Using keyframing effects

Note: Be sure to move the playhead over the clip you're working with when applying effects so you can view your changes as you work. Selecting the clip alone will not make it visible in the Program Monitor.

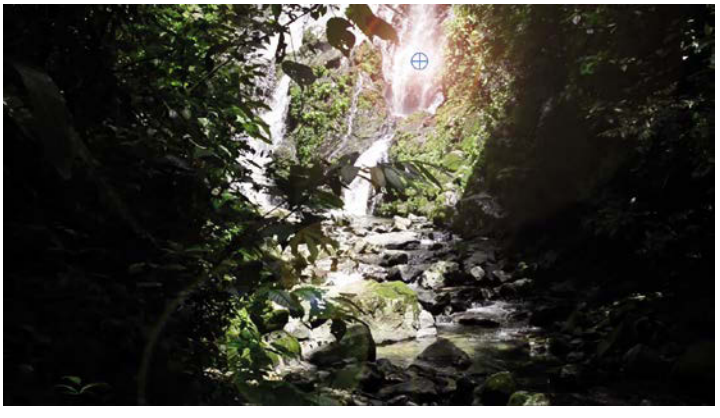
When you add keyframes to an effect, you're setting particular values at that moment in time. One keyframe will keep information for one setting. If, for example, you were intending to keyframe Position, Scale, and Rotation, you would need three separate keyframes.

Set keyframes at precise moments where you need a particular setting and let Premiere Pro work out how to animate the controls between them.

Adding keyframes

You can change almost all parameters for all video effects over time using keyframes. For example, you can have a clip gradually change out of focus, change color, or lengthen its shadow.

1. Open the sequence 05 Keyframes.
2. View the sequence to get familiar with the footage and then position the Timeline playhead over the first frame of the clip.
3. In the Effects panel, locate the Lens Flare effect and apply it to the clip in the sequence.
4. In the Effect Controls panel, select the Lens Flare effect heading. With the effect selected, the Program Monitor displays a small control handle. Use the handle to reposition the lens flare to match the following figure so that the center of the effect is at the top of the waterfall.



5 Make sure the Effect Controls panel Timeline is visible. If it isn't, click the Show/Hide Timeline View button at the top right of the panel to toggle the display.

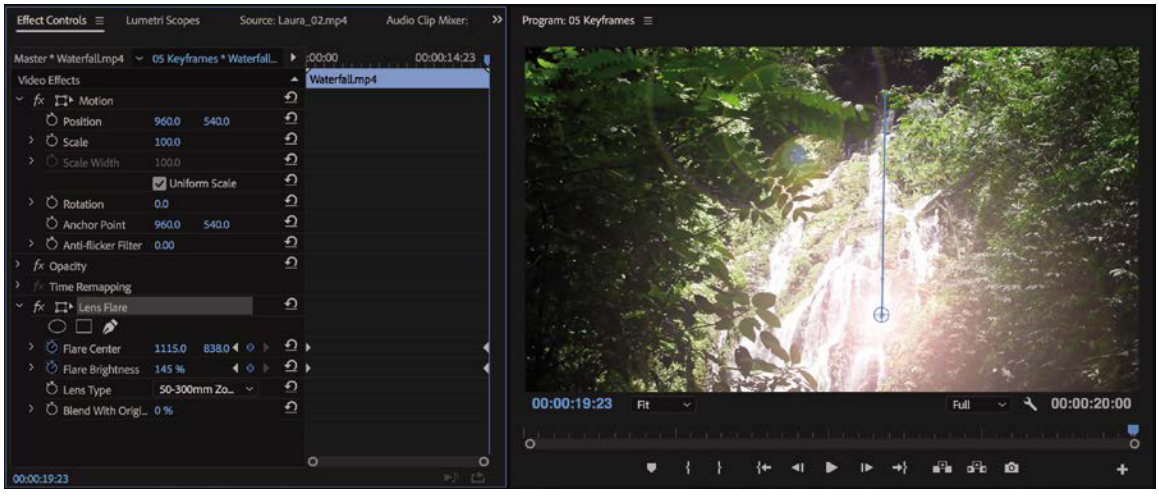
6 Click the stopwatch icons to toggle animation for the Flare Center and Flare Brightness properties.

Clicking the Stopwatch icon enables keyframing and adds a keyframe at the current location with the current settings.

