

A hands-on review of the
Epson R800
Ultrachrome photo printer



by

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1-A new printer

In February 2004 Epson introduced a new desktop printer: the Epson R800. This printer, which is now just becoming available in stores, features a number of new technological breakthroughs in regard to print quality.



The Epson R800 control panel on the printer cover

Epson regularly introduces new, cutting edge printing features on their desktop printers. Some of these new features are later implemented on their larger printers. This migration is based on how well these new features are received by the public and on how well they work in real world printing.

A few years ago I purchased and tested the then-new Epson C80. The C80 featured Epson's Durabrite inks. These were the precursors to the now famous Epson Ultrachrome inks. Durabrite inks were pigment based, had a higher fade-resistance than previous Epson inks and did not exhibit metamerism. The C80 was a letter-size desktop printer however Ultrachrome inks are now found on the 12" wide Epson 2200, the new 17" wide Epson 4000, the 24" wide 7600 and the 44" wide 9600 and 10600. Many fine art printers consider Ultrachrome inks to be one of the most significant advancements to inkjet printing. These inks gave birth to the new, industry-approved term for inkjet prints: pigmented prints. Pigmented Prints replaces the term Giclee which fell out of favor in 2003.

I believe some of the features found today on the new Epson R800 are likely to be seen in medium and wide-format Epson printers in the near future. In fact my guess is that the next generation of medium and wide format Epson printers will feature some of the technology found on the R800. Let's take a closer look at what this exciting, letter size, and below \$400 printer offers and let's look at what the future may hold in store regarding large format printing.

2-Goodbye bronzing

One of the few shortcomings of Ultrachrome inks becomes obvious when you print on glossy papers. Ultrachrome prints –pigmented prints I should say- done on glossy photographic papers exhibit bronzing, a visual effect in which the surface of a glossy print shimmers and takes on a brown, metallic appearance in areas of high ink density such as

shadows. In effect bronzing makes it nearly impossible to use Ultrachrome inks on glossy papers for fine art prints.

The Epson R800 removes bronzing by the addition of a Gloss Optimizer cartridge. The Gloss Optimizer is a transparent and colorless “varnish” which is laid over the surface of glossy prints by the printer.



The Gloss Optimizer cartridge

3-Ultrachrome High Gloss pigment ink

The R800 features a new Ultrachrome inkset: Ultrachrome High Gloss pigment ink. This new inkset is designed to work together with the gloss optimizer to prevent bronzing. Whether this inkset features new inks for all 7 colors (Magenta, Cyan, Yellow, Matte black, photo black, red, and blue) or for some of these colors only is unknown to me at this time.

There are three interesting aspects to this inkset as it implemented in the R800:

First, light cyan and light magenta have disappeared and are replaced by two new colors: blue and red.

