Fixing color balance

Your eyes adjust to compensate for changes in the color of light around you automatically. It's an extraordinary ability that allows you to see white as white, even if objectively it's orange, for example, because it's lit by tungsten light.

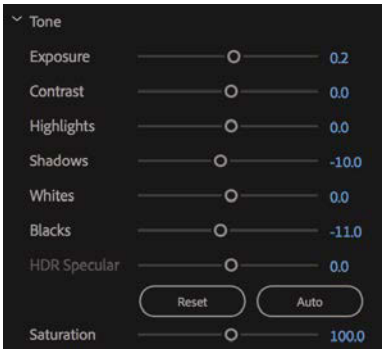
Cameras can automatically adjust their white balance to compensate for different lighting in the way that your eyes do. With the right calibration, white objects look white, whether you are recording indoors (under oranger tungsten light) or outdoors (in bluer daylight).

Sometimes automatic settings are hit or miss, so professional shooters often prefer to adjust white balance manually. If the white balance is set wrong, you can end up with some interesting results. The most common reason for a color balance problem in a clip is that the camera was not calibrated properly.

Balancing with the Lumetri color wheels

Let's try using the Lumetri Color panel color wheels to adjust the last shot in the sequence.

1. Switch to the Color workspace, and reset it if necessary.
2. Position the Timeline playhead over the last clip in the Color Work sequence.
3. In the Lumetri Color panel, expand the Basic Correction section, and click the Auto button to automatically adjust the levels.

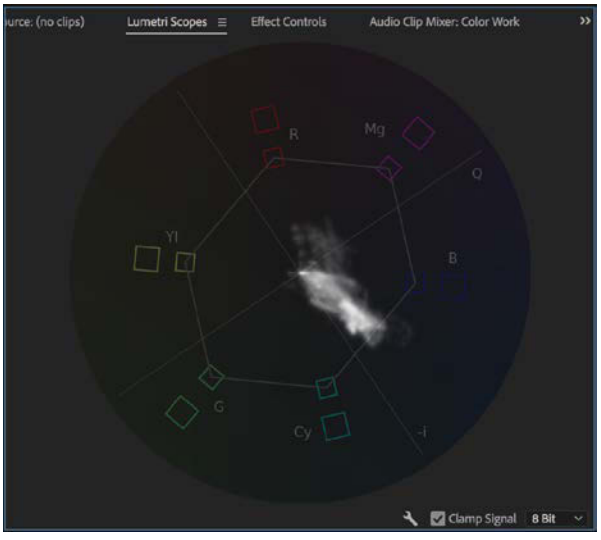


The Tone controls change to reflect the new levels.

Premiere Pro has identified the darkest pixels and the brightest pixels and has balanced automatically.

The adjustment is tiny! Clearly, the problem is not with the range of contrast in the shot.

4 Set the Lumetri Scopes panel to display the Vectorscope YUV.

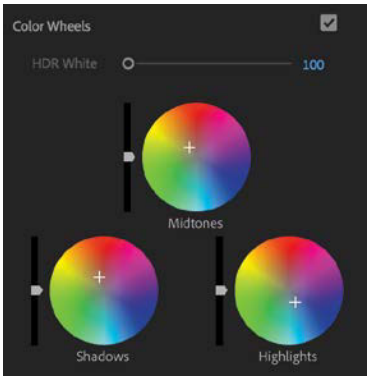


It's clear there's a reasonable range of colors in the shot, but there's a strong bias toward the blue. In fact, this scene has mixed lighting, with bluer daylight coming from the window and warmer tungsten light coming from the interior of the room.

5 In the Basic section of the Lumetri Color panel, use the Temperature slider to push the colors toward the orange. You'll need to push the adjustment all the way to 100 to see a reasonable result because the color shift is so strong in the clip.

The result is pretty good, but perhaps it could be better.

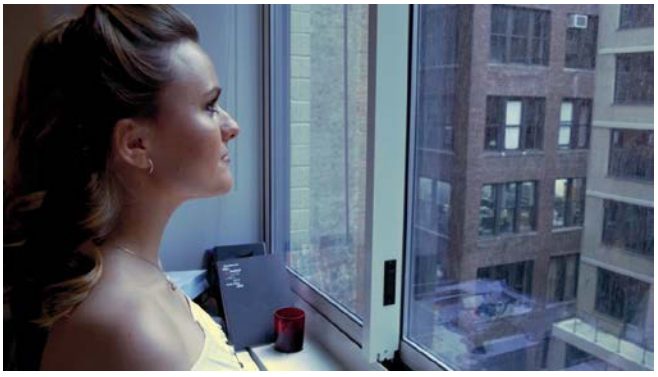
The darker pixels in this shot are generally lit by the interior, warmer room light, while the lighter pixels are generally lit by the bluer daylight. This means different color wheels will interact with different areas of the picture in convincing and natural ways.