7 Move the playhead to the end of the clip.

You can drag the playhead directly in the Effect Controls panel. Make sure you see the last frame of video and not black.

8 Adjust Flare Center and Flare Brightness settings so the flare drifts across the screen with the camera pan and gets brighter. Use the following figure for guidance.



9 Play the sequence to watch the effect animate over time.

Tip: Be sure to use the Next Keyframe and Previous Keyframe buttons to move between keyframes efficiently. This will keep you from adding unwanted keyframes.

Adding keyframe interpolation and velocity

Keyframe interpolation changes the behavior of an effect setting as it moves between keyframes with different settings. The default behavior you've seen so far is linear; in other words, you have a constant change between keyframes. What generally works better is something that mirrors your experience or exaggerates it, such as a gradual acceleration or deceleration.

Premiere Pro offers a way to control those changes: keyframe interpolation and the Velocity graph. Keyframe interpolation is easy (two clicks), whereas tweaking the Velocity graph can be challenging. Getting a handle on this feature will take some time and practice.

1 Open the sequence 06 Interpolation.

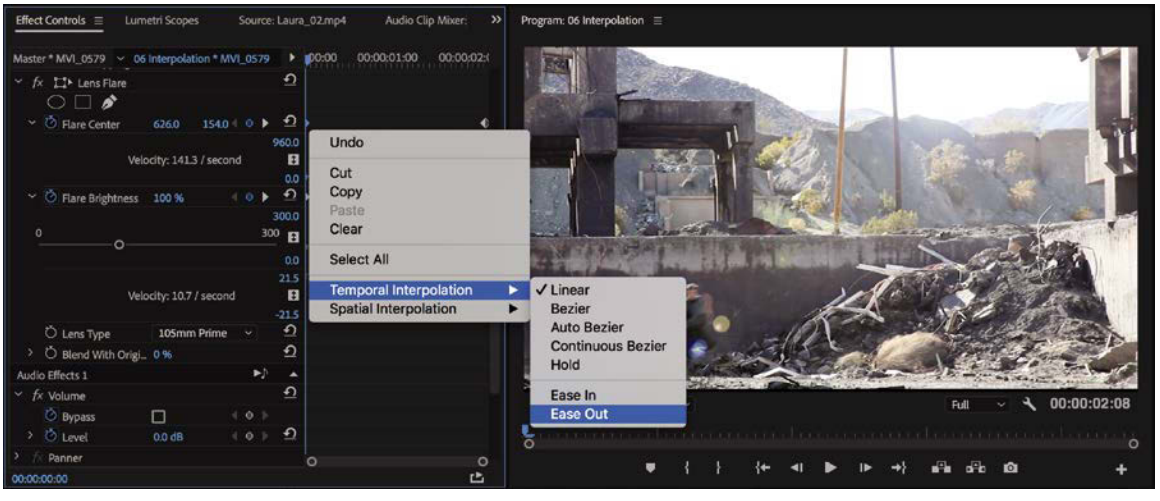
2 Position the playhead at the beginning of the clip, and select the clip.

A Lens Flare effect has already been applied to this clip and is currently animated. However, the movement begins before the camera, which isn't very natural-looking.

3 Toggle the Lens Flare effect off and on by clicking the "fx" button fx next to the effect name in the Effect Controls panel so you can see the result.

4 In the Timeline view of the Effect Controls panel, right-click the first keyframe for the Flare Center property.

5 Choose the Temporal Interpolation > Ease Out method to create a gentle transition into the move from the keyframe.



6 Right-click the second keyframe for the Flare Center property and choose Temporal Interpolation > Ease In. This creates a gentle transition from the stationary position of the last keyframe.

Let's modify the Flare Brightness property.

7 Click the first keyframe for Flare Brightness and then hold down the Shift key and click the second keyframe so both are active.

8 Right-click either Flare Brightness keyframe and choose Auto Bézier to create a gentle animation between the two properties.

Note: When working with position-related parameters, the context menu for a keyframe will offer two types of interpolation: spatial (related to location) and temporal (related to time). You can make spatial adjustments in the Program Monitor as well as in the Effect Controls panel if you select the effect. You can make temporal adjustments on the clip in the Timeline and in the Effect Controls panel. These motion-related topics are covered in Lesson 9, "Putting Clips in Motion."