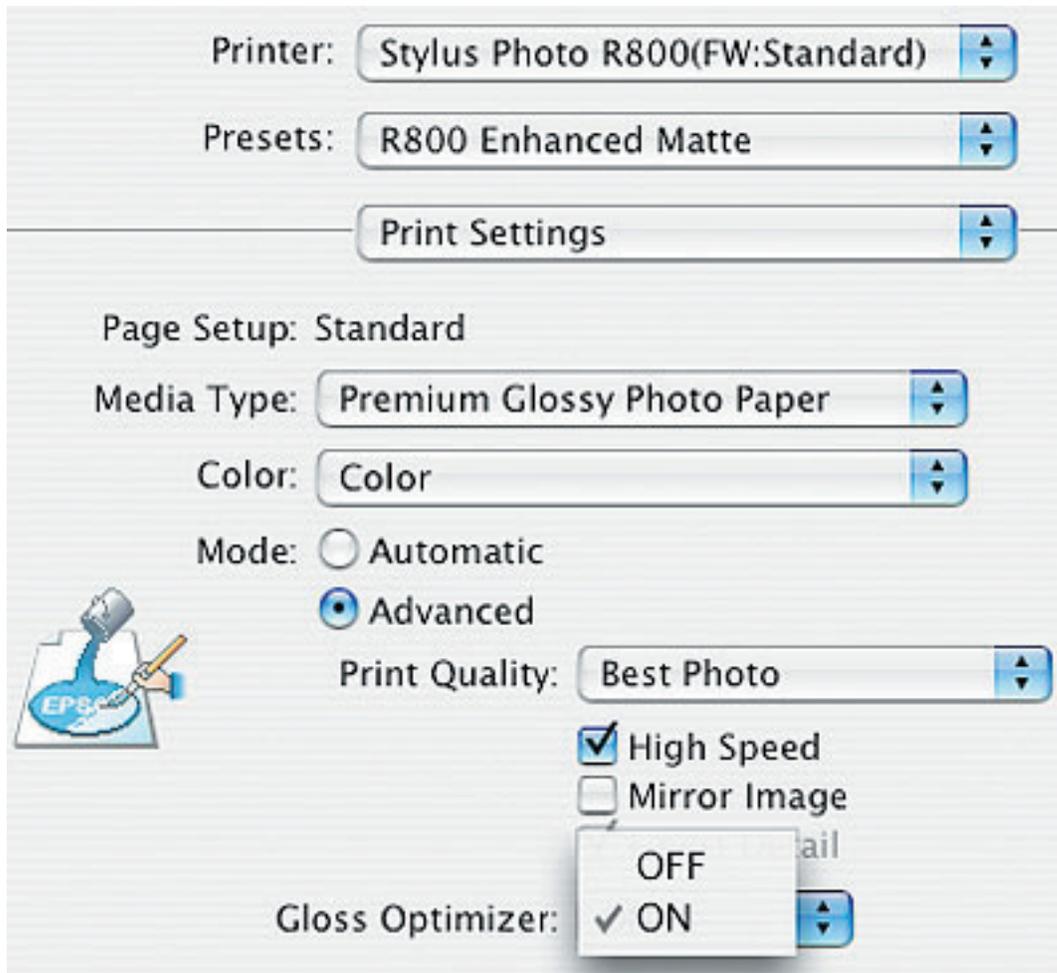
Second, the R800 features both matte black and photo black cartridges just like the new Epson 4000. This shows a definite commitment by Epson to provide both matte and glossy blacks installed in the printer at the same time to prevent users from having to swap cartridges when they change from matte to glossy papers. This feature is

already implemented on the Epson 4000 and my (educated) guess is that we can expect this useful feature to be implemented on all upcoming Ultrachrome printers including the next version of the 7600, 9600 and 10600.

Third, the light grey ink, found on all Ultrachrome printers so far, is absent. I discuss this in greater details in my Black and white prints section below.

4-An 8-cartridges printer

The R800 features both matte black and photo black cartridges just like the new Epson 4000. This, plus the gloss enhancer cartridge, makes the R800 the second 8 individual cartridges Epson printer, the first being the new Epson 4000. If the Light Grey cartridge had been used the R800 would have been the first 9 individual cartridges Epson printer.



The use of the Gloss Optimizer cartridge is controlled in the printer driver. The Gloss Optimizer option is only available when glossy papers are selected. This option can be turned on or off.

5- Smaller ink drops and higher resolution

Two other “firsts” are introduced by the R800:

- 5760x1440 dpi enhanced resolution
- 1.5 picoliter droplet size



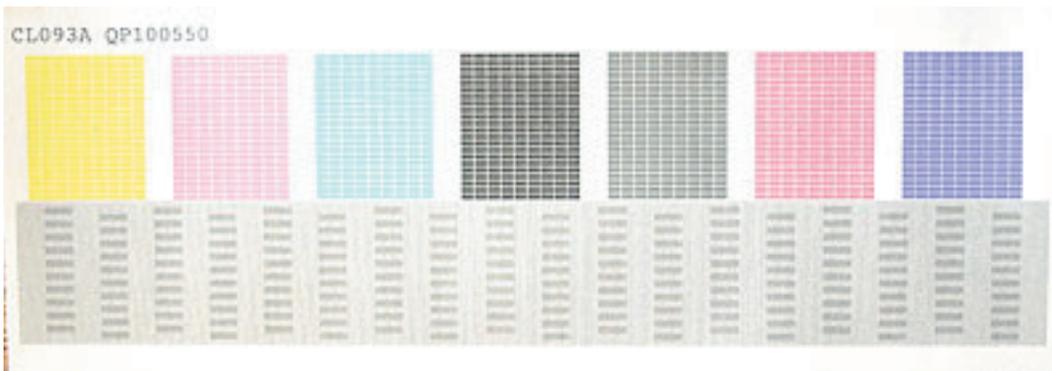
The R-800 features 8 ink Cartridges, including the Gloss Optimizer

6-Two new print head tests

The R800 features two different print head test patterns. You can select either of these patterns in the printer driver based on whether you want to have the printer check if the printhead needs to be cleaned automatically or whether you prefer to make this call yourself.



