

Starting the lesson

The art and craft of video editing is perhaps best demonstrated during the phase after the first version of your sequence is completed. Once you've chosen your shots and put them in approximately the right order, the process of carefully adjusting the timing of your edits begins.

In this lesson, you'll learn about additional controls in the Program Monitor and discover how markers help you stay organized.

You'll also learn about working with clips that are already on the Timeline—the “nonlinear” part of nonlinear editing with Adobe Premiere Pro CC.

Before you begin, make sure you are using the Editing workspace.

- 1 Open the file Lesson 06.prproj from the Lesson 06 folder.
- 2 Choose File > Save As.
- 3 Rename the file Lesson 06 Working.prproj.
- 4 Choose a location on your hard drive, and click Save to save the project.
- 5 Reset the workspace to the default; in the Workspaces panel, click Editing. Then open the menu next to the Editing option, and choose Reset To Saved Layout.

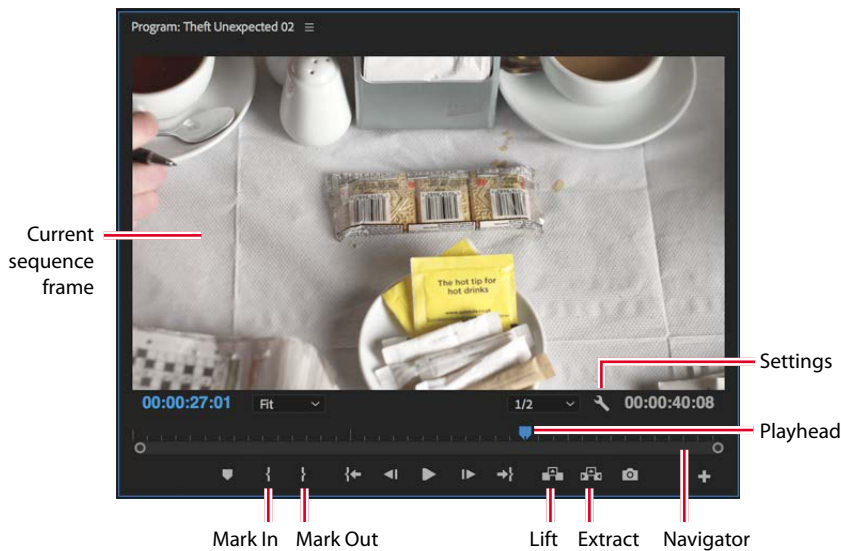
Using Program Monitor controls

The Program Monitor is almost identical to the Source Monitor, but there are a small number of important differences.

What is the Program Monitor?

The Program Monitor displays the frame your sequence playhead is sitting on, or playing. The sequence in the Timeline shows the clip segments and tracks, while the Program Monitor shows the resulting video output. The Program Monitor time ruler is a miniature version of the Timeline.

In the early stages of editing, you're likely to spend a lot of time working with the Source Monitor. Once your sequence is roughly edited together, you will spend most of your time using the Program Monitor and the Timeline.



The Program Monitor vs. the Source Monitor

The key differences between the Program Monitor and the Source Monitor are as follows:

- The Source Monitor shows the contents of a clip; the Program Monitor shows the contents of whichever sequence is currently displayed in the Timeline.
- The Source Monitor has Insert and Overwrite buttons for adding clips (or parts of clips) to sequences. The Program Monitor has equivalent Extract and Lift buttons for removing clips (or parts of clips) from sequences.
- Both monitors have a time ruler. The playhead on the Program Monitor matches the playhead in the sequence you're currently viewing in the Timeline panel (the name of the current sequence is displayed at the top left of the Program Monitor). As one playhead moves, the other moves as well, so you can use either panel to change the currently displayed frame.
- When you work with special effects in Premiere Pro, you'll see the results in the Program Monitor. There's one exception to this rule: Master clip effects are viewed in both the Source Monitor and the Program Monitor (for more information about effects, see Lesson 13, "Adding Video Effects").
- The Mark In and Mark Out buttons on the Program Monitor work in the same way as the ones on the Source Monitor. In and Out marks are added to the currently displayed sequence when you add them in the Program Monitor.

Adding clips to the Timeline with the Program Monitor

You've already learned how to make a partial clip selection with the Source Monitor and then add the clip to a sequence by pressing a key, clicking a button, or dragging and dropping.