9 Play back the animation to watch the changes you've made.

Let's further refine the keyframes with the Velocity graph.

10 Hover the mouse cursor over the Effect Controls panel and then, if your keyboard has the key, press ` (grave) to maximize the panel full-screen; or, double-click the panel name. This will give you a clearer view of the keyframe controls.

11 If necessary, click the disclosure triangles next to the Flare Center and Flare Brightness properties to show the adjustable properties.

The Velocity graph shows the velocity between keyframes. The sudden drops or jumps represent sudden changes in acceleration—*jerks*, in physics parlance. The farther the point or line is from the center, the greater the velocity.

12 Select a keyframe and then adjust its extended handle to change the steepness of the velocity curve.

13 Press the ` (grave) key, or double-click the panel name to restore the Effect Controls panel.

14 Play back your sequence to see the impact of your changes. Experiment some more until you have the hang of keyframes and interpolation.

Understanding interpolation methods

Here's a rundown of the keyframe interpolation methods available in Premiere Pro:

- **Linear:** This is the default behavior and creates a uniform rate of change between keyframes.
- **Bézier:** This lets you manually adjust the shape of the graph on either side of a keyframe. Béziers allow for sudden or smooth acceleration into or out of a keyframe.
- **Continuous Bézier:** This method creates a smooth rate of change through a keyframe. Unlike regular Bézier keyframes, if you adjust one handle of a Continuous Bézier keyframe, the handle on the other side moves equally to maintain a smooth transition through the keyframe.
- **Auto Bézier:** This method creates a smooth rate of change through a keyframe even if you change the keyframe value. If you choose to manually adjust the keyframe's handles, it changes to a Continuous Bézier point, retaining the smooth transition through the keyframe. The Auto Bézier option can occasionally produce unwanted motion, so try one of the other options first.
- **Hold:** This method changes a property value without a gradual transition (a sudden effect change). The graph following a keyframe with the Hold interpolation applied appears as a horizontal straight line.
- **Ease In:** This method slows down the value changes entering a keyframe and converts it to a Bézier keyframe.
- **Ease Out:** This method gradually accelerates the value changes leaving a keyframe and converts it to a Bézier keyframe.

Using effect presets

To save time on repeated tasks, Premiere Pro supports effect presets. You'll find that there are several prebuilt presets included for specific tasks already, but the true power of effects lies in creating your own presets to solve repetitive tasks. A single preset can contain more than one effect and can even include keyframes for animation.

Using built-in presets

The effect presets provided with Premiere Pro are useful for tasks such as beveling, picture-in-picture (PIP) effects, and stylized transitions.

1 Open the sequence 07 Presets.

This sequence has a slow start—the emphasis is on the texture of the background. Let's use a preset to add visual interest to the opening of the shot.

2 In the Effects panel, browse inside the Presets > Solarizes category to find the Solarize In preset.

3 Drag the Solarize In preset onto the clip in the sequence.

4 Play back the sequence to watch the Solarize effect transform the opening.

5 Click the clip, and view its controls in the Effect Controls panel.

6 Experiment with adjusting the position of the second keyframe in the Effect Controls panel to customize the effect. If you extend the timing of the effect, it creates a more pleasing start to the shot.

Saving effect presets

Although there are several built-in effect presets to choose from, creating your own is also easy. You can also import and export presets to share them between editing systems.

1 Open the sequence 08 Creating Presets.

This Timeline has two clips, each with an adjustment layer, and two instances of an opening title.

