Home

TrueColor V3.0 - Reality check

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As much as we like to have absolute, scientific reference points, the purpose of what we do with the camera is to reproduce, for the most part, real life situations. At least this is the goal of my TrueColor configuration. So, after playing with the chart, there is a point when you need to have a "reality check". This opportunity happened for me when I've been asked to work as DIT for a series of commercials shot by Image Line for their client, MGA

The scene had several objects of vivid colors and, during the setup day, I noticed that the HD100 tended to render the pinks and magentas as red. This is, as I learned recently, a characteristic of HD cameras in general. They tend to be "red happy". Now, keep in mind that my HD100 was connected to an HD Sony monitor via component cable so the signal was as good as it gets. In order to verify the color matrix settings I also monitored the color via a vectorscope.

Now the fun part begins. As you can imagine, I thought it would be logical to lower the gain of the red channel. I tried that but I didn't get any significant correction for the magentas. Now, if you look on the VectorScope the blue channel is the one opposite to the red one. So I started moving the blue. Specifically, I lowered the gain a couple of notches. Voila', the red shifts ever so slightly clockwise toward the magenta and the pinks and magentas render just fine. Skin tones are affected a bit, as red and yellow are the main components. You don't want to upset the balance too much. I moved the blue gain from 3 to 1. You can try setting at 2 just to keep skin tones more vibrant, it depends on what you shoot. For the majority of scenes I believe that Blue Gain at 1 should be fine.

Encouraged by the sucess I verified the black levels. The blurred spot on the photo is where the toy is placed. I can't show it yet because it's a new product, but I can tell you that it has black parts over blue areas. There were several spots in the scene that needed good capture of dark tones. TrueColor V2.0 works fine for this but I decided to try a different approach. After a few minutes of work I found a solution that I considered more satisfactory. I called Neal Brown, the DP, and Brad White, the director, to get the opinion of people with a sharp eye for details. They both agreed that the new black settings define the dark tones with lots of subtleties while at the same time they don't seem to affect the midtones as much as V2.0 did. Not thsat V2.0 was bad, it's just that V3.0 is better. Basically I moved Master Black from -2 to "Normal" and I disabled Black Stretch. V2.0 had Black Stretch at 1.

So, in conclusion here are my revised settings, from now on nicknamed "TrueColor Version 3.0"

Master black	Normal	Color Gain	Normal
Black Stretch	OFF	Color Matrix	Standard
Detail	MIN	R Gain	3
White Clip	108%	R Rotation	4
Knee	Manual	G Gain	2
Level	90%	G Rotation	Normal
Cinelike	OFF	B Gain	1
Gamma	CineLike	B Rotation	-3
Gamma Level	-1		

I'm confident that this configuration will improve the look of your footage compared to any of the stock settings. Keep in mind, though, that any two HD100 might have slightly different reactions and you should calibrate your own HD100 with a chart.

One note about the use of these settings. I spent a considerable amount of time to get an engineering approach to color calibration. If you use these settings or configuration derived from them in a professional production I would appreciate if you credit the source. Also, if you have the chance, drop me an email to let me know which features/shorts/commercials have been shot with the HD100 calibrated as described here.

Ciao!

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Paolo
PS: sorry about the watermark. I just found out that some people on a Japanese blog are copying the about table and not only not mentioning the source but crediting it with their name!