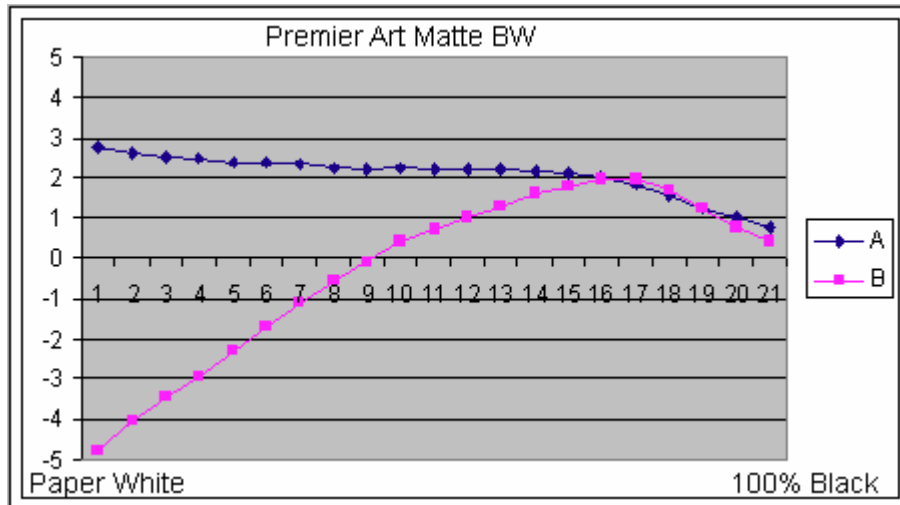


Matching Mat Boards and Split Toning by Selection Area

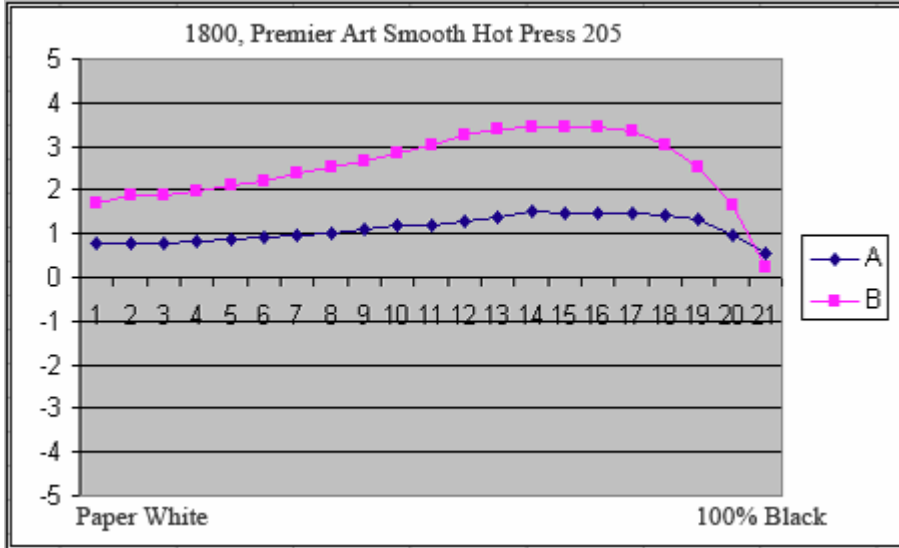
Yellow pigment can be used to match borders of bright paper to warmer, un-brightened over-mats and also to give an image in internal split tone that is controlled by selections in Photoshop.

Highly brightened **Premier Art Matte BW** is a very affordable, acid free, non-flaking, high-dmax, durable paper with the following tonal distribution:



It prints a dramatic, cool-toned image that many favor for to its high visual dynamic range. On the other hand, it does not match the mat boards that are usually used for display. Brightened paper next to the warm mat board looks bluish and is a distraction that interferes with the photographic composition.

