WORKSHOP > FINAL CUT PRO

Basic colour correction

> ON YOUR VideoFocus DVD
Full-sized screenshots and all the supporting files you'll need to follow this tutorial.

One of the biggest differences between amateur and pro film-making is in the finishing – starting with colour correction. **Adam Garstone** shows you how.

It doesn't matter what they are called: graders, colour correctors, colour timers – or, in America, color timers – they are all very highly skilled, highly paid people using very expensive gear to make the work of highly paid, highly skilled cinematographers look even better.

Fortunately, Final Cut Studio brings the highly skilled but rather less well-heeled operator a bewildering variety of colour-correction tools. They even include Color, which used to cost $5,000. Color is quite a complicated beast, though, and could fill a book on its own, so here we'll concentrate on colour correction within Final Cut Pro.

There are three basic reasons to colour-correct your project. Firstly, you will need to match the different shots that make up your scenes. It's quite possible that a scene took one or more days to shoot, so lighting conditions may have varied – even if your shoot lasted only a single day, the light is different in the morning from the afternoon and evening. Secondly, once your scene's clips are matched, you may want to do local adjustments (perhaps to lighten an actor's face in order to draw the audience's eyes to their expression or to darken a distracting element in the scene). Finally, your film's scenes might need an overall 'look' – this may be something striking like the bleach bypass used in *Minority Report* or more subtle, like the 'real-world' warm tones and 'virtual world' blues and greens used in *The Matrix*.

Let's start by running FCP 7 and starting a new project using the DV-PAL Easy Setup. There are a couple of still images on the coverdisc called Colour-Correction-1.jpg and Colour-Correction-2.jpg, so drag them off the DVD onto the Desktop for now and import the files into your FCP project.

POWER TIP
When you start to colour correct footage, it's usually best to get the contrast and brightness right before you start to change the colours. Indeed, some colourists will first pull down the saturation so that they see only the black-and-white image. They correct the contrast and brightness in black and white then add the colour back in to adjust the colours.

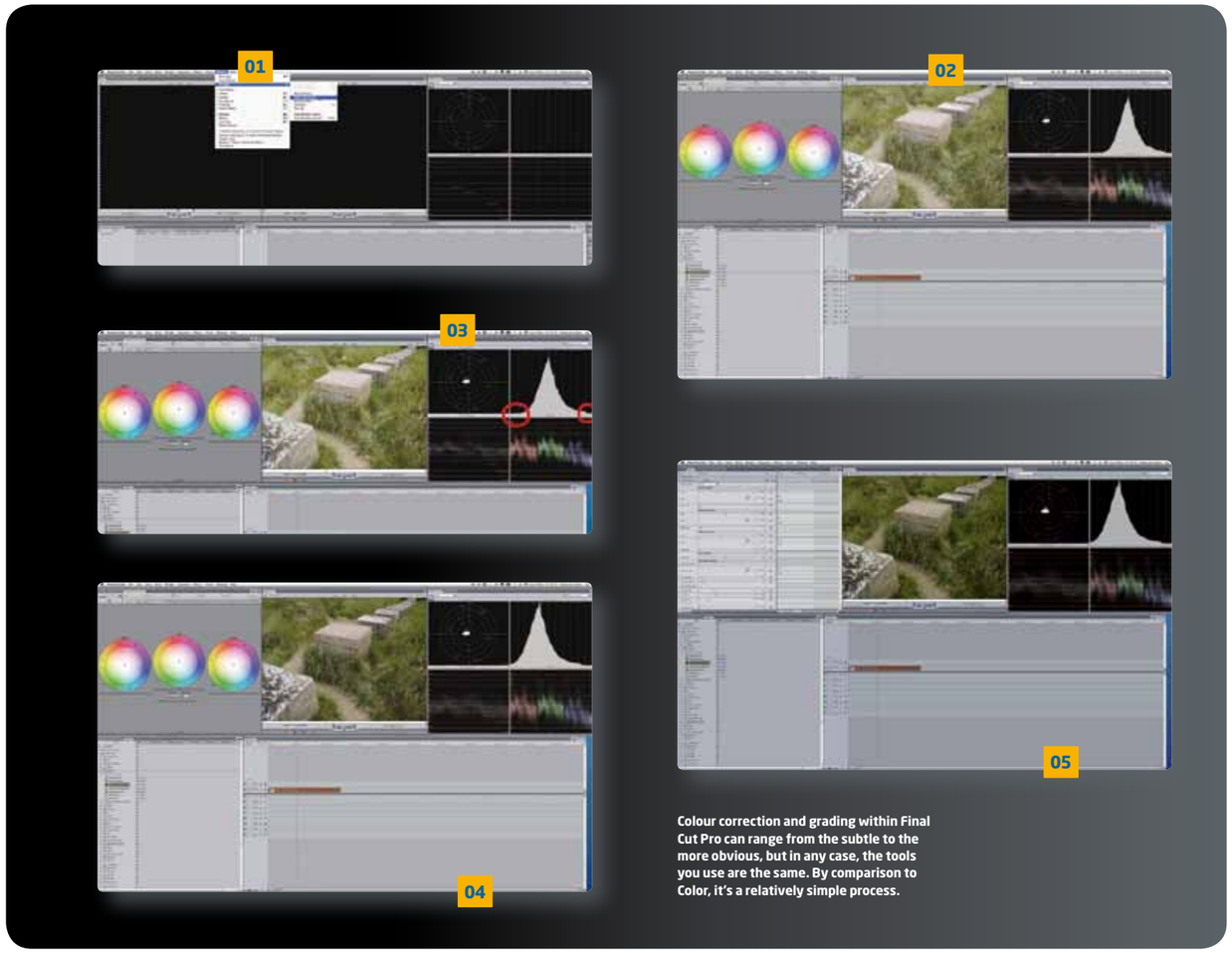
> Final Cut Studio brings the highly skilled but rather less well-heeled operator a bewildering variety of colour-correction tools. <