This is the usual printhead test plus a checkerboard pattern to further allow you to see if a printhead is clogged.



This is the printhead test which allows the printer to check by itself if a printhead is clogged. When selecting this test the printer will print this pattern and then either clean the head or not depending if a nozzle is clogged or not. This is an attractive option. The only drawback is printing this pattern takes longer than printing the regular pattern. I believe we will see this new printhead test on larger size Epson printers in the near future. This automatization means one less thing to think about when running a busy printshop.

7-Let's do some printing

Any of these features alone would be exciting. However, together they make for an exceptional potential print quality jump. I just purchased an R800 and here are my impressions based on looking and comparing actual prints of my work.

Color prints on glossy paper:

Glossy print quality is most likely the biggest improvement brought by the R800. Glossy prints made on the R800 are beautiful and show no bronzing whatsoever. To the naked eye Glossy R800 prints look just like glossy chemical prints. There are no digital artifacts visible to the naked eye and one needs to take an 8x magnifier to the prints to see the dot pattern, a pattern which is very smooth and uniform.

According to my tests so far, and considering only Epson papers, the best glossy paper for the R-800 is Epson Premium Glossy Photo Paper. This paper is available in letter size sheets and in 8.3" wide rolls. The printer comes with a miniature roll holder enabling you to easily print on roll paper. A borderless printing option is available.

In my estimate, glossy prints done on the R-800 using Epson Premium Glossy Photo Paper are very close in appearance to the look of a Cibachrome print. I just showed 8"x10" R-800 prints on Epson Premium Glossy Paper, double matted to 16x20, to my Navajoland workshop students and everyone was stunned by these prints.

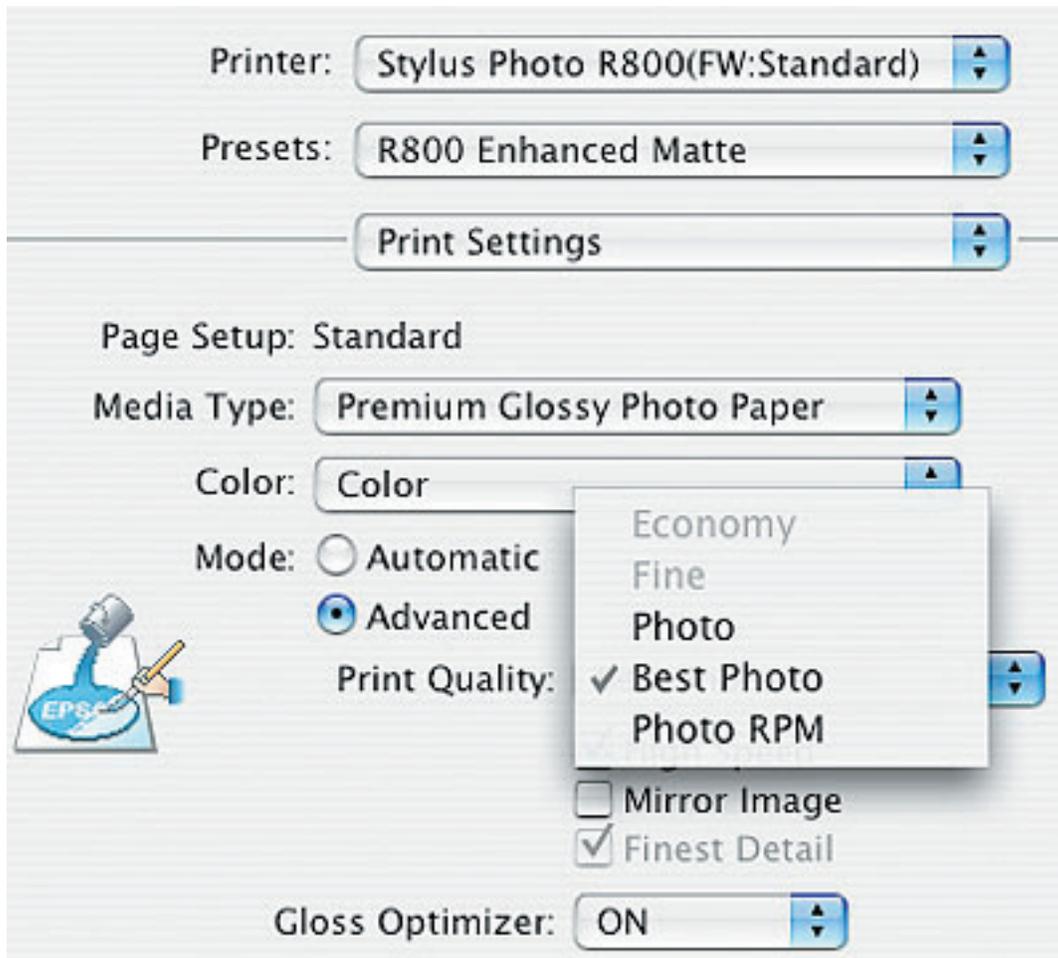
Epson offers a high-quality print setting for all glossy papers called "Photo RPM." This setting gives you 5760x1440 print resolution. However, while the higher resolution is visible with an 8-power magnifier it is not visible to the naked eye. Since this setting increases printing times considerably I decided not to use it. As with 2880 print resolution on the 2200 and other printers it is a nice feature to have but not one that is practical for real-world printing. I used the "best photo" setting for all my prints.

