

Epson Stylus C88+

Black and White Noritsu-Epson Dye Ink

www.PaulRoark.com

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The C88+ is an inexpensive printer that ships with Durabrite pigment inks and uses only 3 colors – no “light” color inks. It is suitable for an efficient and easy ink setup where all the “color” positions are a single neutral, glossy, light black ink.

The ink arrangement discussed here uses the Noritsu-Epson (Claria equivalent) dyes that have been made into a B&W inkset.¹ The goals for this printer-ink combination are to make a reliable, clog-free text printer that can also make outstanding B&W glossy prints and cards.²

The C88+ is similar to the WorkForce 30 that was previously set up with these dye inks.³ The WF 30 is a newer design that has a second black ink cart and is a very fast text printer. The C88, in comparison, is slow at both text and photos. The quality of the final prints are, however, comparable and excellent.

Inks

Black positions = Noritsu (Epson) D700 “dry lab” ink⁴

Color positions = 30% (13% Noritsu/Claria magenta,⁵ 87% Noritsu K), 70% clear dilution base.⁶

The need to mix the inks is clearly a barrier for most users. So, the trade-off is unique B&W glossy capabilities for a fraction of the Epson cost per ml of ink, in exchange for the need to mix inks and load the cartridges.⁷

These advanced dyes are lightfast enough for most uses. Wilhelm Research rates Claria color photos at 98 years of display life when displayed under glass; over 200 years when in an album or dark storage.⁸

¹ See <http://www.paulroark.com/BW-Info/BW-Dye.pdf> for general information about these dyes.

² I have used the same mix in my Epson 1400 for making cards and brochures for about a year with outstanding success. The glossy prints and cards this ink is capable of making are simply better looking than any pigment system is capable of making.

³ See <http://www.paulroark.com/BW-Info/WF30-BW-Dye.pdf>

⁴ Sold in 500 ml carts for \$187, see Appendix A (p. 12) of <http://www.paulroark.com/BW-Info/BW-Dye.pdf> for suppliers. See <http://www.noritsu.co.jp/english/msds/pdf/d701/ENA/MSDSH086075-00-01-NA-E.pdf> for the Noritsu MSDS. The usual bottom-fill adapters are used to pull ink out of the large Noritsu carts. See <http://www.paulroark.com/BW-Info/Modified-Bottom-Fill-Adapter.pdf>

⁵ Given the cost of the Noritsu carts, using a small Claria cart (e.g., for an Epson 1400) as a source of the magenta may be a good alternative.

⁶ For information on the clear dilution base, contact me at roark.paul@gmail.com. I do not recommend the dilution bases used for pigments, such as the generic base discussed at <http://www.paulroark.com/BW-Info/Ink-Mixing.pdf>.

⁷ MIS Associates is the source for carts and other ink loading accessories. See http://www.inksupply.com/printer_products.cfm/p/Epson_WorkForce_30.html at the bottom of the page for empty cartridges.

⁸ See <http://www.wilhelm-research.com/epson/RX595.html>

Black ink is typically much more lightfast than the color inks. When Claria black only prints are sprayed with Premier Art Print Shield, they appear to be in the Epson UltraChrome pigment class in terms of lightfastness.⁹ I make no claim for lightfastness for this inkset. I'm comfortable using this un-sprayed for cards but recommend 100% carbon for fine art and where long life is a top priority.¹⁰

With the high dark storage rating and in light of the fact that dyes do not sit on top of the paper like pigments, the use of these dyes might also be very good for books or applications where pigments would be subject to rub-off problems.

Papers

The dyes print well on most glossy papers. The paper I most favor for cards and brochures is Red River Polar Pearl Metallic.¹¹ The Red River UltraPro Satin paper is also a very good paper for this setup.

For a brief description of my procedure for making cards, see <http://www.paulroark.com/BW-Info/Card-Procedure.pdf>.

On matte papers there is a tendency to either print with a weak dmax (maximum black density) or be too green in tone. For example, Epson Ultra Premium Presentation Matte has a reasonable print tone, but the dmax is weak. Hahnemuhle Photo Rag has an excellent dmax but is too green.

