# Creating DigiNegs with the Epson 2200

The following is a quick and easy method to create alternative process negatives with the Epson 2200 printer and Pictorico OHP film.

The genesis for this approach was from Keith Schreiber's excellent method for creating digital negatives on the Epson 1280 that was presented at the APIS conference it 2003. I used his technique quite effectively for two years. When I got an Epson 2200 printer, I was looking for a method that would produce results of a comparable quality.

I decided that I wanted a method that also had a little flexibility built into it, and would allow me to use one method to produce a wide range of density ranges in my negatives. It occurred to me that if I could find out the right color with which to 'paint' the negative, I could use a single correction curve and just select the appropriate *saturation* of color to determine the final density range of the negative. The technique and color I eventually found will allow the worker to produce a negative with a density range from 1.55 (platinum) to 1.9 (pure palladium) to 2.5 (albumen and salt) with a single curve.

My background in geology provided the seed of the idea I eventually adopted. Geologists use ternary diagrams, an unusual tri-variate graph, to display data where all the proportions of three quantities must add up to one (100%). It occurred to me that this was exactly the same information I was trying to discern on my quest to find the appropriate ratio of the three primary colors (Red, Green and Blue) that would block the most UV light when used to colorize my digital negatives. My intuition was that as long as I could maintain the *ratio* of the colors to each other in conjunction with a single correction curve, it would allow me to extend the density range by increasing the saturation of the hue, or alternatively, reduce the density range of the negative by reducing the saturation of the hue.

So I created a ternary diagram (see above right) that had red, green and blue as its end members, and varied the proportion of each color from 100% to 0% at the opposite side. The way these graphs work is that each vertex represents 100% of the quantity, and the base opposite the vertex contains 0% of the quantity. Once you do this for all three vertices, voila, you have a triangle to print that will contain a complete range of color ratios. Once this is printed, one can find out the triangle that blocks the most UV light. This triangle would contain the best color to use for the maximum density range potential when colorizing the negatives. The next step was to use the color ration I found (in the case of the Epson 2200, this was R:64 G:128 B:0, I could then create a strip that had sections of this color with the same ratio, but varied the saturation. Using my UV densitometer, I could then pick the color
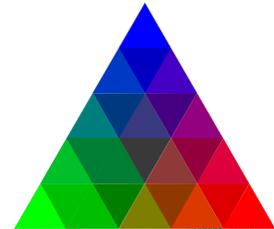
that gave me the correct density range for the particular process in which I wanted to print the negative. The density range is easily calculated by subtracting the Pictorico OHP b+f density from the UV transmission density of any given square.

I then took this color, printed out some test strips and images and adjusted it until I liked the result. I have used the densitometer in the past, but I think the best method is to use a dry print sitting next to your computer monitor. So I ended up with a basic curve that I can now use for creating a wide range of negatives for alternative processes.

Enough bull - how does it work?

It works great.

Details, maybe?

I'm going to fly through with the specifics I ascertained for the Epson 2200. This method should work with other printers, but you're on your own. Email me and I will send you the .tiff file of the basic triangle to print.

Step1: Edit your image until it is a masterpiece in waiting

Step 2: Make sure your image is in 16bit mode. Image->mode->16bit will get you there if you aren't

Step 3: Curve your data with the curve included with this file. It is called RatioCurve. Clever, huh?

Step 4: Invert the image. I always use command-i

Step 5: Convert everything to RGB. It will ask if you want to flatten the images. Of course you do. Just be sure and save your version with all of your editing layers before you do this.

Step 6: Add a new layer. Set the mode to 'Screen'

Step 7: Click on the foreground square, and use the color picker to change the color to:

Density Range 1.6 R:127 G:255 B:0

Density Range 1.9 R:70 G:140 B:0

Density Range 2.2 R:50 G:100 B:0

Density Range 2.5 R:25 G:50 B:0

The 1.6 range is right for platinum, the 1.9 range is right for palladium, the 2.2 is right for some papers in palladium , and the 2.5 would be about right for salt and albumen

Step 8: Use the paint bucket tool to fill the layer you just created

Step 9: Print the negative using the same prints settings outlined in the Schreiber article.

What's with the lack of detail?

I'm a busy guy, and Keith's webpage has all the rest of the information you need. Be sure and use the color settings he recommends. Editing with some weird custom color setting is a recipe for disaster. I recommend saving these color settings with a unique name you will remember like HeyDummyTheseAreTheDigiNegCSFs or something equally memorable. It is also a time saver to save all the particular printer

settings needed with some unique name as well.

Once you do this a few times, it also becomes evident that you should combine all of these steps as photoshop action. Then, with one click, the whole thing just happens. The Photoshop help pages have a great section on recording actions, so read those and make it happen for yourself.
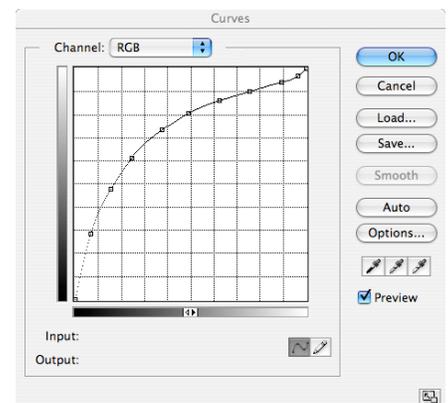
Some screen shots
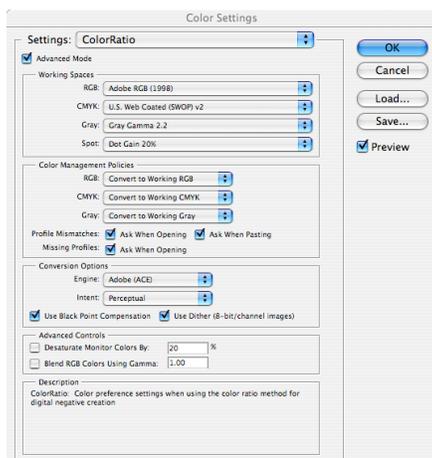
Color picker settings:
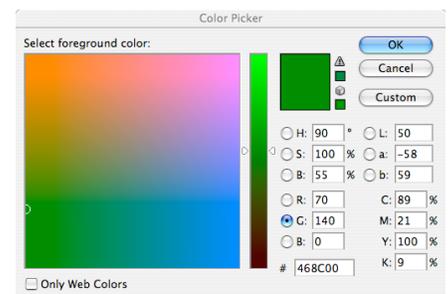
Creating that new layer to colorize with:
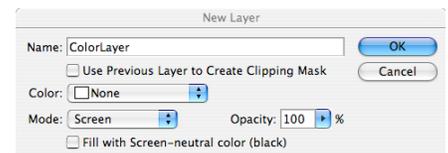
What the curve looks like:

Color Settings needed:

Most importantly:

Keith's website:

http://www.zianet.com/jkschreiber/
articles/1280PyroDigiNegs.html

Caveat emptor, carpe diem, and Sola
Bonum Linguam Mortua Linquam est