Black and white prints on matte paper

I was curious to find out if the lack of light grey ink was going to affect black and white print quality. To test this possibility I printed the same photograph on the Epson R800 and the Epson 2200, the closest competitor to the R800.

In my estimate there is no difference in black and white print quality between these two printers. That is, black and white prints done on the R800 and on the 2200, on the same papers (Epson enhanced matte and Epson Ultrasmooth in my tests) look just as good on both printers. The black and white tones are absolutely neutral on both printers. I printed a grayscale file converted to Adobe RGB before printing and did not need to make any

color adjustments. The range of grays, the light tones and the dark tones looked exactly similar on both printers. Without the notes I wrote on each print I could not tell them apart. The R800 is able to create pure neutral black and white prints without the need for any color adjustments.



Color prints on matte paper

I also compared color prints on matte paper done on both the R800 and the 2200. I used the same paper and the same original image file with no modifications to the file. The same exact file was sent to each printer and printed on the same paper at the same size. Again, I cannot tell the difference easily except that R800 prints exhibit slightly more shadow details (more open shadows) as well as a minor increase in color density and saturation. More testing with a wider range of images is however necessary before final conclusions can be drawn.

The R-800 Printer Driver with Best Photo (1440) and Photo RPS (5760) choices

8-Which of the R800 and the 2200 is the best?

At this time, after several days of testing, it is clear to me that the R800 can generate fine art, exhibition-quality prints on either matte or glossy papers. Of course these prints will be letter size or 8.5" wide panoramas at the most. However, if one only looks at print quality –and this is what I am looking at here- the R800 delivers fine art print quality with great ease of use at an unbeatable price point.

The Epson R800 delivers print quality similar to the Epson 2200. The only advantage of the higher priced Epson 2200 is that it can print 12" wide images. The ink cartridges in the R800 and 2200 are the same size and the ink consumption is most likely identical unless one prints at 5760dpi which, as my tests have shown, offers no significant increase in print quality.

The R800 has an advantage over the 2200 in that it can make fine-art prints on glossy papers. The 2200 has an advantage in that it can make bigger prints.

Finally, If you have been hesitating to buy the Epson 2200 because of its price, the R800 may just be the printer you have been waiting for.

9-Profiles

The R800 comes with a complete set of color profiles. I used these profiles exclusively during my testing with Epson Premium Glossy Photo paper, Epson Enhanced matte and Epson Ultrasmooth paper, and got perfect results right away. Having custom profiles made for this printer is certainly a good idea and may improve print quality further. However, using the profiles that come with the printer will deliver outstanding quality at no extra cost beside the R800 purchase price. This is very good news since, in the past, Epson's "canned profiles" have sometimes proven to be less than perfect.

10- The R-800 and Epson Ultrasmooth paper

In my tests I used the new Epson Ultrasmooth paper extensively. I love this paper because of its fine art quality. Ultrasmooth is a heavyweight paper –either 250 or 500 grams- with an off-white tone due to its lack of optical brighteners. It is the perfect paper for fine art prints on matte paper. The only problem presented by Ultrasmooth is its high scuffability level. Scuffability describes the tendency of a paper to scuff or loose pieces of coating after printing. Unfortunately this often happens with Ultrasmooth. I hope Epson can fix this problem and turn a great paper into an outstanding one by improving the scuff resistance of their Ultrasmooth coating.