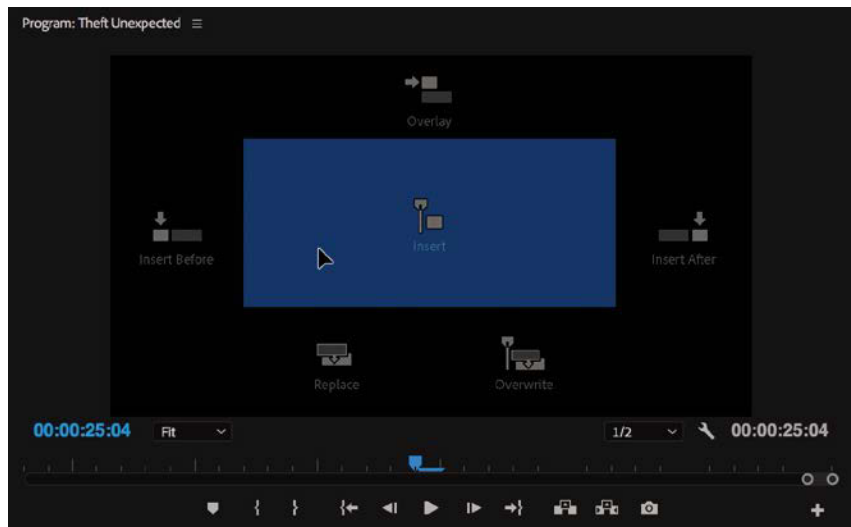
You can also drag and drop a clip from the Source Monitor into the Program Monitor to add it to the Timeline.

► **Tip:** You can use the Left Arrow and Right Arrow keys to expand and collapse bins in the Project panel when it's in the List view.

► **Tip:** You can press the End key (Windows) or fn+Right Arrow key (macOS) to move the playhead to the end of the sequence. You can press Home (Windows) or fn+Left Arrow key (macOS) to move the playhead to the start of the sequence.

► **Tip:** Remember that you can click the timecode display, type the numbers without punctuation, and then press Enter to send the playhead to that time.

- 1 In the Sequences bin, open the Theft Unexpected sequence.
- 2 Position the Timeline playhead at the end of the sequence, just after the last frame of the clip Mid John. You can hold the Shift key to snap the playhead to edits, or you can press the Up Arrow and Down Arrow keys to navigate between edits.
- 3 Open the clip HS Suit from the Theft Unexpected bin in the Source Monitor. This is a clip that has already been used in the sequence, but you want a different part.
- 4 Set an In mark for the clip around 01:26:49:00. There's not much going on in the shot, so it works well as a cutaway. Add an Out point around 01:26:52:00 so you have a little time with the man in the suit.
- 5 Click in the middle of the picture in the Source Monitor and drag the clip into the Program Monitor, but don't release the mouse yet.



Several overlay images appear in the Program Monitor, each highlighting a drop zone that gives different options for the edit you're about to perform.

The overlays give maximum flexibility when editing by touch, with a computer screen that allows touch interaction. You can use the mouse to drag clips in, as well as drag clips by touch.

As you move the cursor over each overlay, it's highlighted to indicate the type of edit you will apply if you release the mouse button.

Here's the list of options:

- **Insert:** This performs an insert edit, using the source track selection buttons to choose the track (or tracks) the clip will land on.
- **Overwrite:** This performs an overwrite edit, using the source track selection buttons to choose the track (or tracks) the clip will land on.
- **Overlay:** If you have a clip selected on the Timeline, the new clip will be added to the next available track above the selected clip. If there's already a clip on the next track, the one above that is used, and so on.
- **Replace:** The new clip will replace the clip currently under the Timeline playhead (more on replace edits in Lesson 8, "Advanced Editing Techniques").
- **Insert After:** The new clip will be inserted immediately after the clip currently under the Timeline playhead.
- **Insert Before:** The new clip will be inserted immediately before the clip currently under the Timeline playhead.

For this edit, no clip is selected on the Timeline, and there are no clips in the way to overwrite. Choose Insert—just because it's the largest drop zone and easier to aim for.

When you release the mouse button, the clip is edited into the sequence at the playhead position, and your edit is complete.

● **Note:** When you drag a clip into your sequence using the mouse, Premiere Pro still uses the Timeline Source Channel Selection buttons to control which parts of the clip (video and audio channels) are used.

Insert editing with the Program Monitor

Let's try an insert edit into the middle of the sequence using the same technique.

- 1 Position the Timeline playhead on the edit at 00:00:16:01, between the Mid Suit and Mid John shots. The continuity of movement isn't good on this cut, so let's add another part of that HS Suit clip.
- 2 Add a new In mark and Out mark to the HS Suit clip in the Source Monitor. Choose any part you like, selecting about 2 seconds in total. You can see the selected duration at the lower-right corner of the Source Monitor, displayed in white numbers.



