3. In the Effect Controls panel, click the Anchor Point's Toggle Animation stopwatch and set the numeric values to 0.0, 0.0 (**Figure 24**).

   Note: Anchor Point uses the same coordinate system as Position. The upper-left corner of the clip is 0.0, 0.0 and the lower right is 720, 480. These anchor point coordinates are independent of the clip scale. You can set anchor points outside the clip to have the clip rotate around a point on the screen. Try –100, –100, for example.
4. Play the clip.

   The clip rotates clockwise twice and counterclockwise twice, using its upper-left corner as the center of rotation.
5. In the Effect Controls panel, move to the second keyframe and change the values for Anchor Point to 360, 240 (putting the clip's center of rotation in the center of the clip—its default location).
6. Drag the CTI to a point between the first and second keyframes and look at the clip's anchor point in the Program Monitor (**Figure 25**).

   The anchor point is near the clip's upper-left corner. As the clip moves toward the center of the screen, the anchor point moves to the center of the clip.

   Note: You can adjust the Anchor Point values only in the Effect Controls panel. You cannot drag the Anchor Point to a new position in the Program Monitor.
7. In the Effect Controls panel, go to the third keyframe and click the Anchor Point's Add/Remove Keyframe button to add a keyframe there, using the previous keyframe's values (anchor point centered in the clip).
8. Move to the fourth keyframe and change the Anchor Point to 720, 480 (setting the clip's anchor point—center of rotation—to its lower-right corner).
9. Play this clip.

   As the clip spins on and off the screen, the anchor point gradually moves from the clip's upper-left corner to its lower-right corner.

Figure 24 Motion effect Anchor Point parameter

Figure 25 Clip bounding box and anchor point