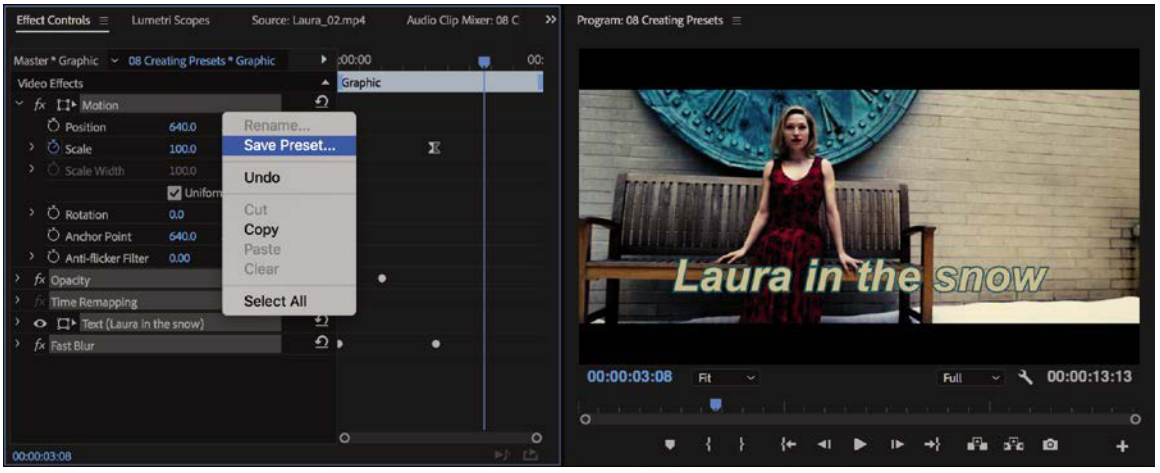
2 Play the sequence to watch the initial animation.

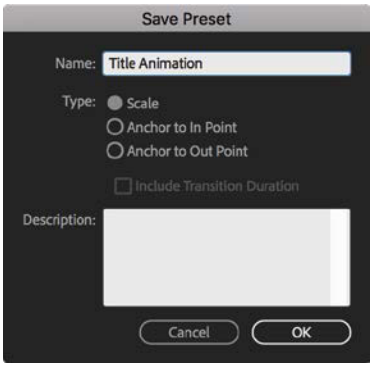
3 Select the first instance of the "Laura in the snow" title clip on V3.

4 Click in the Effect Controls panel to make it active, and choose Edit > Select All to select all the effects applied to the clip.

You can also select individual effects if you want to include only some of them in the preset.

5 Right-click any of the selected effects in the Effect Controls panel and choose Save Preset.





6 In the Save Preset dialog, name the effect Title Animation.

There are three options for the way keyframes in the preset will be adapted for new clips with differing durations:

- **Scale:** Proportionally scales the source keyframes to the length of the target clip. Any existing keyframes on the original clip are deleted.
- **Anchor To In Point:** Preserves the position of the first keyframe as well as the relationship of other keyframes in a clip. Other keyframes are added to the clip relative to its In point. Use this option for this exercise.
- **Anchor To Out Point:** Preserves the position of the last keyframe as well as the relationship of other keyframes in a clip. Other keyframes are added to the clip relative to its Out point.

7 For this preset, choose Anchor To In Point so the timing matches at the start of each clip the preset is applied to.

8 Click OK to store the effects and keyframes as a new preset.

9 In the Effects panel, locate the Presets category and the newly created Title Animation preset.

▶ **Tip:** Effect presets can be exported and imported, so they can be shared. You'll find a number of free presets at https://premierepro.net/jarles-premiere-pro-presets-version-4/.

10 Drag the new Title Animation preset onto the second instance of the "Laura in the snow" title clip on the V3 track in the Timeline.

11 Watch the sequence play back to see the newly applied title animation.

Using multiple GPUs

If you'd like to speed up the rendering of effects or the export of clips, consider adding an additional GPU card. If you're using a tower or workstation, you may have an additional slot that can support a second graphics card. An additional GPU won't improve playback performance when previewing real-time effects or displaying multiple layers of video, but Premiere Pro takes full advantage of computers with multiple GPU cards to significantly accelerate render and export times. You can find additional details about supported cards on the Adobe website.

Using frequently used effects

In this lesson, you've explored several effects. Although it's beyond the scope of this book to explore all the options, here are a few additional effects that are useful in many editing situations.