- 3 Once again, drag the clip from the Source Monitor into the Program Monitor, making sure to drop the clip onto the insert overlay. When you release the mouse button, the clip is inserted into your sequence.

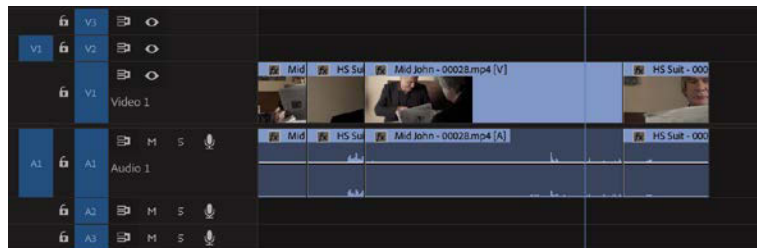


If you prefer to drag clips into your sequence, rather than using keyboard shortcuts, clicking the Insert and Overwrite buttons on the Source Monitor, or dragging into the Program Monitor, there's still a way to bring in just the video or audio part of a clip.

Let's try a combination of techniques. You'll set up your Timeline track headers and then drag and drop into the Program Monitor.



Note: Remember, only the source track selection buttons matter when editing clips into a sequence, not the Timeline track selection buttons.

- 1 Position the Timeline playhead at 00:00:25:20, just before John takes out his pen.
- 2 On the Timeline track headers, drag the Source V1 track selection button next to the Timeline Video 2 track. For the technique you're about to use, the track targeting is used to set the location of the clip you are adding.



- 3 Open the Mid Suit clip in the Source Monitor. At about 01:15:54:00, John is wielding his pen. Add an In mark there.

- 4 Add an Out mark at about 01:15:56:00. You just need a quick alternative angle.

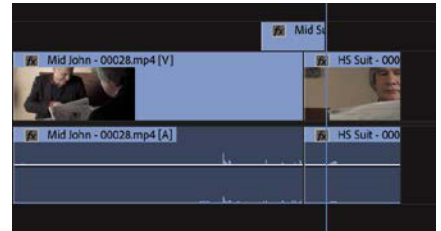
At the bottom of the Source Monitor, you'll see the Drag Video Only and Drag Audio Only icons  .

These icons serve two primary purposes.

- They tell you whether your clip has video, audio, or both. If there is no video, for example, the filmstrip icon is dimmed. If there is no audio, the waveform is dimmed.
- You can drag them with the mouse to selectively edit video or audio into your sequence.

- 5 Drag the filmstrip icon from the bottom of the Source Monitor into the Program Monitor, and release it on the Overwrite option. When you release the mouse button, just the video part of the clip is added to the Video 2 track on the Timeline.

This works even if both the Source Video and Source Audio selection buttons are enabled, so it's a quick, intuitive way to select the part of a clip you want. You could achieve the same effect by selectively disabling Source track selection buttons.



- 6 Play your sequence from the beginning.

The timing may not be perfect, but the edit is off to a good start. The clip you just added plays in front of the end of the Mid John clip and the start of the HS Suit clip, changing the timing. Because Premiere Pro is a nonlinear editing system, you can adjust the timing later. You'll learn how to do this in Lesson 8, "Advanced Editing Techniques."

Why are there so many ways to edit clips into a sequence?

This method may seem like yet another way to achieve the same thing, so what's the benefit? It's simple: As screen resolution increases and buttons get smaller, it's an increasingly delicate maneuver to aim and click in the right place.

If you prefer to use the mouse (or your finger with a touch screen) to edit (rather than the keyboard), the Program Monitor represents a conveniently large drop zone for you to add clips to the Timeline. It gives you accurate placement of clips—using the track header controls and the position of the playhead (or your In and Out marks)—while allowing you to work intuitively.

Setting the playback resolution

The Mercury Playback Engine enables Premiere Pro to play multiple media types, special effects, and more in real time. Mercury uses the power of your computer hardware to boost performance. This means that the speed (and number of cores and breadth of instruction sets) of your CPU, the amount of RAM you have, the power of your GPU, and the speed of your storage drives are all factors that impact playback performance.

If your system has difficulty playing back every frame of video in your sequence (in the Program Monitor) or in your clip (in the Source Monitor), you can lower the playback resolution to make playback smoother. If you see your video playback stuttering, stopping, and starting, it usually indicates that your system is unable to play the file because of a hardware limitation.

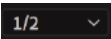
It's worth remembering that playing high-resolution video files is *hard*! A single frame of uncompressed full HD video is roughly equivalent to more than 8 million letters of text. UHD video (often described as 4K video) is four times that!

