MIS Ultra-Tone R2 B&W INKS for the Epson R200 Printer

Information and Settings

By
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(7-12-06)

(Note, the formatting of this document works better when at full screen display.)

The MIS UT- R2 inksets come in 2 tones: R2-N (neutral) and R2-Warm (pure carbon).
Both are 100% pigment (no dyes), black and white inksets for the Epson R200 printer.
They can be purchased from MIS Associates. See the MIS website at:
http://www.inksupply.com/bw/utr2

In my fade tests no other inkset has matched the lightfastness of the MIS UT family of
B&W inks, which includes these R2 inks.

The R2 inksets can print on matte or glossy papers as long as the appropriate black ink is
installed. MIS Eboni matte black is for matte papers. For glossy paper a special Photo
Black has been formulated specifically for the R200.

The tones of the images printed with the R200 can be varied from neutral to warm by
installing different combinations of the R2-N and R2-W cartridges. Different papers also
print with different tones. Note that the inks in the cyan and magenta positions are the
same density. Likewise, the LC, LM, and Y position inks are all the same density. The
chips, however, are specific to each ink position. So if you want to warm up a "neutral"
set slightly, try putting an R2-Warm yellow cart in the yellow position.

Grayscale images are printed using the Epson driver, where the profiling needed to match
the printing characteristics to the paper is accomplished using the Epson driver
adjustments. As such, any application that can handle images can print high quality B&W
images with this system. So, while photographers will want a good image editor,
publishing programs and even Word can print excellent B&W using these R2 inks.

Settings

Photoshop "Color Settings"

In Photoshop, the Color Settings (click on Edit, then "Color Settings") usually default to
Gray Working space **Gray Gamma 2.2**, which is usually fine. (This is referred to in
Elements as optimized for computer monitors or the Web.) If the print is much lighter

than the monitor, however, you might try Dot Gain 20% as the gray working space. (This is referred to in Elements as optimized for printing [the prepress industry].)

In Picture Window, the default spaces seem to work very well.

Photoshop CS2 "Print with Preview"

If printing with Photoshop CS2, use "Print with Preview." In the box that appears below the image, there is a box that shows either "Color Management" or "Output." Select "Color Management" and the following settings should appear if one is printing a grayscale file:

> **Print** – Profile: Gray Gamma 2.2.

> **Options** – Let Printer Determine Colors.

Epson Driver Properties

For all applications, be sure the driver is loaded from an Epson disk or downloaded form the Epson webpage. The drivers that are built into Windows are not complete.

When one hits the "Print" button a "Print" box appears. Go to **"Properties"** and **"Advanced."** In that box the settings will vary with the type of paper used.

The sliders and gamma setting in this box allow substantial control of how the print will look. These are used to "profile" different papers to look the way you'd like. I have settings below that I've found work for me. When you get settings that give the results you like, I recommend that you save those.

Although many different papers will print well with this printer and inkset   I recommend starting with the papers and settings listed below to learn what the printer is capable of and to hold down the variables. Not all papers print well with just the slider controls. For example, getting appropriate shadow contrast with some glossy papers can be a challenge.   Some may require a supplemental "linearization" curve, but I have not made those at this point. For a tutorial on making grayscale curves, see
http://home1.gte.net/res09aij/EZ_Adjustment_Curves.htm

To test new or different papers, I recommend the use of 21-step test files such as I have on my web site. (See the index at http://home1.gte.net/res09aij/index.htm.)   Printing these test files will show whether the grayscale ramp is reasonably "linear" (evenly spaced 5% steps) and help in determining the best slider settings for new papers.