6 Expand the Color Wheels section of the Lumetri Color panel. Try using the Shadows color wheel to pull the color toward the red, while using the Highlights color wheel to pull the color toward blue.

7 You've adjusted the color wheels to warm up the shadows and cool down the highlights. Experiment with the midtones to obtain the most natural result possible. Use the image as a guide.

Experiment with the other controls in the Lumetri Color panel to see whether you can improve the result further.



Making a secondary color adjustment

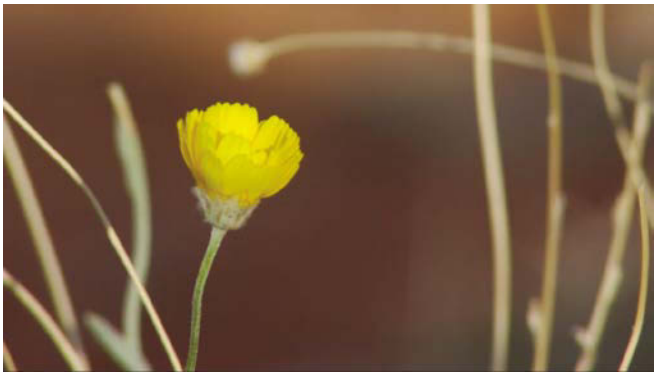
The Lumetri Color panel allows you to make adjustments that are limited to a particular range of hues, a level of color saturation, or a level of brightness.

This is useful if you want to bring out the blue in a subject's eyes or give a flower a color boost.

Let's try it.

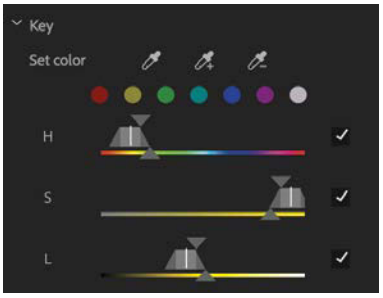
1 Open the sequence Yellow Flower, and position the Timeline playhead over the first clip.

This sequence has two shots with clearly distinguished areas of color.



2 Expand the HSL Secondary section of the Lumetri Color panel

3 Click the eyedropper to select it and then click the yellow petals of the flower to pick that color.

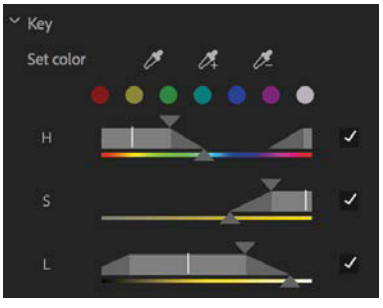


The color selection controls update based on the area of the petal you clicked.

You may get a more useful result by holding Ctrl (Windows) or Command (macOS) while clicking, as this captures a 5x5 pixel average.

When making a selection of this kind, it can be helpful to initially apply an extreme adjustment to the colors. This makes it easier to tell if you have selected the right range of colors in the image.

4 Scroll down in the Lumetri Color panel and drag the Temperature and Tint controls to the far left to apply an extreme adjustment.



5 Drag the color range selection controls to expand the selection. Your initial selection probably only selected a few pixels, as there is quite a lot of variation in the yellow petals.

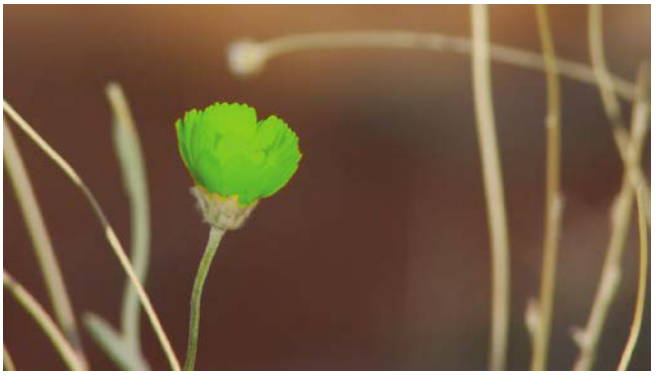
Each control sets the range of pixels you're selecting, based on one of three factors:

H: Hue

S: Saturation

L: Luminance

The upper triangles represent the hard-stop range of the selection. The lower triangles extend the selection with a softening that reduces hard edges.



6 Once you're happy you have selected all the pixels in the petals of the flower, reset the Temperature and Tint controls, and make a subtler adjustment.

The adjustments you make will be limited to the pixels in your selection.

7 Once you have mastered this effect, experiment with the sky in the second clip in this sequence.

Using special color effects

Several special effects give you great creative control over the colors in your clips.

Here are a few effects of note.

Using Gaussian Blur

While not technically a color adjustment effect, adding a tiny amount of blurring can soften the results of your adjustments, making an image look more natural. Premiere Pro has a number of blur effects. The most popular is Gaussian Blur, which has a natural-looking, smoothing effect on an image.