Reducing the resolution means you won't see every pixel in your pictures, but it can dramatically improve performance, making creative work much easier. It's common for video to have a much higher resolution than can be displayed, simply because your Source Monitor and Program Monitor are usually smaller than the original media size. This means you may not see a difference in the display when you lower the playback resolution.

Changing playback resolution

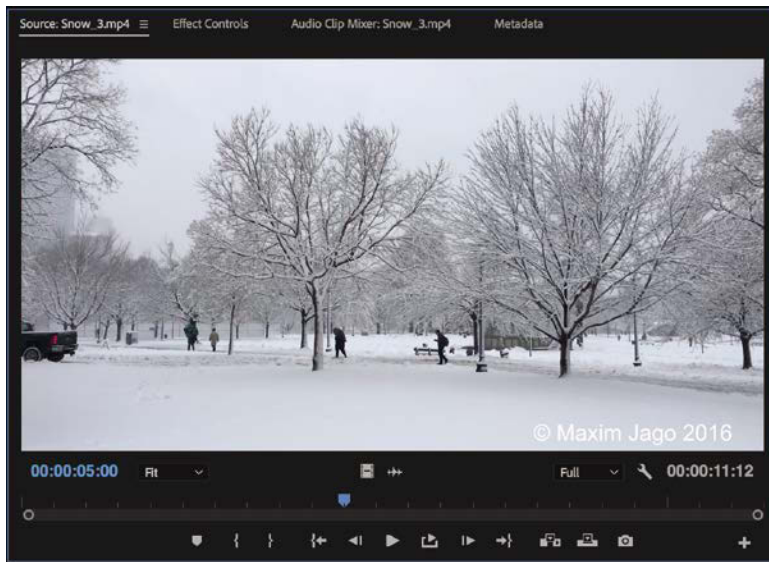
Let's try adjusting playback resolution.

- 1 Open the clip Snow_3 from the Boston Snow bin. By default, the clip should be displayed at half-resolution in the Source Monitor.



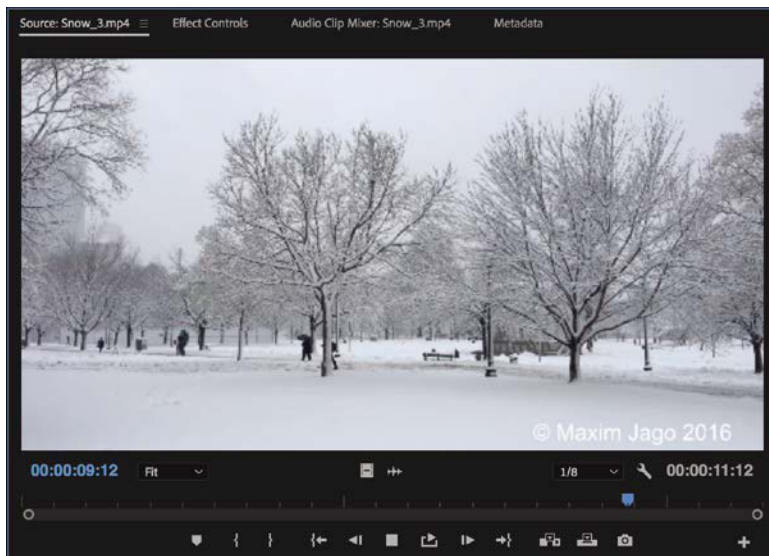
At the bottom right of the Source Monitor and Program Monitor, you'll see the Select Playback Resolution menu.

- 2 Play the clip to get a sense of the quality when it's set to half-resolution.
- 3 Change the resolution to Full, and play it again to compare. It probably looks similar.




- 4 Try reducing the resolution to 1/8. Now you might begin to see a difference during playback. Notice that the picture is sharp when you pause playback. This is because the pause resolution is independent of the playback resolution (see the next section).

You'll notice the biggest differences in picture elements like text. Compare the detail in the tree branches, for example.



● **Note:** The playback resolution controls are the same (but independent) on the Source Monitor and the Program Monitor.

- 5 Try dropping the playback resolution to 1/16. Premiere Pro makes an assessment of each kind of media you work with, and if the benefits of reducing resolution are less than the effort it takes to drop the resolution, the option is unavailable. In this case, the media is full 4K (4096 x 2160 pixels), and the 1/16 option is available.
- 6 Return the setting to 1/2, ready for the other footage in this project.

If you're working on a powerful computer, you may want to maximize the playback quality when previewing. There's an extra option to do this: Choose High Quality Playback in the Settings menu  for the Source Monitor or Program Monitor.