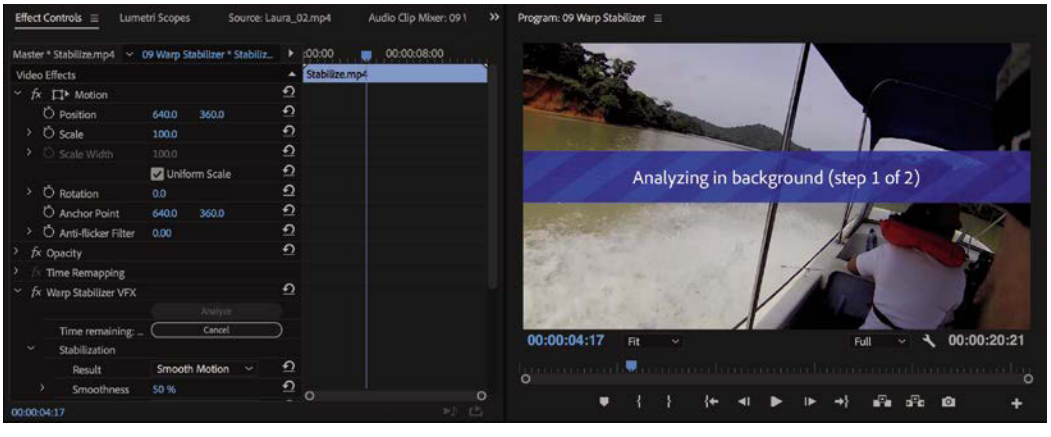
Applying image stabilization and rolling shutter reduction

The Warp Stabilizer effect can remove jitter caused by camera movement (which is more and more common with today's lightweight cameras). The effect is useful because it can remove unstable parallax-type movements (where images appear to shift on planes).

Let's explore the effect.

1. Open the sequence 09 Warp Stabilizer.
2. Play the first clip in the sequence to see the wobbly shot.
3. In the Effects panel, locate the Warp Stabilizer VFX effect and apply it to the shot.

   The clip is analyzed.



A banner across the footage lets you know you'll need to wait before working with the effect. There's also a detailed progress indicator in the Effect Controls panel. The analysis takes place in the background, so you can carry on working while waiting for it to complete.

4 Once the analysis has completed, you can adjust settings in the Effect Controls panel to improve results by choosing options that better suit the shot.

- **Result:** You can choose Smooth Motion to retain the general camera movement (albeit stabilized), or you can choose No Motion to attempt to remove all camera movement. For this exercise, choose Smooth Motion.
- **Method:** You can use the four methods available. The two most powerful, because they warp and process the image more heavily, are Perspective and Subspace Warp. If either method creates too much distortion, you can try switching to Position, Scale, Rotation or just to Position.
- **Smoothness:** This option specifies how much of the original camera movement should be retained for Smooth Motion. Use a higher value to smooth out the shot the most. Experiment with this shot until you're happy with its stability.

5 Play back the clip.

The impact is pretty dramatic.

6 Repeat the process for the second clip in the sequence. This time, set the Warp Stabilizer Result menu to No Motion.

This is a common example of a shot that was intended to be static but, being handheld, has a little wobble. Warp Stabilizer is effective at locking these kinds of shots in position.

Tip: If you notice that some of the details in the shot appear to wobble, you may be able to improve the overall effect. In the Advanced section, choose Detailed Analysis. This makes the Analysis phase do extra work to find elements to track. You can also use the Enhanced Reduction option from the Rolling Shutter Ripple option in the Advanced category. These options are slower to calculate but produce superior results.

Using the Timecode and Clip Name effects

If you need to send a review copy of a sequence to a client or colleague, the Timecode and Clip Name effects are useful. You can apply the Timecode effect to an adjustment layer and have it generate a visible timecode for the entire sequence. You can enable a similar timecode overlay when exporting media, but the effect has more options.

This is helpful because it allows others to make specific feedback based on a unique point in time. You can control the display of position, size, opacity, the timecode itself, and its format and source.

Note: If you work with multiple sequences with different settings in a single project, it's worth naming adjustment layers to make it easier to identify their resolution.

1 Open the sequence 10 Timecode Burn-In.

2 At the bottom of the Project panel, click the New Item menu, and choose Adjustment Layer. Click OK.

A new adjustment layer is added to the Project panel, with settings that match your current sequence.

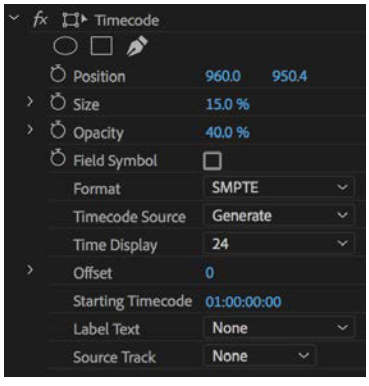
3 Drag the adjustment layer to the beginning of track V2 in the current sequence.

4 Drag the right edge of the new adjustment layer to the right to trim it to the end of the sequence. The adjustment layer should cover all three clips.