Printing on Matte Papers

General Matte Paper Settings –
For Epson Enhanced Matte, Hahnemuhle Photo Rag, PermaJet Alpha & Most Matte Papers

The driver's Properties > Advanced box settings as shown below will work well for a number of matte papers.
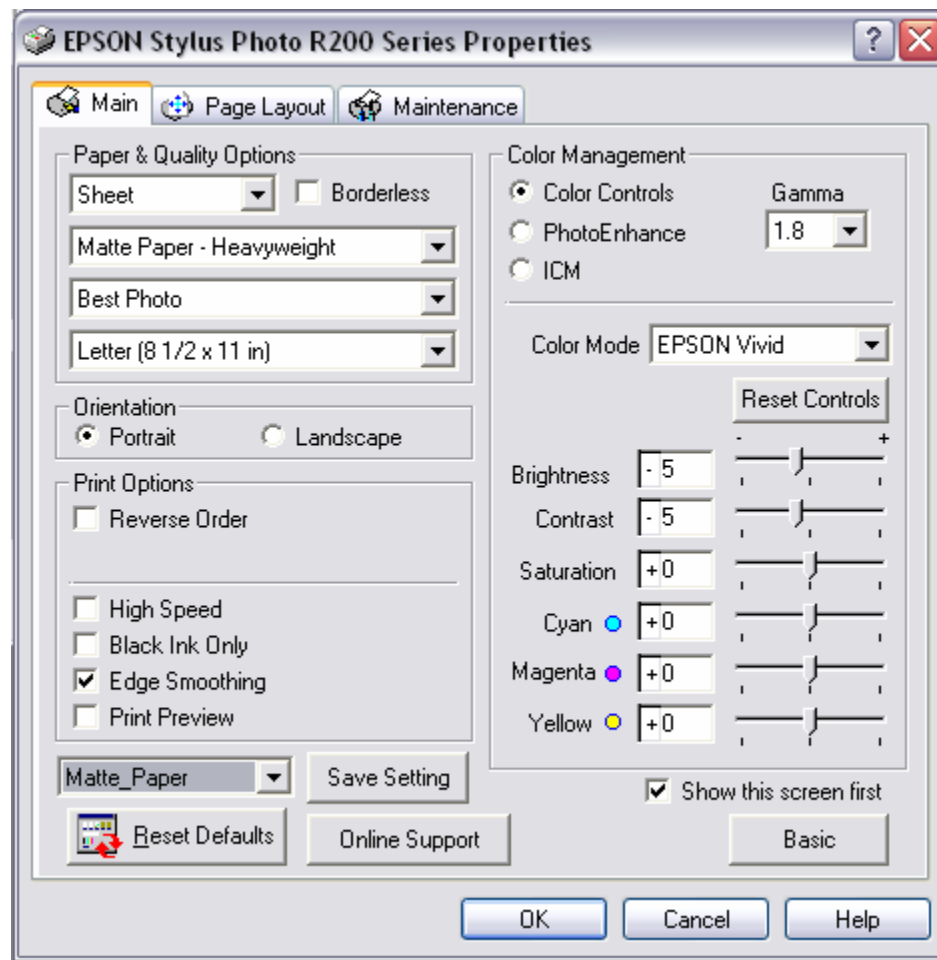
Epson Enhanced Matte ("EEM") has a paper life of just over 100 years in good storage conditions according to the Wilhelm Research accelerated aging tests. In high humidity or temperature, it might yellow much more quickly. While this paper is not archival, it makes an excellent image and is a good value for non-archival printing.

Hahnemuhle Photo Rag & PermaJet Portrait Classic tend to have some flaking (blow off the surface before printing) and a sensitive surface.

PermaJet Alpha contains no optical brighteners, which give it a creamy look and avoid the appearance of yellowing that will happen over time with brightened papers. This is one of my favorite papers, but, unfortunately, PermaJet currently has no distribution in the U.S. Related papers Omega and Delta print similarly and have some brighteners, with Delta being the brightest, but still neutral. These papers exhibit little if any flaking.

Innova papers have a similar coatings to PermaJet Alpha and should print with the same settings.

Moab papers, which are good value cotton papers print quite well with these settings. These papers also suffer from flaking and should be blown off before printing. The Moab Natural has no optical brightening agents ("OBAs"), and thus will not appear to yellow over time due to the OBAs burning out.


