Starting the lesson

Until now, you have been mainly working with single, whole-frame images. You have created edits where you have transitioned between one image and another or edited clips onto upper video tracks to have them appear in front of clips on lower video tracks.

In this lesson, you'll learn about ways to combine those layers of video. You'll still use clips on upper and lower tracks, but now they will become foreground and background elements in one blended composition.

This title…

…combines with this video…

…to produce this composite image.

The blend might come from cropping part of the foreground image or from *keying*—selecting a specific color to become transparent—but whatever the method, the way you edit clips onto a sequence is the same as ever.

Let's begin by learning about the important concept of *alpha*, which explains the way pixels are displayed, and then try several techniques.

1. Open Lesson 15.prproj in the Lesson 15 folder.
2. Save the project as Lesson 15 Working.prproj.
3. Switch to the Effects workspace by clicking Effects in the Workspaces panel or by choosing Window > Workspaces > Effects.
4. Reset the workspace by opening the Effects menu in the Workspaces panel and choosing Reset To Saved Layout or by choosing Window > Workspaces > Reset To Saved Layout.

What is an alpha channel?

Cameras selectively record the red, green, and blue parts of the light spectrum as separate color *channels*. Because each channel is monochrome (just one of the three colors), they are commonly described as *monochrome*.

Adobe Premiere Pro CC uses these three monochromatic (single color) channels to produce the corresponding primary color channels. They are combined using what's called *additive color* to create a complete RGB image (which stands for Red, Green, and Blue). You see the three channels combined as full-color video.

Finally, there is a fourth monochromatic channel: *alpha*. The fourth channel defines no colors at all. Instead, it defines *opacity*—how visible the pixel is. Several different words are used in the world of post-production to describe this fourth channel, including *visibility*, *transparency*, *mixer*, and *opacity*. The name is not particularly important. What matters is that you can adjust the opacity of pixels independently of their color.

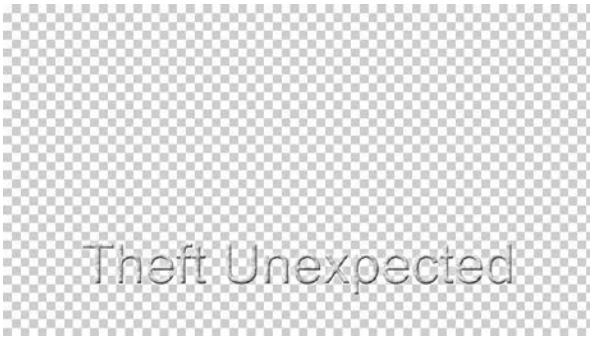
Just as you might use color correction to adjust the amount of red in a clip, you can use Opacity controls to adjust the amount of alpha. By default, the alpha channel, or opacity, of clips is 100%, or fully visible. On the 8-bit video scale of 0 to 255, this means it will be at 255. Clips that are animations or text or logo graphics will often have alpha channels that control which parts of an image are opaque or transparent.

You can set the Source Monitor and Program Monitor to display transparent pixels as a checkerboard, just as in Adobe Photoshop.

1. Open the Source Monitor Settings menu  , and make sure Transparency Grid is not selected.
2. From the Graphics bin, open the clip Theft_Unexpected.png in the Source Monitor (be sure to open the PNG clip).

   It looks as if the graphic has a black background, but those black pixels are actually displayed in place of transparency. Think of them as the background of the Source Monitor.

3 Open the Source Monitor Settings menu and choose Transparency Grid.



Now you can clearly see which pixels are transparent. However, for some kinds of media, the transparency grid is an imperfect solution. In this case, for example, it can be a little difficult to see the edges of the text against the grid.

4 Open the Source Monitor Settings menu and choose Transparency Grid again to disable it.

Making compositing part of your projects

The use of compositing effects and controls can take your post-production work to a whole new level. Once you begin working with the compositing effects available in Premiere Pro, you'll find yourself discovering new ways of filming and new ways of structuring your edit to make it easier to blend images together.

A combination of pre-production planning, filming techniques, and dedicated effects will produce the most powerful results when compositing. You can combine still images of environments with complex, interesting patterns to produce extraordinary textured moods. Or, you can cut out parts of an image that don't fit and replace them with something else.

Compositing is one of the most creative parts of nonlinear editing with Premiere Pro.

