

FROM THE BEST-SELLING AUTHOR OF *COLOR CORRECTION HANDBOOK*

COLOR CORRECTION LOOK BOOK

CREATIVE GRADING TECHNIQUES
FOR FILM AND VIDEO



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Figure 7.1 A duotone using shadow and highlight rebalancing to create a tint over the original color of the image

Another approach to this look can be accomplished by first desaturating the source image before rebalancing shadows and highlights. The result is a purer duotone effect that consists of only the two colors you're introducing, with no color interaction with hues from the original image (**Figure 7.2**).



Figure 7.2 A different duotone look can be created by desaturating the image prior to tinting the shadows and highlights.

These techniques are highly dependent on the overlapping tonal regions that each color balance control affects. Different color correction applications use different overlapping regions, so you're bound to get varying results depending on your application.

CREATING TRITONES USING HSL QUALIFICATION

Another approach to this kind of selective tinting is to use HSL Qualification to define specific regions for tinting. You could do this for regular duotone looks if you're trying to limit one or the other color to specific regions, but perhaps a better way to achieve this look is by creating tritones, three overlapping tints variously affecting the shadows, midtones, and highlights of an image.

Figure 7.3 shows the setup in DaVinci Resolve's node-based correction interface, but the same idea can be accomplished via scaffolds in Assimilate Scratch or layers in FilmLight Baselight and Adobe SpeedGrade.

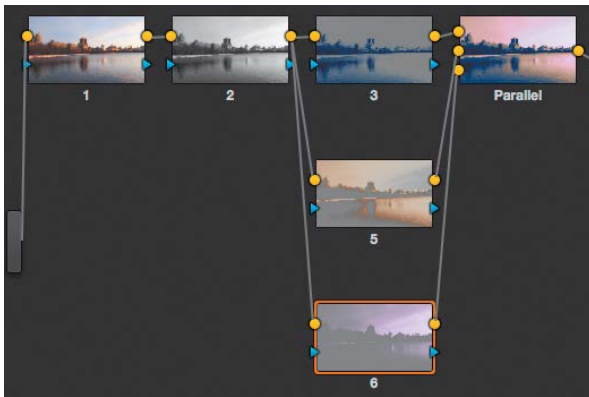
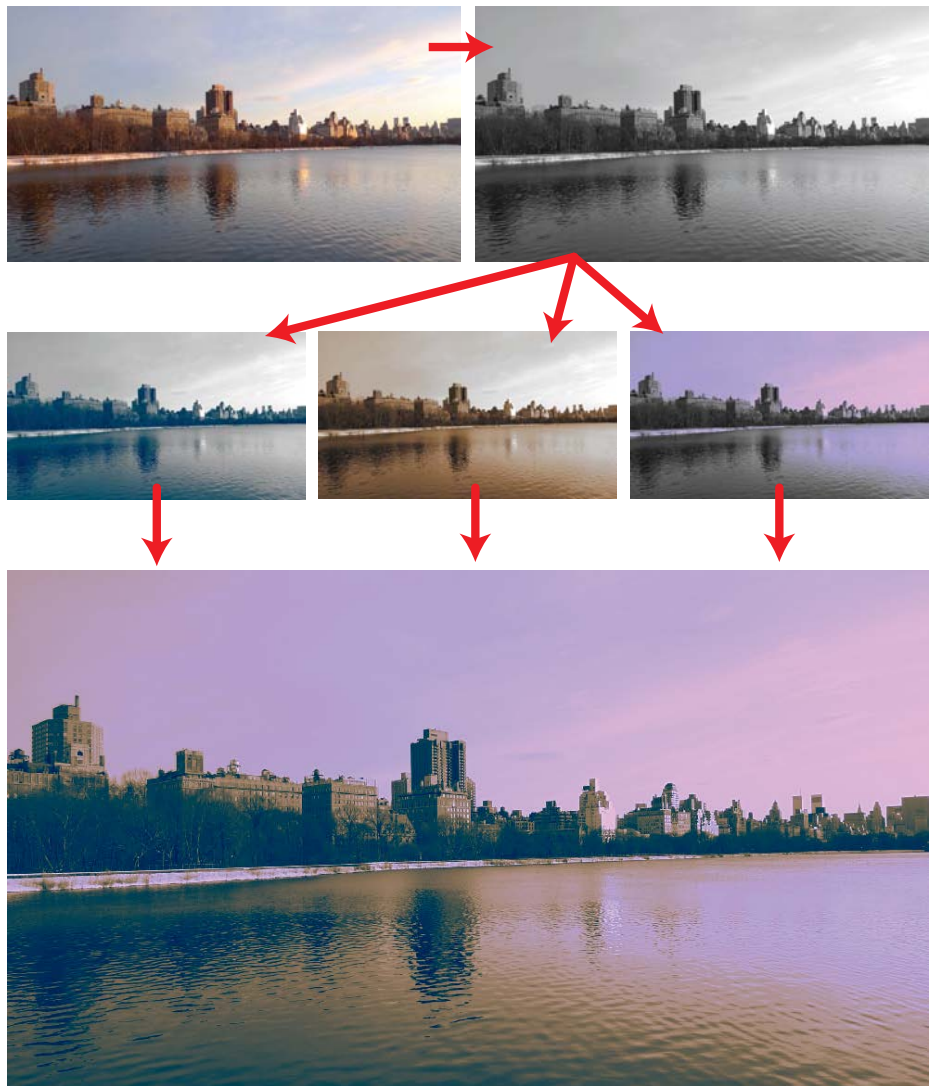