PremierArt Fine Art Hot Press
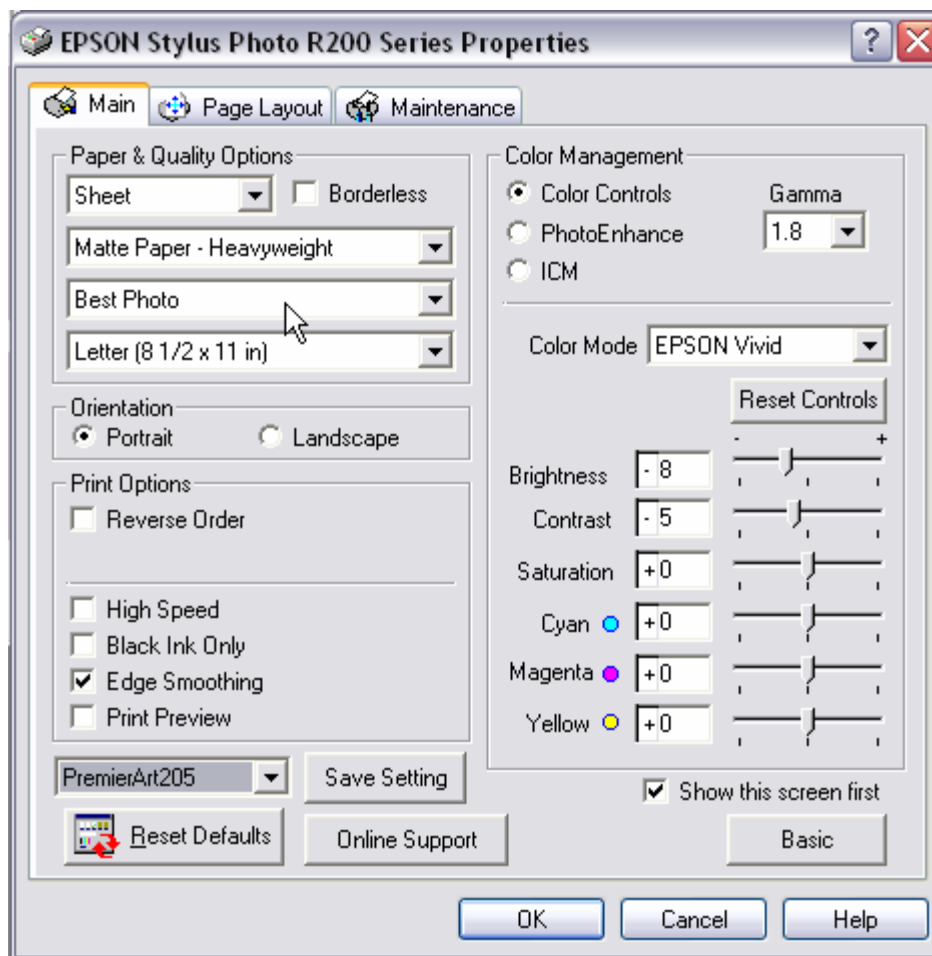
PremierArt Fine Art Hot Press 205 ("PA 205") is an excellent value in archival cotton paper. The convex side of the 205 weight version prints slightly smoother than the concave side. The heavier PremierArt Fine Art papers and Epson **UltraSmooth** typically use the same settings. These papers have no optical brighteners, yet are still quite bright. They exhibit little or no flaking and may be the most archival and durable papers I've tested. MIS now carriers PremierArt 205 paper, as do a number of other internet outlets.