The R800 prints beautifully on Ultrasmooth although one has to be careful when loading the paper since it this paper is thicker than normal. An R800 profile for Ultrasmooth is not available from Epson. However using the R800 Enhanced Matte profile and selecting Enhanced matte as paper gave me excellent results. Again, comparing prints done on Ultrasmooth on the R800 and the 2200, both using Epson's Enhanced matte profiles for both printers, showed nearly identical print quality.

11- Problems

A new product is rarely perfect and this is probably why Epson releases new printing solutions in small format printers first. I have encountered the following difficulties with the R800 so far:

1-The print head clogs each time the printer is not used for a day or so.

This isn't just one or two colors that are clogged. This systematic clogging affects ALL the inks! The first printhead test shows no colors whatsoever. I get a blank page and have to do 2 or 3 head cleanings before things return to normal.

2- Print head tests cannot be done on roll paper.

I suppose this is so expensive paper isn't wasted on tests which can be done on regular, copy-quality paper. However, because loading and unloading the roll paper is both difficult and time consuming, doing a print head test takes more time than it should.

3- I have not so far found a way to do borderless printing on 8.3" wide roll paper.

This option is available and important since it allows you to make maximum use of the already small printing width. However, how to achieve this has eluded me so far. Apparently, only certain paper size permit borderless printing.

12-Low cost and high quality are no longer mutually incompatible

I believe this printer fits into a new and emerging category of digital equipment that combines low cost and reduced features with high quality results.

In my February 2004 article I have shown how this combination is present in the Canon 300D Digital Rebel camera. I now find it to be present in the Epson R800 Ultrachrome Printer. I believe it is also present in other products and that the range of such products is expanding everyday. If you do not need “pro” features --such as the ability to print larger than 8.5” in this instance-- but still want the very best quality, this category is worthy of your attention.

By shooting with the Canon 300D and printing on the Epson R800, *at sizes up to 8.5x11*, you can achieve the same quality I achieve by shooting with a 4x5 view camera and printing on the Epson 9600.

The whole issue here is print size. With a 4x5 transparency scanned on my Imacon Flextight III and printed on the Epson 9600 I can create a 40”x50” print without upresing and without losing an ounce of quality when compared to smaller prints. The R-With the 300D and the R800 you are limited to a much smaller print size. But, if you do not intend to make larger prints, or if you prefer high quality to large sizes, the option is available.



The R-800 logo on the printer cover

13-Conclusion

The R800 is the lowest priced Ultrachrome printer ever. It is also the first Ultrachrome printer to deliver fine art prints on both glossy and matte papers, thanks to the new Gloss Optimizer. Granted, the R800 only prints 8.5” wide. However, If you are interested in creating fine art prints for the lowest cost possible and do not mind being able to print letter size or 8.5 wide panoramas only, you owe it to yourself to take a closer look at the Epson R800. It is considerably less expensive than the Epson 2200, its closest competitor, and in some ways delivers higher print quality. It is also the precursor of printing technology that I believe will be found shortly on larger format Epson printers.

During my testing of the R800 (which I plan to continue using in my studio by the way) I created a small portfolio of 5x7 images on 8.5x11 Ultrasmooth paper. For such a portfolio this printer is all I need. Using the 9600 is possible but overkill because loading multiple 8.5x11 sheets in a 44” wide printer is fastidious. Similarly the R800 is all I need to create 8x10 proof prints which I can later mat to 11x14. Of course, for large print runs, or multiple reproductions, the 9600 is the best.

The R800 is also perfectly adequate to print 8.5 x25" (or so) panoramas on roll paper. 8.3"x50 feet rolls of Epson Premium Glossy Photo paper are available for about \$35 street price. I have one on order for further testing and printing. I just love the look of glossy prints on the R800!

The R800 is the only viable inkjet option for printing fine art photographs on Glossy Paper as of February 2004. My educated guess is that we will soon see the gloss optimizer on larger Epson printers such as a new version of the 4000, 7600, 9600 or 10600. I can't wait to print 44" wide glossy photographs with Ultrachrome High Gloss inks and Gloss Enhancer!

13- Print of the Month Special Offer

Each month I offer a print of the month at a special price. My March print of the month is an 8x10 print done on the Epson R800 on Epson Premium Glossy photo paper and matted to 11x14. If you want to see for yourself what I am writing about here visit my website at <http://www.beautiful-landscape.com> and take a look at my current print of the month. It is an opportunity to start, or build up, your fine art collection while witnessing first hand the superb quality of fine prints done on the equipment I am describing here.

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