5 In the Effects panel, locate the Timecode effect. Drag it onto the adjustment layer to apply it.

6 In the Effect Controls panel, make sure Time Display is set to 24 to match the frame rate of the sequence.

7 Choose a timecode source. In this case, use the Generate option, set the Starting Timecode option to 01:00:00:00 to match the sequence, and deselect the Field Symbol option (this footage is progressive, so it does not have fields).



8 Adjust the Position and Size options to your preference.

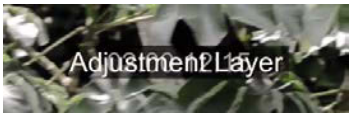
It's a good idea to move the timecode window so it's not blocking critical action in the scene or obscuring any graphics. If you plan to post the video to the web for review, be sure to size the timecode burn-in so it's easy to read.

Now let's apply an effect that will display the name of each clip in the exported movie. This will make it easier to get specific feedback from a client or collaborator.

9 In the Effects panel, search for the Clip Name effect.

10 Apply the Clip Name effect to the adjustment layer clip.

By default, the clip name appears in the same location on-screen as the timecode. It also shows the name of the clip you applied it to, which in this case is Adjustment Layer—not very useful!



11 In the Effect Controls panel, set the Clip Name effect Source Track menu to Video 1. Now the clip names from the V1 track are displayed.

Tip: You can click the Timecode or Clip Name effect heading in the Effect Controls panel and then drag the displayed information directly in the Program Monitor to reposition it.

12 Use the Clip Name effect Position controls to place the displayed name somewhere different than the existing Timecode effect.

13 Clear the Effects panel find box by clicking the X.

Using immersive video effects

Premiere Pro includes comprehensive tools and effects for equirectangular 360 video (often referred to as *VR video* or *immersive video*).

The effects workflow for 360 video is similar to the workflow for any other kind of video. However, there are dedicated effects available that take into account the wraparound nature of 360 video.

The fact that 360 video seamlessly surrounds the viewer and can connect on all sides (depending on the configuration) does not impact most visual effects. The exception is any effect that generates changes to surrounding pixels, such as blurs and glows. These effects make changes to multiple pixels, and only effects specially designed to work with seamless 360 video images will result in an image without a visible join along the original edges.

Let's try this.

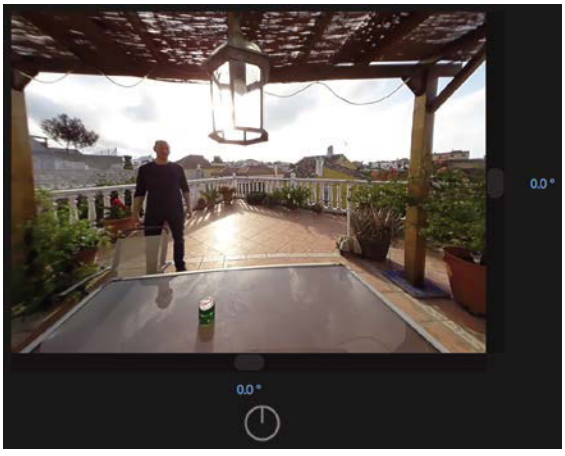
1 Open the sequence 11 Immersive Video.

This is equirectangular 360 video, so let's switch to the VR video viewing mode in the Program Monitor.

2 Use the Program Monitor Settings menu to enable VR video.

3 The viewing angle is a little narrow by default. Go to the Program Monitor Settings menu, and choose VR Video > Settings.

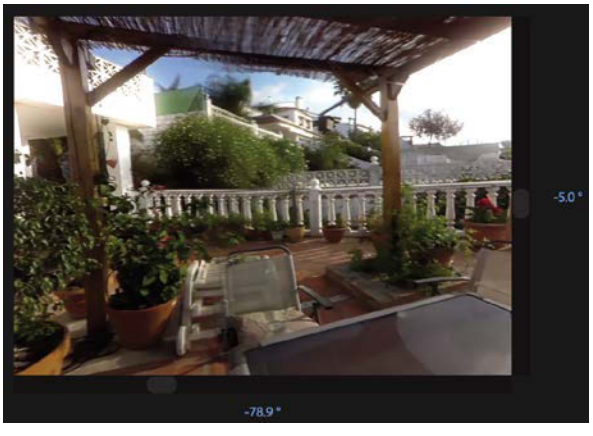
4 Set the Monitor View Horizontal to 150, and click OK.



