Filtration Tests

I need to thank Michael Toay, Steve Lucas and Gene Duggan over at Plus8 Digital Burbank. They helped me obtain the gear I needed and the time to play around with it. Also I need to thank Denny Clairmont, Sergio Huerta and Bill Sturcke over at Clairmont Hollywood. They too set me up with all the equipment I needed. Another really big thank you to Michael Bravin and Jeff Cree over at BandPro Burbank. Michael set me up so I could do the frame grabs and Jeff loaned me his personal filter sets. Dave Corely for the DSC ChromaDumonde chart and lastly George Palmer for helping me keep all this in perspective.

First a word of caution:
Both Plus8 and Clairmont create their own F-900 reference files. These files involve shading out errors in the chip block, pixel mapping and other engineering alignments. I would recommend **NOT** blowing out these files unless you know what you are doing or talked to the rental house before hand. These are service bench alignments that require special tools and the time to do it properly. If you do blow out the reference file then you will be back to factory defaults. Operator and scene files are user related. If you accidently blow out the OHB file then you are in a heap of trouble. The camera will need to go back to the shop for realignment. Most rental houses will give you their reference files on a memory stick just incase an "enthusiastic assistant" blows them out. Using owner operator cameras is a stickier issue. That requires judgment on your part, trust by the owner and how much the owner will let you play with adjustments.

Base Camera Setup:
F-900/3
24p
-3db
DSC Cavity Black Chart
Detail Off
Matrix ON
Auto Knee or DCC On
Matrix aligned to DSC Labs ChromaDumonde
Plus 8: 28mm DigiPrime
Clairmont: 7.5mm-158mm Canon T2.1 Zoom

I shot all the filter tests over at Plus8 Digital. I used my preferred F-900 setup. This is my starting point. My adjustments are minimal. I used a 28mm Zeiss DigiPrime at T 2.8. I was experimenting and accidently shot some examples on 9db gain. It didn't affect the look of the filtration. The gain did add a bit of noise to the examples. The noise is most noticeable in the blue label on the bottle. The rest of the tests were shot on -3db. I use -3db when I can. Some of the filter packs are incomplete. I tried my best to get complete sets.

What you see here are uncorrected examples as I shot them. You have a clean frame for comparison to the filtration shots. I personally would pull down the blacks on some shots as the softer filters tend to lift the blacks. I ran out of lighting units, foam core and time. The bottle of wine disappears into the background. Shame on me. Enjoy.

I shot these examples over at Clairmont. They illustrate differing looks and Knee compensation.

The setups are as follows:

Clairmont base setup

McDonnell setup Matrix off

McDonnell setup Matrix on

Even though the Clairmont base setup looks desaturated and flat it really isn't. They align their cameras for the most neutrality. Plus8 is the same way. They give you a neutral starting point. I could shoot both cameras this way and be happy. The benefit to this neutral setup is it makes a DIT's job much easier. If you want to test a 900 this is the way to do it. On the other hand my base settings tend to be bit more punchy and richer. That's how I like to shoot a 900 as long as everybody signs off on it. I give post a bit more chroma to start with. Push the chroma to far and you introduce noise. You can always take chroma out in post. If you are doing a film out consult with post on how they want it to look. The film out house may dictate certain camera settings. Call them!

Knee Examples:

These are extreme examples of what Auto Knee or DCC does for you. It does control highlights but at a cost. It is better to close down, use a grad or diffusion to help control the highlights.

To exaggerate these examples I heavily over exposed the scenes. I was probably 2 to 3 stops over on the highlights. DCC tried to bring them back so they weren't completely gone. I shoot with Auto Knee on all the time. You can dial in less aggressive settings. It's a choice you need to make as a DIT or DP.

Example 1:

The transmitter tower is blown around the edges . The sky through the tree leaves are blown out. The sky is gone. Whites are clipped.

Example 2:

The sky is pulled back. You can see the complete transmitter tower. The sky coming through the leaves looks better. No clipping.

Example 3:

The overall scene looks okay. The highlights are starting to clip.

Example 4:

Scenes loses chroma when highlights get pulled back. This is how Knee can hurt you. But whats really amazing is the white strip at the bottom of the frame. Knee pulled it back and now you have detail in it. Not pretty but it's also not a supernova anymore. Knee is definitely a tradeoff in some situations.

I hope these tests are informative. I sure educated myself doing them. If you have any questions on what I did or why please feel free to contact me anytime.

Sincerely,

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