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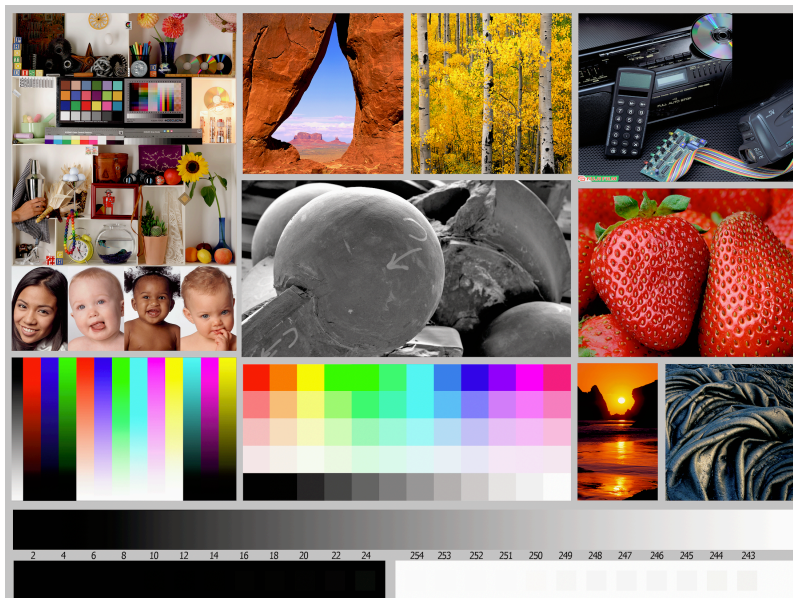
This document describes how to visually adjust your (any) display device for maximum “Dynamic Range” (“DR”) in any viewing environment.

Be advised that as the ambient light in the viewing environment changes, so should these adjustments. Many new display devices have presets such as “Day”, “Night” or “Custom” modes to store multiple adjustment settings.

Also, there are many other controls that impact viewing (color temp, gamma, color saturation, color tint, sharpness, icc profiles, etc.) but the adjustment that will have the single most visible impact is DR.

If a devices DR is set incorrectly, shadow detail will be lost in a black pool and highlight details will be clipped to the brightest white the device will display. Visually setting a display devices DR can easily be completed in just a minute or two.

NOTE : Be sure to have your Photoshop Colorspace set to ProPhoto before opening this file.



In addition to saving this image to your computer's storage drive, I also recommend saving it to a USB Key. Keep this with you so that you can adjust every display device that you may be using.

Once you have the TIF file on the target computer, simply display the image using the computer's "image preview" application. Be sure that the image completely fits on the display device that you want to adjust.

You're going to use two controls ("Brightness" & "Contrast") on the display device (projector, HDTV, computer monitor) to adjust the DR to its maximum density or Dmax.

The "Brightness" control is going to set the **black point** while the "Contrast" control will be setting the **white point**.

If you have not done so already, download the "Digital Eval Image_ProPhoto.tif" file.

You will be using this file to make DR adjustments as there are "calibrated" values contained at the bottom of the image that you will need to reference when adjusting.

With the image on the display device that you want to adjust, look at the very bottom portion of the image.

Note a black scale on the left and white scale on the right. These numeric values shown are Photoshop RGB values (0=pure black / 255 = pure white).

What you will be doing is visually setting the DR of the display device for the ambient light of the viewing environment.

Before making these adjustments however, I suggest that you select a "Picture Mode" and a "Color Temperature" on the display device that makes the test image looks as realistic as possible.

"Picture Mode" options may be "Photo", "Computer RGB", "Cinema1", "Cinema2", "Sports", etc..

“Color Temperature” options may be “Warm 1”, “Warm 2”, “Daytime”, “Cool”, etc..

The benefit of using this digital evaluation image, is that it has all the content needed to make several different display adjustments.

Look at the skin tones on the faces. Are they too warm or too cool? Look at the Strawberries. Do they look realistic or a neon red?

After you have selected the best “Picture Mode” & “Temperature” settings that gives you the most realistic looking image on the display device, proceed with the following steps to adjust the DR.

Setting the Black Point:

Using the “Brightness” control on your display device, adjust until you see gray boxes appear under the low numbers on the left. The further to the **left** the gray boxes appear (under the black scale), the better.

Each display device differs in its ability to show detail in the very dark regions. So, you may only see gray boxes appear starting at 8 or 10 or higher.

Setting the White Point:

Using the “Contrast” control, adjust until you see gray boxes appear under the high values on the right. Again, the further to the **left** the gray boxes appear (under the white scale), the better.

Each display device differs in its ability to show white detail before clipping. So, you may only be able to see gray boxes at values of under 251 / 250 and lower.

Now for the fun part. These controls interact. So, when making black point adjustments, the white’s point will shift and the reverse. The key is use both controls to show the maximum number of gray boxes to appear underneath each scale.

Once you've completed making the "Brightness" & "Contrast" adjustments, your display devices DR is now calibrated to the ambient light of the viewing environment.

You will be surprised how effective these adjustments are with regards to enhancing your viewing experience.

I recommend that you take this evaluation image with you when doing photographic or video presentations at venues where you are plugging your notebook computer into an existing display environment.

Very few venues properly configure their display devices. They mostly increase the brightness so that the display can be seen at noon or in a very bright room.

The information contained in this document gives the knowledgeable presenter an edge over all those who just accept a bad display environment.

Be sure that you make these adjustments so that your audience will have a more enjoyable viewing experience.