Figure 7.3 The node setup for the tritone example in this chapter, shown in DaVinci Resolve

The basic idea is that, after an initial grade for contrast (node 1), the image is desaturated (node 2), and then three parallel nodes create individual tints for the shadows, midtones, and highlights of the image (nodes 3, 5, and 6), which are recombined into the final grade using a Parallel node at the end of the tree.

Visually, **Figure 7.4** shows how each stage of the grade looks.

Figure 7.4 The six stages of an HSL key-segmented tritone grade



The goal with duotones and tritones is to create a harmonious blend of the tints you're using to fit the design goals of your project.

CHAPTER 8

EMULATING FILM STOCKS

Now that the use of motion-picture film is giving way to digital acquisition, many clients are beginning to express a desire to emulate the characteristics of film. There are a variety of ways you can do this, but before we continue, let's take a look at three images that were acquired on film and telecine'd to video neutrally for future grading (**Figure 8.1**).

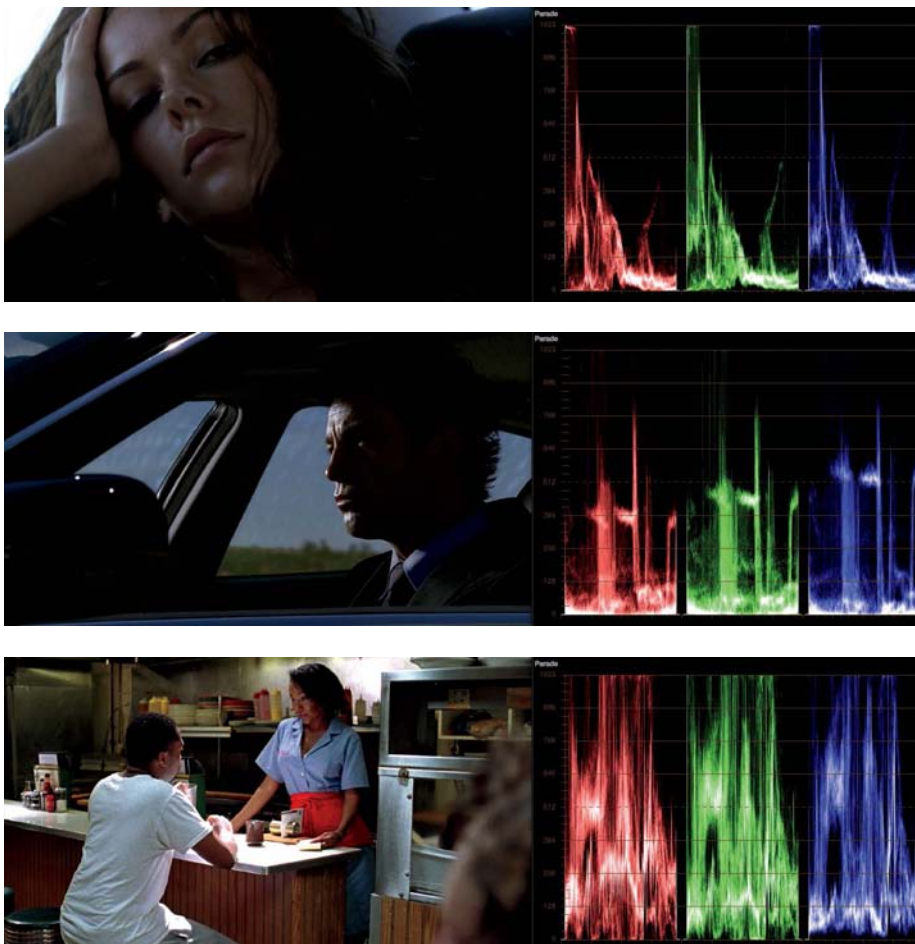


Figure 8.1 Three images that were actually shot on film

These three images are exposed very differently, using different stocks. However, even without the giveaway of a 24p frame rate, there are inherent characteristics that identify each image as “filmic”: rich saturation found primarily in the mid-tones, a lack of over-saturation in the highlights, gentle roll-off of detail in the shadows, smooth tonal gradations from the shadows to the highlights of skin tone, and a warmth within the image that’s perceptible even when there’s an abundance of cool tones found throughout the frame.