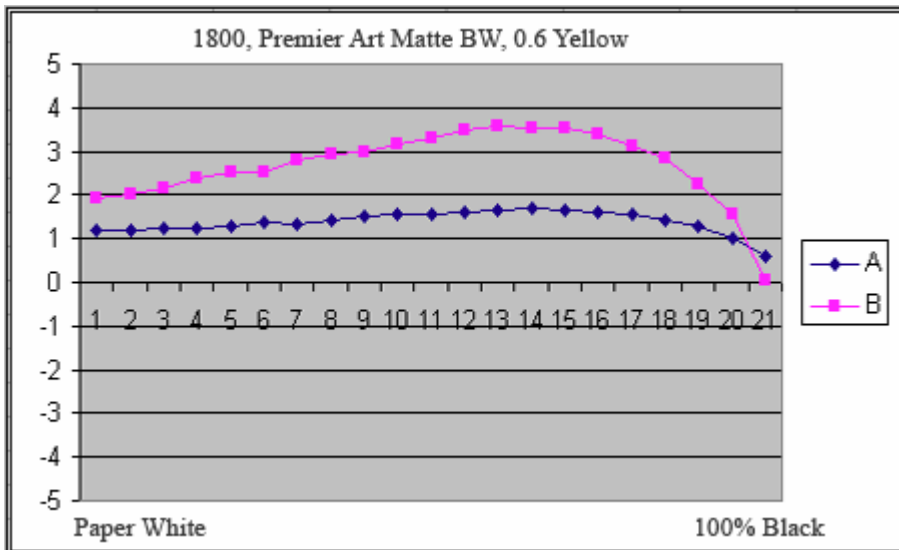
Premier Art Smooth Hot Press 205, on the other hand, like other un-brightened papers with no OBAs, matches my Light Impressions Gallery White mat boards. Its tonal response is shown below:



While it matches the mat board, most prefer the visual impact of brightened papers. The un-brightened papers are a small submarket for inkjet papers.

Is there a way to get the best of both worlds? Maybe not entirely, but visually a very bright paper like Matte BW can be made to do it via a split tone procedure.

Matte BW, first under-printed with a 0.6 (QTR) ink limited yellow and then over-printed in a second pass with the usual Matte BW QTR profile produces the following tonal distribution:



As shown in the graph above, the tonal distribution of the un-brightened paper can be matched very well by bright Matte BW if it is first under-printed with yellow. The very light yellow does not affect the carbon pigment, but just warms the paper where it shows between the carbon dots. The d_{max} , for example, is un-affected and stays at its usual 1.7+.

An over-mat that has a window opening larger than the image can now be used such that the signature on the paper will show, without the distraction of the brightened paper adjacent to the creamy over-mat.

The yellow under-printing does not need to be over the entire paper. A very fuzzy mask can be used such that the bright Matte BW paper shows through in differing degrees to brighten the centers of interest in the image. Because printing in two passes will involve some mis-registration, the mask must be fuzzy enough to account for this. Once the selection is appropriate, transfer it to a new image and paint with one pass of 100% black, so that the areas to be printed yellow are differing degrees of black in the grayscale image. These will print yellow with the profile that simply uses only the yellow ink with a 0.6 ink limit and a (0, 0) to (100, 100) straight line curve.

Here is a sample of the mask I use for my Whaler's Cabin split tone print:



After the mask is printed, the normal image is printed over the slightly and differentially warmed paper. Be sure the paper feed is the same direction. The yellow mask is hard to see.

With this procedure one ends up with a split tone that is determined by selection areas. The higher visual dynamic range of the brightened paper is limited to the internal parts of the image, where, rather than being a distraction that pulls the eye out of the image, it is an attraction that pulls the eye into the image. The paper border and image areas close to the border reasonably match the overmat.

Additionally, different tones can be matched to the intended mood of the image elements. In the Whaler's Cabin, the old tree and those things that I imagine are lighted by moonlight continue to have the original cool Matte BW paper tone. On the other hand, the window of the cabin, which I imagine is lighted by a lantern that is burning inside, and the back yard, where a fire is boiling the whale fat, have the warmer paper tones that I think appropriate for those light sources.

The split tone is sufficiently subtle that most will never know it's there, which I think is a good thing for B&W printing. However, the visual dynamic range of the OBAs and the differing moods that different paper tones give are there, but only where and to the degree appropriate.

Of course, we know the yellow ink will fade relatively quickly. Likewise, most OBAs fade quickly; that has been one objection to brightened papers. They ultimately warm to the un-brightened paper tones. So, the split tone will ultimately fade. When the yellow and OBAs are totally faded, the paper border will be ... the same tone as when it was first printed. The actual fade path, determined by the relative fade rates, will be determined by the paper and display conditions.

It's just another tool ...

Enjoy,

Paul

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The PDF on R800/1800 carbon printing is located at

<http://www.paulroark.com/BW-Info/R1800.pdf>

My index of other black and white digital printing information is at

<http://www.paulroark.com/BW-Info/>