Shooting videos with compositing in mind

Much of the most effective compositing work begins when you are planning your production. Right at the start, you can think about how you can help Premiere Pro identify the parts of the image you'd like to be transparent. There are a number of ways to identify which pixels you'd like to make transparent. Consider chromakey, for example, a standard special effect used by major feature film productions to allow action to take place in environments that would otherwise be too dangerous, or physically impossible—like the inside of a volcano!

The actors are actually standing in front of a screen that is solid green. Special-effects technology uses the green color to identify which pixels should be transparent. The video image of the actors is used as the foreground of a composition, with some visible pixels (the actors) and some transparent pixels (the green background).

Next, it's just a question of putting the foreground video image in front of another background image. In an epic action feature film, it's the prebuilt set, a real-world location, or a composite created by visual effects artists; it could be anything.

Planning ahead makes a big difference to the quality of your compositing. For that greenscreen effect to work well, the background needs to be a consistent color. It also needs to be a color that does not appear anywhere on your subject. Green-colored jewelry, for example, might turn transparent when the Chromakey effect is applied.

If you're shooting greenscreen footage, the way you film can make a big difference to the finished result. Try to match the lighting for your subject to the replacement background you intend to use.

Capture the greenscreen background with soft light and try to avoid *spill*, where light reflected from the greenscreen bounces onto your subject. If this happens, you'll be in danger of *keying out*, or making transparent, parts of your subject because they will be the same green color as the background you are removing.

This…

…combined with this…

…becomes this.

Understanding essential terminology

In this lesson, you'll encounter some terms that might be new to you. Let's run through the important ones.

- **Alpha/alpha channel:** The fourth channel of information for each pixel. An alpha channel defines transparency for a pixel. It's a separate monochromatic channel, and it can be created entirely independently of the content of the image.

- **Key/keying:** The process of selectively making pixels transparent based on their color or brightness. The Chromakey effect uses color to generate transparency (that is, to change the alpha channel), and the LumaKey effect uses brightness.
- **Opacity:** The word used to describe the overall alpha channel value for clips in a sequence in Premiere Pro. The higher the value, the more opaque the clip is—the inverse of transparency. You can adjust the opacity for a clip over time using keyframes, just as you adjusted audio level in a previous lesson.
- **Blend mode:** A technology originally seen in Adobe Photoshop. Rather than simply placing foreground images in front of background images, you can select one of several different blend modes that cause the foreground to interact with the background. You might, for example, choose to view only pixels that are brighter than the background or to apply only the color information from the foreground clip to the background. You used a blend mode in Lesson 13, "Adding Video Effects." Experimentation is a good way to learn about blend modes.

▶ **Tip:** For more information on blend modes in Adobe software, see *The Hidden Power of Blend Modes*, by Scott Valentine (Adobe Press).

- **Greenscreen:** The common term that describes the process of filming a subject in front of a screen that is solid green and then using a special effect to selectively turn green pixels transparent. The clip is then combined with a background image. An old-style weather report is a good example of greenscreen.
- **Matte:** An image, shape, or video clip used to identify a region of your image that should be transparent or semitransparent. Premiere Pro allows multiple types of mattes, and you'll work with them in this lesson. You can use an image, another video clip, or a visual effect like Chromakey to generate a matte dynamically based on the color of the pixels.

  When you made a secondary color adjustment in Lesson 14, "Improving Clips with Color Correction and Grading," Premiere Pro generated a matte that was applied to the color adjustment.

  Secondary color adjustments apply a dynamically generated matte to an effect, limiting the pixels that are changed. The Chromakey effect applies the matte to the alpha channel, selectively making pixels transparent.

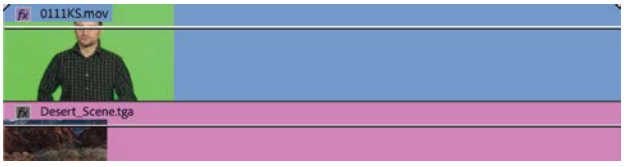
Working with the Opacity effect

You can adjust the overall opacity of a clip using keyframes on the Timeline or in the Effect Controls panel.

1 Open the sequence Desert Jacket. This sequence has a foreground image of a man in a jacket, with a background image of a desert.

2 Increase the height of the Video 2 track a little. You can do this by dragging the dividing line between V2 and V3 or by hovering the mouse cursor over the V2 track header, holding Alt (Windows) or Option (macOS), and scrolling your mouse wheel.