Changing resolution when playback is paused

The playback resolution control is also available in the Settings menu on the Source and Program Monitors.

If you look in that Settings menu on either monitor, you'll find a second option related to display resolution: Paused Resolution.



This menu works in the same way as the menu for playback resolution, but as you might have guessed, it changes the resolution only when the video is paused.

Most editors choose to leave Paused Resolution set to Full. That way, during playback you may see lower-resolution video, but when you pause, Premiere Pro reverts to showing you full resolution. This means when working with effects, you'll see the video at full resolution.

If you work with third-party special effects, it's possible you'll find they do not make use of your system hardware as efficiently as Premiere Pro does. As a consequence, it might take a long time to update the picture when you make changes to the effect settings. You can speed things up by lowering the paused resolution.

Playing back VR video

Virtual reality headsets for the home are now commonplace, and the demand for content is high. Premiere Pro has built-in support for 360 video, with clip interpretation options, immersive video visual effects, desktop playback controls, integrated VR headset playback, and Ambisonics Audio support.

Let's try playing a 360 video clip.

What's the difference between 360 video and virtual reality?

360 video is captured a little like a panoramic photo. Video is recorded in multiple directions, and the different camera angles are “stitched” into a complete sphere. The sphere is flattened into 2D video footage that’s described as *equirectangular*. This is the term used to describe the way globes showing the earth are flattened into atlases you can view in a book.

Equirectangular video looks distorted, which makes it hard to view and follow the action. However, although the appearance is strange for human eyes, it’s a regular video file like any other and Premiere Pro can work with it.

To view 360 video properly, it’s usually necessary to wear a virtual reality headset. In the headset, 360 video is presented as all around you, and you can turn your head to see different parts of the image. Because a VR headset is required to see 360 video properly, it’s often referred to as *VR video*.

True VR isn’t actually video. It’s a complete 3D environment you can move around in, viewing things from different directions, like 360 video, but also viewing things from different locations in the virtual reality space.

The key difference is this: In 360 video, you can view in different angles, but in true VR you can view from different locations within the scenario.

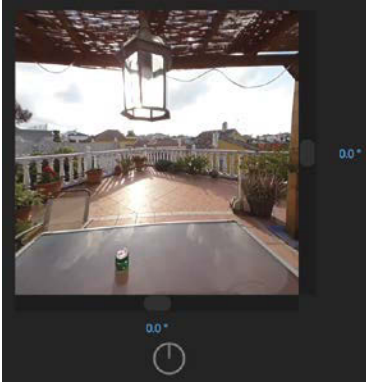
- 1 Browse into the Further Media bin, and open the clip 360 Intro.mp4 in the Source Monitor. Play the clip.



This is an introduction to a 360 video film. The clip is in 4K resolution, which might be difficult for your system to play back—lower the playback resolution if you need to do so.

The center of the image is quite easy to make out, but if you look toward the edges, it gets harder to follow what you're looking at.

That's because the clip is equi-rectangular video, where a spherical video intended for VR headsets has been flattened into a 3D image. To see this clearly, you're going to need to switch to the VR Video mode.



- 2 Click the Source Monitor's Settings menu, and choose VR Video > Enable.

Now the clip looks more like regular video, and additional controls appear in the Source Monitor.

Note: The Source Monitor and Program Monitor have identical VR video playback controls.

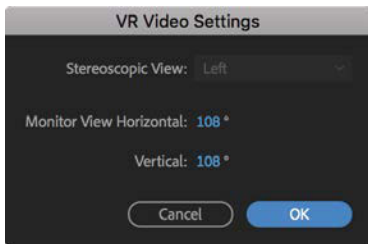
Tip: If you have a VR headset attached to your editing system, you'll find an option to view playback in the headset in the Monitor Settings menu, under VR Video.

- 3 Play the clip again. This time, while it plays, click into the image, and drag to change the angle of view.

The numbers under the image and to the right of the image allow you to precisely control the angle of view. They're helpful, but they take up a lot of space.

- 4 Go to the Source Monitor Settings menu, and choose VR Video > Hide Controls.

You can still click the image to change the angle of view, but now the image is much larger in the Source Monitor.



Also in the Settings menu, you'll find a VR Video Settings area, where you can specify the height and width of the view in degrees to emulate different VR headsets.

By default, the height and width are quite small. The ideal setting will match the intended VR headset field of view.

- 5 For now, open the Source Monitor's Settings menu, and choose VR Video > Enable to deselect it.

Using markers

Sometimes it can be difficult to remember where you saw that useful part of a shot or what you intended to do with it. Wouldn't it be useful if you could mark clips with comments and flag areas of interest for later?

What you need are markers.