Using Stylize effects

The Stylize category of effects includes some dramatic options, some of which, like the Mosaic effect, you'll use for more functional applications in combination with an effect mask, such as hiding someone's face.

The Solarize effect gives vivid color adjustments that can be used to create stylized back plates for graphics or intro sequences.

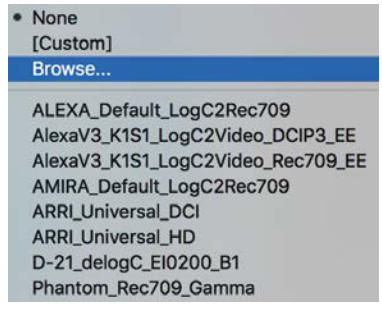
Using Lumetri looks

The Lumetri Color panel includes a list of built-in looks you experimented with earlier, and as you have found, there are a number of Lumetri Look presets in the Effects panel to get you started.

These effects all make use of the Lumetri Color effect.

In addition to using the built-in Looks, the Lumetri effect allows you to browse to an existing .look or .lut file to apply nuanced, subtle color adjustments to your footage.

It's possible you will be given a LOOK or LUT file to use as a starting point for your color adjustments. It's increasingly common for cameras or location monitors to employ a color reference file of this kind. It helps to use the same reference when you are working on footage in post-production.



To apply an existing LOOK or LUT file, open the Input LUT menu at the top of the Lumetri Color panel, and choose Browse.

Creating a look

Once you've spent a little time with the color correction effects available in Premiere Pro, you should have a feel for the kinds of changes you can make and the impact those changes have on the overall look and feel of your footage.

You can use effect presets to create a look for your clips. You can also apply an effect to an adjustment layer to give your sequence, or part of a sequence, an overall look. Changes made using the Lumetri Color panel apply just as well when applied to an adjustment layer.

In the most common color correction scenario, you would do the following:

- Adjust each shot so that it matches the other shots in the same scene. That way, there is color continuity.
- Next, apply an overall look to your production.

Try using an adjustment layer to apply a color adjustment to a scene.

1. Open the Theft Unexpected sequence.
2. In the Project panel, open the New Item menu and choose Adjustment Layer. The settings automatically match the sequence, so click OK.
3. Drag and drop the new adjustment layer onto the V2 track in the sequence.

   The default duration for adjustment layers is the same as the duration of still images. It's too short for this sequence.
4. Trim the adjustment layer until it stretches from the beginning to the end of the sequence.

5. In the Effects panel, browse to Lumetri Presets > SpeedLooks > Universal. Drag one of these SpeedLooks onto the adjustment layer. The Look will apply to every clip in the sequence, and you can modify it using the controls in the Effect Controls panel or in the Lumetri Color panel.

Note: If you use adjustment layers in this way on a sequence that has graphics and titles, you may want to ensure that the adjustment layer is on a track between the graphics/titles and the video. Otherwise, you will adjust the appearance of your titles too.

You can apply any standard visual effect this way and use multiple adjustment layers to apply different looks to different scenes.

The Lumetri Color panel controls always adjust the last Lumetri Color effect applied to a clip. For example, if you apply three instances of the Lumetri Color effect to a clip, the third effect would be adjusted when clicking in the Lumetri Color panel.

You can adjust any effect in the Effect Controls panel, or drag effects to change the order they are applied.

This is just a brief introduction to color adjustment, and there's an enormous amount more to explore. It's worth investing the time to familiarize yourself with the advanced controls in the Lumetri Color panel. There are a great many visual effects that can add nuance or a striking look to your footage. Experimentation and practice are key to developing your understanding in this important and creative aspect of post-production.

▶ **Tip:** SpeedLooks available in the Effects panel are applied as regular effects, so it's easy to combine them—just apply another.

Review questions

1. How do you change the display in the Lumetri Scopes panel?
2. How do you access the Lumetri Scopes panel when not viewing the Color workspace?
3. Why should you use the vectorscope rather than depending on your eyes?
4. How can you apply a look to a sequence?
5. Why might you need to limit your luminance or color levels?

Review answers

1. Right-click in the panel or open the Settings menu and choose the display type you would like.
2. Access the Lumetri Scopes panel, like all panels, in the Window menu.
3. The way you perceive color is highly subjective and relative. Depending on the colors you have just seen, you will see new colors differently. The vectorscope display gives you an objective reference.
4. You can use effect presets to apply the same color correction adjustments to multiple clips, or you can add an adjustment layer and apply the effects to that. Any clips on lower tracks covered by the adjustment layer will be affected.
5. If your sequence is intended for broadcast television, you'll need to ensure you meet the stringent requirements for maximum and minimum levels. The broadcaster you're working with will be able to tell you the required levels.