3 Click the Timeline Settings menu, and make sure the option Show Video Keyframes is enabled.



4 Now you can use the clip rubber band to adjust the settings and keyframe any effect you apply to a clip. Since the fixed effects include Opacity, this option is automatically available. In fact, it's the default option, which means that the rubber band already represents clip opacity. Try dragging the rubber band up and down using the Selection tool on the clip on Video 2.

In this example, the foreground is set to 50% opacity.

When you use the Selection tool in this way, the rubber band is moved without additional keyframes being added.

Tip: When adjusting the rubber band, after you begin dragging, you can hold Ctrl (Windows) or Command (macOS) for fine control. Be careful not to hold the modifier key before clicking or you'll add a keyframe.

Keyframing opacity

Keyframing opacity on the Timeline is almost the same as keyframing volume. You use the same tools and keyboard shortcuts, and the results are likely to be exactly what you expect: The higher the rubber band, the more visible a clip will be.

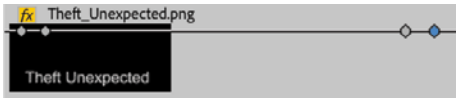
1 Open the Theft Unexpected sequence in the Sequences bin.

This sequence has a title in the foreground, on track Video 2. It's common to fade titles up and down at different times and with different durations. You can do so using a transition effect, just as you would add a transition to a video clip; or, for more control, you can use keyframes to adjust the opacity.

2 Make sure track Video 2 is expanded so you can see the rubber band for the foreground title, Theft_Unexpected.png.

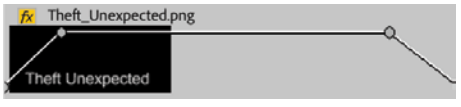
▶ **Tip:** It's often easier to add the keyframe markers to the rubber band first and then drag them to adjust them.

3 Ctrl-click (Windows) or Command-click (macOS) the rubber band for the title graphic to add four keyframes—two near the beginning and two near the end. Don't worry about the precise positions of the new keyframes.



▶ **Tip:** Once you've added a keyframe by Ctrl-clicking (Windows) or Command-clicking (macOS), you can release the key and start dragging with the mouse to set the keyframe position.

4 Adjust the keyframes so they represent a fade-up and a fade-down in the same way that you would adjust audio keyframes to adjust volume.



5 Play the sequence, and watch the results of your keyframing.

You can also use the Effect Controls panel to add keyframes to the opacity for a clip. Like the audio volume keyframes controls, the Opacity setting has keyframing turned on by default in the Effect Controls panel.

Combining tracks using a blend mode

Blend modes are special ways for foreground pixels to combine with background pixels. Each blend mode applies a different calculation to combine the foreground red, green, blue, and alpha (RGBA) values with those of the background. Each pixel is calculated in combination with the pixel directly behind it.

The default blend mode is called Normal. In this mode, the foreground image has a uniform alpha channel value across the entire image. The more opacity the foreground image has, the more strongly you will see those pixels in front of the pixels in the background.

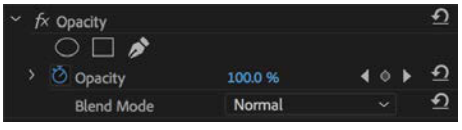
The best way to find out how blend modes work is to try them.

1 Replace the current title in the Theft Unexpected sequence with the more complex title Theft_Unexpected_Layered.psd in the Graphics bin.

You can replace the existing title by dragging the new item onto it while holding Alt (Windows) or Option (macOS). Notice that replacing a clip this way retains the Timeline clip keyframes you added.

2 Select the new title on the Timeline, and take a look at the Effect Controls panel.

3 In the Effect Controls panel, expand the Opacity controls, and browse through the Blend Mode options.



4 Right now, the blend mode is set to Normal. Try a few different options to see the results. Each blend mode calculates the relationship between the foreground layer pixels and the background pixels differently. See Premiere Pro Help for a description of the blend modes. Choose the Normal blend mode when you have finished experimenting.

▶ **Tip:** Hover the mouse cursor over the Blend Mode menu without clicking to open it, and scroll to quickly browse through the modes.

In this example, the graphic has the Lighten blend mode applied. In this mode, a pixel is visible only if it is lighter than the pixel behind it.