

BIPC DIGITAL IMAGING STUDY GROUP
ASSIGNMENT 2002-10

SUBJECT: PURE B&W PRINTS AND QUADTONE PRINTS (using Piezography)

PURE BLACK AND WHITE PRINTS

PROBLEM: You have a digital color image that you would like to make into a black and white print. What technique should you use to make the black and white print effective?

CONCEPT¹: Converting your color images to black & white can be easily done by selecting the grayscale mode in Photoshop. But the results just don't look as if they were shot on real black & white film... So here is where the DigiDaan Channel Mixtures for Adobe Photoshop come in.

Earlier this year in Assignment 2002-02 several other options for creating black and white prints were presented. I recommend re-reading that assignment for a discussion of the various alternatives.

Download the three DigiDaan Channel Mixtures from <http://www.outbackphoto.com/workshop/channelmixer/mixers.zip>, unzip them, and store them on your hard drive in a folder called DigiDaan. Put this folder in the Program Files\Adobe\Photoshop x.0\Presets folder. Now you are set to go.

There are three mixtures to choose from:

- DigiDaanNC.cha is the normal contrast basic conversion, suitable for most pictures.
- DigiDaanHC.cha is the high contrast mixer, to spice up those soft-lighted pics.
- DigiDaanOF.cha is the orange filter mixer, as if the pictures were taken with an orange filter. Very nice for blue skies and gives skin tones that semi-infrared look!

The standard Photoshop grayscale conversion gives a somewhat, dull, unsatisfying result. The DigiDaan normal contrast gives a better, 'crispier' image, but for people pictures the DigiDaan high contrast -because of skin tones-does transform the colors into a more pleasing luminosity/contrast-impression.

The standard Photoshop grayscale conversion washes out the yellows and bright greens. But black & white film is quite insensitive for yellows and greens, that's why the DigiDaan Channel Mixtures also have a notch in that tonal range. To give that film-like impression.

¹ Much of the information in this section comes from the Digital Photo Outback. Ref: <http://www.outbackphoto.com/workshop/channelmixer/channelmixer.html>

The above concept works well. You can experiment with other mixtures found on the Photoshop CD. You can also tweak the basic settings in the Channel Mixer starting at the basic settings of R30G60B10 that provides a good starting point for gray.

PROCEDURE: Follow the steps below:

- Open the to be converted document in Photoshop
- Convert image to 8 bits
- Create a Channel Mixer adjustment layer
- Load one of the above mentioned channel mixer files
- Optional: drag the RGB-sliders for fine-tuning
- Optional: drag the Constant slider for more or less brightness
- Keep in mind that the document stays RGB. Flatten the layers. Then chose Image>Mode>Grayscale and discard color information.
- Levels/Curves may now be used and sharpening applied.
- Print using the same settings as you would use for color printing.

ASSIGNMENT: Try out the above procedure. Report on results.

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Quadtone B&W Prints

Black and white digital printing is rapidly evolving with the advent of Quadtone Inkjet printing. The technology was developed several years ago by Jon Cone of Cone Editions (Cone Tech division) for use in conjunction with expensive (\$50,000+) Iris printers. For the first time digital technology was able to take the process out of the traditional laboratory and produce a product comparable to the finest platinum prints with no telltale inkjet printer dots in the high value. Less than three years ago, Cone introduced an adaptation “Piezography BW” for use in conjunction with several Epson printers, thus opening the technology to a broader market of amateur as well as professional photographers. When combined with special archival papers, the results have been touted as producing exceptional quality fine art prints rivaling traditional former silver prints.

“Cone sought a complete and radical solution to quality B&W printing. He insisted on a calibrated monitor achieved through ‘Color Blind Prove It’ (software) and invented a new driver that exported from Photoshop bypassing the Epson driver’s highlighted dots and increased the resolution from 720 dpi to 2160 dpi instantly. Photographers now have control over tonal values from 0-100%...Using the Epson 7000 and a large format camera at 16 bits Piezography Quadtone results in 16,000 grays rather than the typical 8-bit inkjet printer with 256 grays...pushing us beyond what we have known as the best in B&W photography.”¹

General Information:

- ♣ Available for EPSON 860, 980, 1160, 1200, 1280, 1290, 3000, 7000, 7500, 9000 & 9500 printers. Note that once adapted, the printer can not be used for color again
- ♣ Starter kit for several different printers - \$335 and up
<http://www.inkjetmall.com/store/piezo1160.html>
- ♣ You must flush printers previously used for color. Flushing cartridges included in above kit.
- ♣ There are two types of inks available “original” and new “PiezoTone” available at various prices depending on printer. They can be purchased in cartridges or in bulk.
<http://www.inkjetmall.com/store/piezography-original.html>
and
<http://www.inkjetmall.com/store/piezography-piezoTone.html>
- ♣ There is a wide range of papers and prices...
<http://www.inkjetmall.com/store/finepapers-dt.html>
- ♣ The process is complex and training is limited and expensive- i.e. 4 day Cone workshop, held in Vermont, class size min. 5 max. 9, \$1,500
<http://www.inkjetmall.com/store/workshops-dd.html#pbw>
- ♣ This process is not supported by Epson.

- ♣ On April 25, 2002 Epson announced the Stylus 2200 A3+ printer that uses seven color pigment based UltraChrome inks. Characteristics are: faster (three time as fast as the 2000P), higher gamut, longer life (80-100 years), water and light resistant prints. Produces ‘stunning B&W photographs with the addition of a new lower density black ink – Light Black- which helps produce more neutral grays’. Also available with optional matte black ink. Available in July 2002. Est. \$699.
<http://www.dpreview.com/news/0204/02042601epsonphoto2200.asp>
- ♣ Seattle photographer Tyler Boley , phone 206-860-7166, uses the Quad Tone process.
- ♣ Recommended reading:
<http://www.inkjetmall.com/store/exhibition-printing.html>
<http://www.inkjetmall.com/store/focusonimaging.html>
<http://www.inkjetmall.com/store/shutterbug1.html>

¹ Paraphrased from Geo.DeWolfe, View Camera Magazine, July/Aug. 2001 p58-59
see <http://www.inkjetmall.com/store/dw-view.html>

Norm Babcock
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