5 In the Effects panel, find the VR Glow effect, in the Video Effects > Immersive Video category. Add the effect to the video clip in the sequence.

This is a processing-intensive effect, and you may find the preview is slower to update than when working with other effects.

6 Try dragging the image in the Program Monitor to see different views.



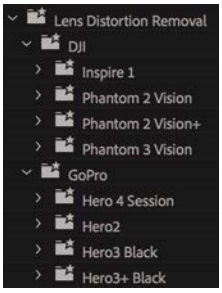
The original video clip has some minor "stitching" errors, where the overlap between sections of the image is visible. However, the glow effect is seamless.

7 Like other effects, you'll find settings for the VR Glow effect in the Effect Controls panel. Experiment with the VR Glow settings.

8 When you have finished, use the Program Monitor Settings menu to disable VR video mode.

Removing lens distortion

Action and point-of-view (POV) cameras such as the GoPro and DJI Phantom are very popular, especially with the advent of affordable aerial camera mounts. While the results can be amazing, the wide-angle lenses can introduce unwanted distortion.



The Lens Distortion effect can be used to introduce the appearance of lens distortion as a creative look. It can also be used to correct lens distortion. Premiere Pro has a number of built-in presets intended to correct distortion from popular cameras. You'll find the presets in the Effects panel, under Lens Distortion Removal.

Remember, you can make a preset from any effect, so if you are working with a camera that has no existing preset, you can always create your own.

Rendering all sequences

If you have several sequences with effects you want to render, you can render them all as a batch, without opening each sequence to render it individually.

Simply select the sequences you would like to render in the Project panel and choose Sequence > Render Effects In To Out.

All effects that need to render in the selected sequences will be rendered.

Rendering and replacing

If you are working on a low-powered system and your media is high resolution, you may find media tends not to preview without dropping frames. You may also see dropped frames when working with dynamically linked After Effects compositions or complex third-party visual effects that don't support GPU acceleration.

If all your media is high resolution, you may decide to use the proxy workflow. However, if just one or two clips are difficult to play back, you also have the option to render the clips as a new media file and replace the original item in a sequence quickly and easily.

To replace a sequence clip segment with a version that's easier to play back, right-click the clip and choose Render And Replace.

The Render And Replace dialog has similar options to the proxy workflow. Here are the main settings:

- **Source:** Create a new media file that matches the frame rate and frame size of the sequence or of the original media, or use a preset.
- **Format:** Specify your preferred file type. Different formats give access to different encoders.
- **Preset:** While you can use a custom preset created with Adobe Media Encoder, several are included by default—choose one here.

Once you have chosen a preset and a location for the new file, click OK and the sequence clip is replaced.

A rendered and replaced clip is no longer directly linked to the original media—it's a new media file. This means, for example, changes made to a dynamically linked After Effect composition will not update in Premiere Pro. To restore the link to the original item, right-click the clip and choose Restore Unrendered.

Review questions

1. What are two ways to apply an effect to a clip?
2. List three ways to add a keyframe.
3. Dragging an effect onto a clip turns on its parameters in the Effect Controls panel, but you don't see the effect in the Program Monitor. Why not?
4. Describe how you can apply one effect to a range of clips.
5. Describe how to save multiple effects to a custom preset.

Review answers

1. Drag the effect to the clip, or select the clip and double-click the effect in the Effects panel.
2. Move the playhead in the Effect Controls panel to where you want a keyframe and activate keyframing by clicking the "Toggle animation" button; move the playhead and click the Add/Remove Keyframe button; and with keyframing activated, move the playhead to a position and change a parameter.
3. You need to move the Timeline playhead to the selected clip to see it in the Program Monitor. Selecting a clip does not move the playhead to that clip.
4. You can add an adjustment layer above the clips you want to affect. You can then apply an effect that will modify all the clips below the layer. You can also select the clips you would like to apply the effect to and then drag the effect onto the group, or double-click the effect in the Effects panel.
5. You can click the Effect Controls panel and choose Edit > Select All. You can also Ctrl-click (Windows) or Command-click (macOS) multiple effects in the Effect Controls panel. Once the effects are selected, choose the Save Preset command from the Effect Controls panel menu.