

## ■ ■ ■ Tutorial: Creating a Luminance Key

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A luminance key lets you superimpose one layer over another by knocking out either the very bright or very dark parts of a layer to expose underlying layers. In this tutorial, we'll use a luminance key to superimpose a flash of gunfire over another video clip (see Figure 17.14).



**Figure 17.14**

In this tutorial, we're going to superimpose the footage of a muzzle flash over footage of a hand to create a final composite that will show a hand firing bullets.

For this tutorial, you'll need an editing or effects package that provides luminance keys (for example, Adobe Premiere, Apple's Final Cut Pro, Adobe After Effects, Sony Vegas, Avid Media Composer). This tutorial assumes that you understand how to add clips to a project, search through them using a "source monitor," add clips to a timeline, and add luminance keys to a clip. If you're unclear on any of these, check your editing software's manual.

## STEP 1: SET UP YOUR PROJECT

In your editing package, create a project. Import the files hand-gun.mov and GS125.mov from the Chapter 17 page on the companion website, at [www.thedigitalfilmmakinghandbook.com/chapter17](http://www.thedigitalfilmmakinghandbook.com/chapter17). Hand-gun.mov is a short clip showing a hand "firing" bullets. It was shot with a Canon GL-1. GS125.mov is from the ArtBeats Gun Stock Digital Film Library and is a short movie showing a number of muzzle flashes shot in near darkness.

Place the hand-gun.mov clip on the first video track in your timeline. Create a second video track above this one. Place the GS125.mov in the upper video track.

## STEP 2: FIND THE FIRST MUZZLE FLASH

Load the GS125.mov clip in your timeline into your source monitor. Scrub through the clip to find a muzzle flash you like. Position the playback head on the first frame of one of the muzzle flashes and set an in-point. Scrub forward one or two frames to be sure the flash has ended and set an out-point.

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### Finding the Muzzle Flashes

Note that most of these flashes are only one frame. Depending on your computer's performance, you might not see each frame during playback. Consequently, you'll probably have to scrub to find the single frames. Look for places in the clip where the hand recoils. This is a good way to zero in on the flash.

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## STEP 3: POSITION THE FLASH IN THE TIMELINE

In the timeline, scrub through your footage and watch the program monitor to find the frame where the finger seems to fire. This is where you want the muzzle flash to appear (see Figure 17.15). Position the GS125.mov clip in a higher track so that it begins at the point in time where the finger fires. Note that the program monitor will now be filled with the muzzle flash on the black image of the GS125.mov clip. Your background plate that shows the finger will be completely obscured, but not for long.



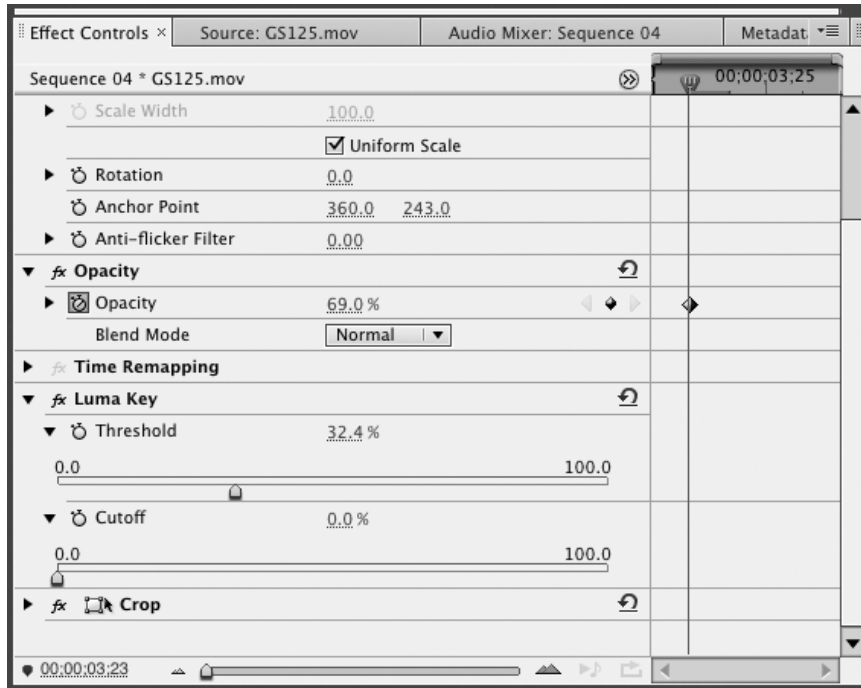
**Figure 17.15**

Your muzzle flash footage should start right when the finger begins to recoil.