Printing on Glossy Papers with Photo Black Installed

Kirkland Glossy Photo Paper & Ilford Galerie Smooth Pearl
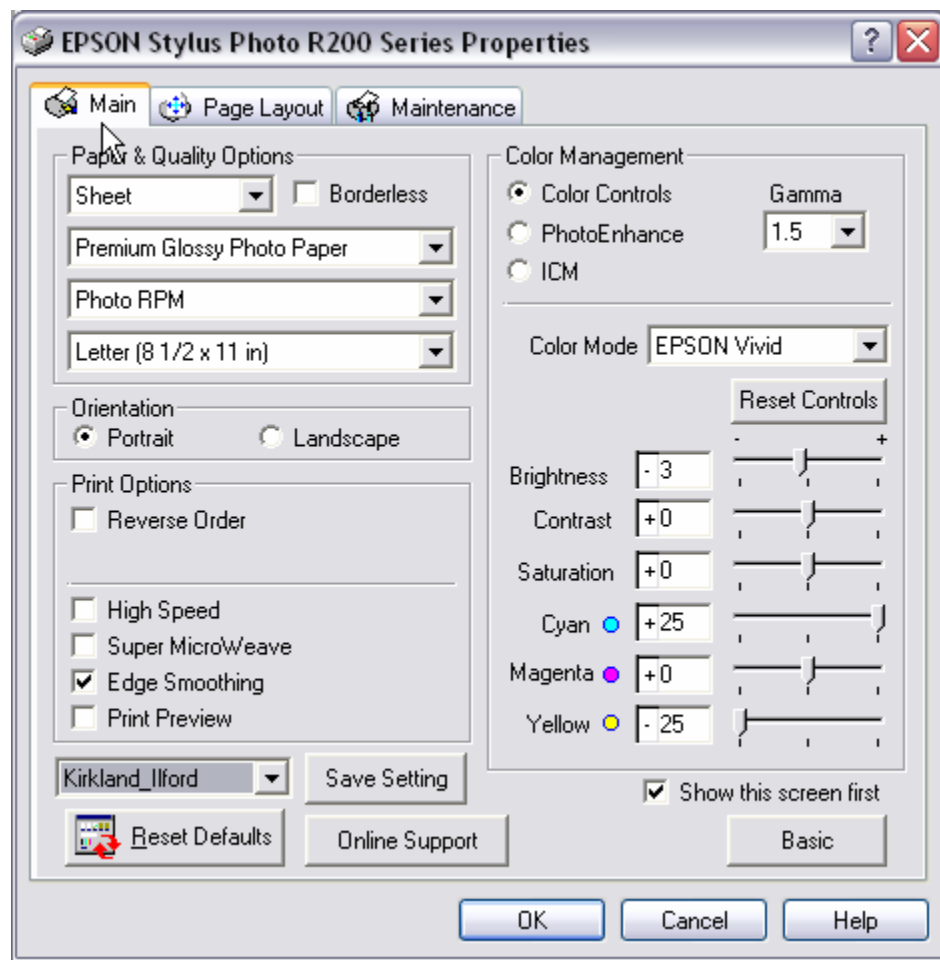
Note that the **Gamma 1.5** setting for these papers.

Costco's Kirkland Glossy Inkjet Photo Paper and Ilford's Galerie Smooth Pearl are the primary recommendations for a glossy and pearl finish, respectively.

Kirkland Glossy Photo paper is a wild bargain. With its buffered interior paper, similar to Epson Premium papers, it may even be archival. This paper may convince you that the cheapest can also be the best. The Kirkland paper can be ordered from Costco at <http://www.costco.com/Common/Category.aspx?whse=BC&topnav=&cat=1200&hierPath=354*&Browse> even by non-members.

Ilford Galerie Smooth Pearl is the best choice I've found for a pearl surface. It is also reasonably priced. Typical of the vast majority of gloss papers, this paper does not appear to be acid free.

These papers have a dmax of about 2.0, which is very adequate and better than most of the other glossy papers I've tested with the R200.

Note the Cyan and Yellow settings. This has the effect of increasing the contrast between the 95% and 90% steps, which is needed for many glossy papers on the R200.

I spray many of my best glossy-paper prints with PremierArt Print Shield after they are dry. In the past this was needed to eliminate the "bronzing" (differential color reflections) that seriously afflicted most glossy papers with other inksets. However, the current MIS UT inks have such low bronzing that most will probably not see any need for this now.

Spraying also increases the dmax makes the surface of the print waterproof. Once sprayed, the print surface is tough enough to be cleaned with a damp paper towel if need be.   I sometimes display sprayed glossy (including semi-gloss and semi-matte) papers with no glass, so that the full dynamic range of the image, including particularly the depth of the deep blacks, can be seen without the compromising effects of glass reflections. Spraying for these purposes still has value.

The settings for the following papers are recommended starting points. You may be able to get a better match to the monitor with other adjustments.