Save your new project with a suitable name. We'll need to use the Video Scopes during colour correction. Final Cut provides a handy window arrangement: in the menus just select Window>Arrange>Color Correction. 01

Drag the first still, Colour-Correction-1.jpg, into your timeline and double-click on it to get it into the Viewer. Ensure that the playhead is over the clip in the timeline so that it also appears in the Canvas and turn on Luma range checking in the View menu: View>Range Check>Excess Luma. In the Browser Effects tab, find Video Filters>Color Correction>Color Corrector 3-way and drag it onto the Viewer. It will appear as a tab in the Viewer so click on the tab to bring up the interface. 02

This first still is lacking in contrast and is washed out. This is confirmed by the range check and by looking at the video scopes. The histogram has a red section above 100% showing that we have illegally high luma (brightness). 03

In Europe, we are generally allowed a maximum luma of 103%, but the red section of the histogram goes up to about 110%. The histogram also shows that there is very little luma below about 14%, which is why our shadow areas look rather grey.



Colour correction and grading within Final Cut Pro can range from the subtle to the more obvious, but in any case, the tools you use are the same. By comparison to Color, it's a relatively simple process.

Let's start with these shadow areas. Grab the slider under the Blacks section of the Color Corrector 3-Way and drag it to the left while you watch the Canvas. The dark areas of the picture will get darker and you'll see that the Histogram moves to the left. Once you have a visually pleasing result, you'll probably still need to pull down the highlights a bit – the histogram is probably still showing them over 100% and you probably still have a yellow warning triangle on the Canvas from the Range Check. Once again, grab the slider below the Whites section of the Color Corrector and pull it slightly to the left. Watch the histogram until the red section in the highlights has more or less disappeared. 04

At this point, it's worth noting that there is another interface to the Color Corrector 3-Way. Clicking on the Filters tab in the Viewer gives you a numeric interface to the plug-in. Your changes should have left you with Blacks Controls Level set to about -35 and the Highlights Controls Level set to 242. Click back to the Color Corrector 3-Way tab.

You'll notice that the Canvas image already looks much better. We have adjusted only the luma (brightness and contrast) but the colour saturation has improved – darkening an image always deepens apparent colour saturation. This is why we started with the luma before fiddling with the chroma (colour) settings.

POWER TIP
You'll need a properly calibrated monitor to do any decent colour-correction work. Apple's standard Cinema Displays are pretty good straight out of the box, but it's worthwhile investing in a calibration solution if you are serious about getting the right look for your finished material. Spyder3 from DataColor gives great results. If you can afford it, nothing beats a true grading monitor.

The grass could still do with a little more oomph. It's tempting to turn up the colour saturation, but this gives you a very unnatural green (more like green baize than grass). Let's use the colour controls instead. The grass colour we want to change is in the mid-tones – in other words, not the bright highlights or the dark shadows – so we'll be using the Mids colour wheel in the Color Corrector. By dragging the dot in the centre of the colour wheel we can bias the mid-tones toward any colour. You might think that we want to drag the dot towards the green to make it look greener, but again, that gives an unnatural look. Grass responds best to pulling towards the yellow. Again, watch the Canvas and don't overdo it. If you want to check back to the numerical values in the Filter tab, you should find it looks best with the Midrange Controls Angle of about -71 and Magnitude 6. 05

Note that, once you have started to move the colour balance control, you can hold down [Shift] to stop the colour angle from changing. If you need to reset a colour wheel, click on the dot to its bottom right. 06