These characteristics have been discussed elsewhere in this book and are all things you can emulate using more basic adjustments. However, for colorists wanting to more directly emulate the look of a film transfer and film exhibition when doing digital mastering, there’s a more direct way to replicate the film experience.

PRINT EMULATION LUTS

Many of the LUTs being advertised for creative film emulation actually have their origins in the digital intermediate process as film print emulation LUTs. As described in Chapter 2 of *Color Correction Handbook*, the colorist who’s working digitally but planning on printing to film needs to be able to see the effect that printing to the internegative stock will have and possibly also how *that* will look printed to the eventual positive “release print” stock. Over the years, many evolutions of negative stocks and release print stocks have been developed, with the result that it’s long been necessary to mix and match different stock combinations based on the latest improvements, with a different LUT needed to represent each combination so that the colorist can know how the grade will look after being printed through two generations of stocks.

For example, SpeedGrade comes with a variety of “Filmstock” looks that are actually film print emulation LUTs derived from digital intermediate projects performed over the years. One such LUT is Fuji ETERNA 250D FUJI 3510 (by Adobe). This LUT is a sandwich of two stocks (now discontinued): a negative stock for film recording and a positive stock for creating the release print used to project the film at theaters. These stocks are described by FujiFilm as follows:

- Fuji ETERNA 250D “delivers ample sensitivity, super shadow quality and extremely natural facial tones. Facilitates telecine transfer and digital image processing.”
- Fuji ETERNA CP 3510 is a “normal-contrast color release print stock [that] offers outstanding images with rich gradations and more lifelike colors. It provides natural skin tones, better shadow quality and detail, and more neutral blacks.”

Additionally, depending on the vigor of the color science involved in your DI process, you may not need to merely emulate the film stocks; you may also have to take into account the film recorder used, as well as the entire system of exhibition, including the qualities lent an image by the way different bulbs pass light through the film and lens of the cinema projector.

Richard Kirk at FilmLight described the development of Truelight, a system for translating images from video, film, and computer graphics, and translating them with accurate color to any other display system, including film recording. In addition to the combinations of negative and positive stocks, Kirk explained, characteristics of the projector were also included in the calibration process, which included the spectral characteristics of the projector bulb, light loss due to lens optics, light scattering due to print stocks (due to the Callier effect), and the screen material. In short, there's a lot that can go into accurate print emulation.

What makes this relevant to the digital colorist is that, in mixed-deliverable workflows where one needs to generate a film print for theatrical exhibition as well as a BT.709 grade, often the theatrical grade is done first using appropriate print emulation LUT for the workflow at hand, and that LUT is then “baked” into the BT.709 deliverable, usually after a trim pass to make whatever additional adjustments are necessary to ensure that the program looks as it should in a living-room environment.

In theory, the print emulation LUT should be invisible, since the colorist is using the LUT to represent the character of the ultimate display and the objective is to grade the image to correct for any foibles introduced by the film recording process. In fact, the exhibition medium influences the grade, so even though the digital intermediate colorist's goal is not explicitly to “make the program look like film,” filmic characteristics come with the territory.

USING LUTS TO EMULATE FILM

With all of this in mind, one way you can add “filmic” characteristics to a grade is to apply a print emulation LUT, thereby putting yourself in the same position as the digital intermediate colorist but for strictly aesthetic reasons. Dave Hussey, senior colorist at Company 3, observed in conversation that when the ARRI Alexa digital cinema camera started finding wide use in television, everyone's projects started looking the same; the variances that once resulted from different cinematographers favoring different film stocks from a variety of manufacturers (Kodak, FujiFilm, Agfa) were no longer there.

In Hussey's opinion, the process of applying a film LUT pushes the look of the image into a different and more interesting space, and the very process of building your own grade on top of this very different starting point is guaranteed to stimulate a different and unique visual approach.

However, when you apply a film emulation LUT, what exactly is the ineffable character that is being lent to the image? Let's take a look.

Whenever you're curious about just what a particular color or contrast preset or LUT is doing to an image, apply it to a linear ramp, and you'll be able to immediately tell.

Figure 8.2 shows three examples of applying an emulation LUT to a ramp.