Epson Premium Glossy, Semigloss & Luster
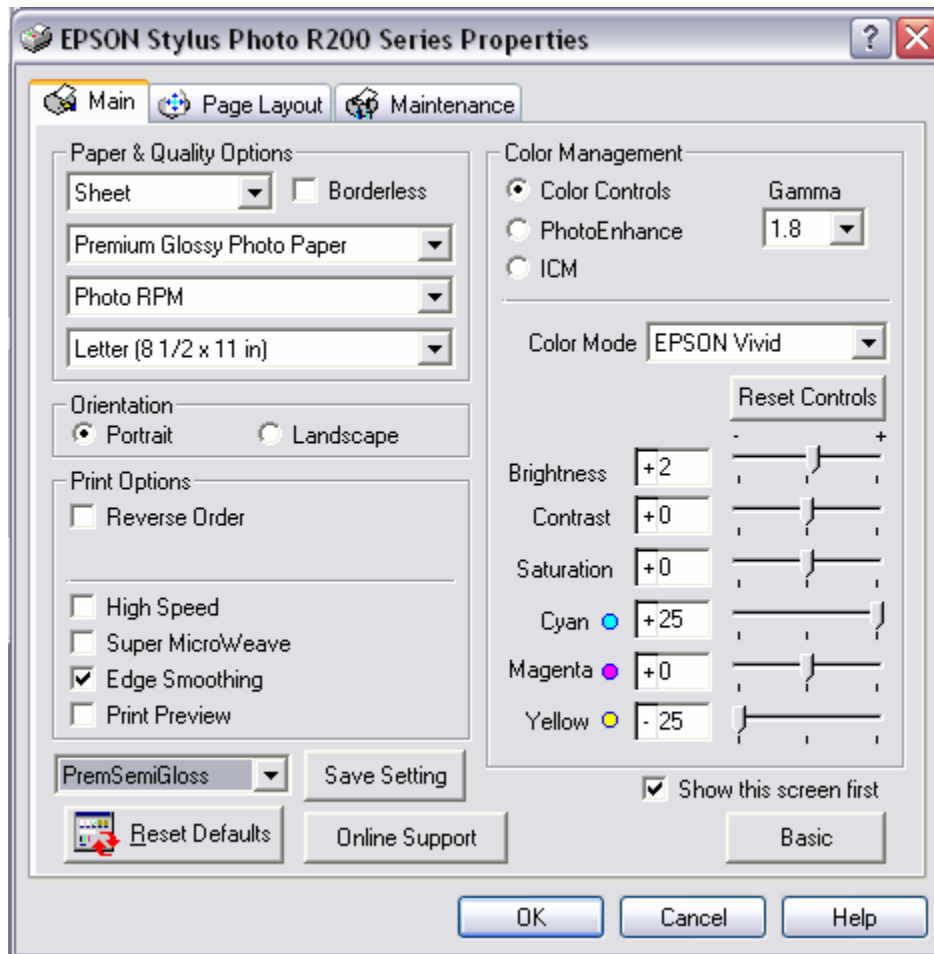
The Epson Premium Glossy, Semigloss, Luster and Semimatte papers are rated by Wilhelm at ">200" years in terms of storage life. The above settings work for the Semigloss but not the Semimatte, which is not available in letter size anyway. I have not tested the Luster and Glossy papers, but they usually work with the Semigloss settings. The Luster dmax may be less.

Fine-tuning with Photoshop Curves

There may be some papers that do not adjust well with the sliders. For there, a simple grayscale Photoshop curve, which can also be loaded as Transfer Function, can profile the printer more accurately. Grayscale curves are relatively easy for users to make or modify as needed. See my tutorial at http://home1.gte.net/res09aij/EZ_Adjustment_Curves.htm .

Matching the Monitor to the Print

If one uses Photoshop and the monitor does not match the print, the alternative that I use to accomplish this is outlined at http://home1.gte.net/res09aij/Monitor-Profiling.htm .

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Paul
www.PaulRoark.com
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PS: For an open forum where I hang out, join the B&W Digital Print forum at
http://groups.yahoo.com/group/DigitalBlackandWhiteThePrint/