## STEP 4: DEFINE YOUR LUMINANCE KEY

Add a luminance key to the GS125.mov clip. If you're unsure of how to add a key, consult your manual for details. Some luminance keys allow you to choose between keying out light areas or dark areas. Others default to keying out darker areas. If your luma key provides an option, set it to key out darker areas.

Most luminance keys provide at least two sliders for adjusting the key effect: one that specifies which values will be keyed out, and another that controls how transparent those areas will become. Adjust the sliders in your luminance key filter until the black areas are gone and only the flash remains. Your goal is to find a balance of settings that eliminates the background without reducing the luminance of the flash too much. Pay particular attention to the edges of the flash. Even though it's only one frame, a hard edge or a black fringe will be noticeable to the viewer (see Figure 17.16).



**Figure 17.16**

Experiment to find luminance key settings that eliminate the background, without dulling the intensity of the flash and without creating a hard, distinct edge on the flash.

## STEP 5: POSITION THE FLASH IN THE FRAME

With your key defined, you should be able to see the background beneath the muzzle flash. Unfortunately, the flash is probably over at the left side of the screen. Obviously, we want it to look like it's coming out of the finger. Using your software's motion controls, reposition the flash so that it sits just off the tip of the finger. You might also want to try scaling it down so that it doesn't overwhelm the composition.

Finally, many of the flashes in the GS125.mov clip have a visible gun barrel on the left side of the frame. Your editing software should provide a motion control tool that allows you to crop the frame so that the barrel is removed from view without affecting the flash (see Figure 17.17). (See your user documentation if you don't know how to do this.)

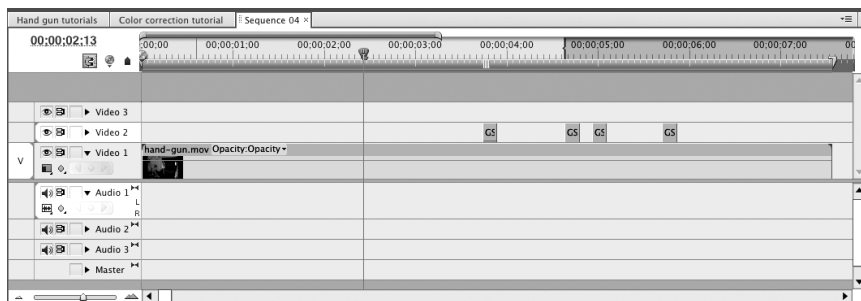


**Figure 17.17**

Move the muzzle flash to the end of the “barrel” and scale it down to be more appropriate to the “caliber” of this finger.

## STEP 6: NOW DO THE REST

Render your footage and take a look. Pay close attention to the timing of the flash; it might need to be moved forward or backward a frame or two to match the recoil of the finger. You might also see that you need to adjust the settings of your luminance key. When you’re satisfied, choose another four muzzle flashes and edit them into the appropriate locations, as shown in Figure 17.18.



**Figure 17.18**

When you’ve placed all of your muzzle flashes, your timeline should have five clips on it.

## **i** Filtered Footage

If you don’t have or don’t want to use clip footage of a muzzle flash, consider using a computer-generated one. DigiEffects’ Delirium collection of After Effects plug-ins includes an excellent Muzzle Flash filter that can generate muzzle flashes for you.

That's it! With the simple application of some stock footage and a luminance key, we've created. . . well . . . a kind of silly special effect. However, you can see that, in a more practical situation, such effects would save you the danger and expense of using a real gun. In the next chapter, we'll increase the realism of the shot through the use of a little rotoscoping, but first, let's see if we hit anything during our little target practice.