

Using Chroma Key and Chroma Blur in Sony Vegas

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As budgets have become tighter and tighter, and the technology has improved, chroma keying in video has become commonplace. It is said that chroma keying in DV is unacceptable. New specialized tools have greatly improved the chroma keys in DV, but with a little understanding of DV and the right process, you can get good results with your NLE. We are going to step through the process of producing a quality chroma key with Sony's Vegas® NLE. You may find that many of the tools used in Vegas are available in your NLE. If so, the process should be very similar.

We are going to start with a nightmare for raw footage. The talent has light blond hair that is fine and flyaway. She is standing in front of a wavy curtain with plenty of shadows. Notice the hot spot behind her and how the picture darkens at the top and bottom. We have one thing going for us, she is well backlit.

DV chroma keys usually have a number of problems, but the most annoying is the blockiness of the key. (see the purple arrow below) The jaggies are caused by the nature of the color sampling in DV. Not every pixel has full color information. This means that where one color begins and another ends can be in big blocks. The color sampling in DV is 4:1:1. Don't worry if that does not mean a lot to you, we are going to go through the steps to deal with it.

Your first step to create your chroma key is to place your source clip on the timeline. Now drag the Chroma Blur video effect onto the event. When the dialog opens, select a medium blur to start. When Vegas modifies video, it decompresses the video into a 4:4:4 color space. The best way to think of it is that this gives color information to each pixel. The Chroma Blur smoothes the colors in that space. Now instead of cutting out the object in big blocks, you can cut it out in smooth almost one pixel lines. You can see the difference in the pictures.

Next drag the Chroma Key video effect onto your clip. Trust me on this one, but to start, turn off the effect by un-checking the box in the effect chain. (see yellow arrow below) Now click on the eyedropper (red arrow below). You are now going to select the color to key on, but you are not going to select just one color. You are going to select a range. Draw a large box by clicking and dragging with the eyedropper in the video preview window.

Now click on the Show mask only box. (see blue arrow above) Our eyes see more detail in black and white than color, so this will help us define the key by showing it to us in black and white. Now go ahead and turn the Chroma Key effect back on. (yellow arrow above) At first the preview just looks like a black and white picture. Start by sliding the High threshold to the left until the object appears solid white.

Now slide the Low threshold to the right until the background is all black. The best results tend to come from adjusting the high threshold first and then the low threshold second. You will have to adjust the two to get the right balance. Turn the Show mask only off and on to check your settings. With a little practice you will not have to use any blur on the mask at all. If you have to use any more mask blur than about .050 to look good, you might need to go back and increase the Chroma Blur or reset your thresholds. Notice the nice clean edges and detail, even around the hair.

Turn off the Show mask only box. Create a video track below your clip and drag your background on to that track below your keyed source clip

After you have done everything that you can in front of the camera, such as proper lighting and positioning, a good chroma key in DV boils down to:

- Take advantage of the Chroma Blur to smooth out the edges
- Select a range of color, not just one spot
- Use the black and white mask to help you see the trouble areas
- Set the high threshold first, then the low threshold
- Use the mask blur sparingly
- Place the background footage on the video track below the keyed source

That's how it works. Now go and be creative!

Keith

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After 25 years of entertainment production, Keith Kolbo can now be found teaching video production at an inner-city high school in Orlando, Florida and lurking in the Sony Vegas forum on DMN.

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