The only matte paper I've tested that combines good print tone with outstanding dmax is the Red River Premium Matte Plus.¹²

The print tones for the recommended papers, above, are all neutral. All of the papers are "brightened." As such, the cool paper tone is continued through the rest of the print.

⁹ See <http://www.aardenburg-imaging.com/> fade test data. Compare the results of the 1400 black only, sprayed print on Canson paper with UltraChrome ABW results.

¹⁰ See <http://www.paulroark.com/BW-Info/Eboni-6.pdf>

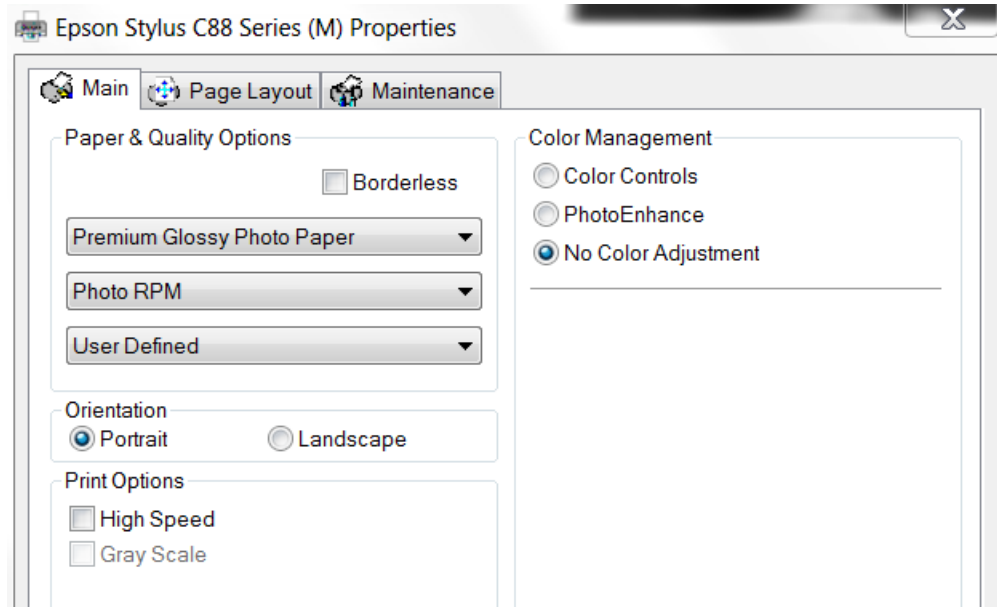
¹¹ See <http://www.redrivercatalog.com/cardshop/scored/66-polar-pearl-metallic-framecard.html> for the card stock I use most.

¹² See http://www.redrivercatalog.com/browse/60lb_premium_matte_plus.html

Workflow – Printing Procedure

Driver Settings for Photos

To print cards or other photos, the best quality settings are used. See the screen grab, below.



For matte paper the paper type would be “Premium Presentation Paper Matte.” I always use the best printing quality for photographs.

ICC Profiles

For good photos, ICC profiles are recommended. These ICCs are made with QTR’s Create ICC-RGB¹³ and contain Photoshop curves that start the inks sequentially and limit the output at the 100% black point to maximize the depth of the black. ICCs have been made for Red River Polar Pearl Metallic paper (recommended for cards) and Red River Premium Matte Plus (60 lb.) (recommended for matte prints). See <http://www.paulroark.com/BW-Info/C88+Noritsu-Profiles.zip> for profiles.¹⁴

In Photoshop, the ICCs are selected in the print preview.

¹³ See <http://www.quadtonerip.com/html/QTRdownload.html>

¹⁴ The PS curves for the ICCs & papers are also in the Zip file. They should be flexible enough to linearize ICCs for many other papers. Print the 80-100 test strip (<http://www.paulroark.com/BW-Info/80-100.jpg>), and then change matte or glossy “seq ...” curve to correspond to the edge of the dmax plateau and linearize with a 21-step (<http://www.paulroark.com/BW-Info/21-Step.jpg>) rgb test strip and Create ICC-RGB. For how to embed a PS curve in and ICC, see http://www.paulroark.com/BW-Info/Embedding_Photoshop_Curves_in_ICCs.pdf.



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