

Epson 9600 Diary

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Epson 9600 Diary



6/21/2000 — Delivering the Epson 9600 in Chinle, Arizona

The printer was delivered today and we assembled it without any problems. The most difficult part of the assembly seems to be the cloth paper basket which is a little difficult to figure out at first. Otherwise the printer is very easy to assemble. 4 screws hold the stand together, 2 on each side, and the necessary Allen wrench is provided. The printer itself sits on top of the stand and is held by 2 small butterfly screws, that all.

I was concerned by the weight of the machine, 280 lb shipping weight, but it is easily manageable with 2 persons if the stand and the printer are carried separately. However, a lift gate is necessary on the delivery truck as the printer is too heavy to be lifted and carried down from the truck. It comes in a very large sturdy cardboard box with a plywood bot-



tom and wooden block sort of like a light duty pallet. There is a special offer for a roll of free media in the box. Make sure you don't throw away the box too fast as the UPC code is needed to get the free media! I had to go and retrieve part of the box myself, luckily it wasn't too late.

Space-wise, the printer is quite large, as can be expected, but the fact that the stand is on rollers makes it very easy to move it around. For example, getting access to the back of the printer is very easy: just move it forward a couple of feet, as needed, until you have enough room to access the rear of the unit. This is much better than lifting a heavy unit or crawling behind a cramped space. The rollers are multi-directional which makes moving the printer a very easy process.

The height of the paper reel, ink tanks and printhead are also ideal. Just a little below chest height which makes working with the unit very easy and convenient. So, so far, so good! No problem to report.

Tomorrow we will move on to ink and paper loading. I will also have some jpegs showing details of the machine.

One last note: the serial number of my printer is 78, clearly one of the very first units



6/22/2002 — Initial setup including ink and paper loading

Today I started by loading the inks into the printer, a very straightforward process. Just turn on the printer and insert each cartridge in the ink cart holder, going from left to right -starting with the black cartridge.



The printer then proceeds to load the ink and keeps you updated of the process on the control panel:

The next step was to load the paper using the 44" roll of Enhanced matte Paper

Again, no problem here: start by lifting the paper-release lever on the right top of the printer and push the paper down until it comes out below the printhead area. The only difficulty was that pushing the paper down won't do the job. The paper curls up just enough to not be able to make it on its own past the rollers. It is thus necessary to open the transparent front cover and pull the paper down. I found that pushing the paper down with one finger placed in-between the rows of rollers works best. This isn't necessary when loading sheets of paper as they are by nature flatter than rolled paper.

The printer was connected to my Macintosh G4 via USB cable



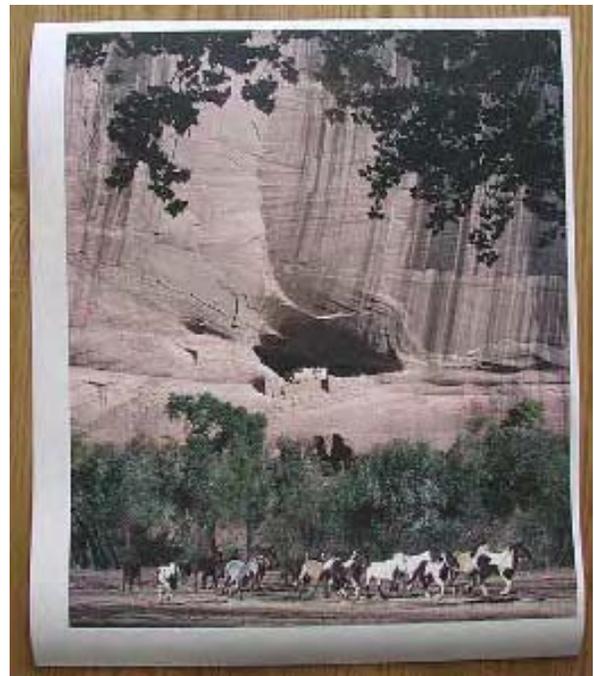
Although I had already installed the software for the 9600 I found it was necessary to install it again to see the printer port appear in the chooser.

Printing from Photoshop, using the Epson driver, is no different from printing to any other Epson

printer. You just send the file to a bigger machine, and you can send a much larger print file, that's all. My first print came out perfect.

From this successful beginning I started to print other files and explore the various features of the 9600. Here are some of the unique aspects of this printer illustrated by photographs.

First, one of the unique characteristics of the 9600 is the use of Epson's new Ultrachrome pigmented inks. There is also a dye version of the 9600 but I chose the pigmented model. The two printers are identical, the selec-





tion of inkset being made when the original ink cartridges, the ones that came with the printer, are inserted. These cartridges have special chips which tell the printer whether it will be a dye or a pigment printer.

Here is a photo of the chip on the cartridges. This chip also tells the printer how much ink is left in the cartridge making these cartridge unrefillable unless someone finds a way to reset the chip in the future.



Another item that is chipped is the “maintenance tank. The purpose of this tank, located on the right side of the printer just above the stand is to collect ink purged from the printhead during either cleaning, cartridge replacement, or cartridge removal (when the printer is to be moved



or shipped for example). The tank contains heavy absorption sponges which gets filled with ink over time until the chip communicates to the printer that the maintenance tank needs replacement. In the past, this meant an expensive service call as this replacement could only be made by a technician (or a printer owner with above-average knowledge). With the 9600 it simply means a call to Epson Supplies for a new maintenance tank, then pulling the old tank out of the printer (it slides out just like a drawer) and inserting the new tank.



All inkjet printers have such a tank to collect wasted ink. However I personally didn't think much about maintenance tanks before acquiring the 9600.

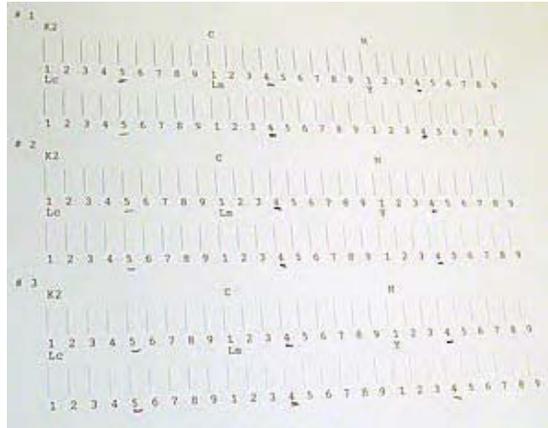
6/23/2002 — Printhead alignment test

Today I did a printhead alignment test. On a machine this size this test takes on unheard of proportions when compared to the same test on a desktop printer. If roll paper is loaded in the machine the 9600 will print the test across the whole width of the roll, repeating the test patterns every 8.5 inches. I suppose this allows one to calibrate for variations along the length of the printer. However, the calibration



program, accessible via the LCD screen on the control panel, only

allows one entry for each printed line requiring the user to make an average of the different results over one page. I found this approach confusing and very wasteful paper-wise and so decided to print the head alignment test on a letter size page. This



worked well. I just don't know if the head is aligned

along the entire 44" length of the printer or not.

Notice that there are two head alignment tests: one for uni directional printing with all colors and one for bi-directional printing with all colors. The following photographs show what each test looks like:

bi-directional test pattern (left) and uni-directional test pattern (right)

This test allowed me to find out that the 9600 is able to accept letter-size sheets of paper without problems. Unloading a roll of paper is also very easy: just push back the paper release lever and pull the paper out of the printer. This is important to know when one needs to make a small test print and does not want to waste roll paper. That way the test print can be done on a letter size scrap of paper and when a satisfying test is done the full size image can be printed on a roll of the same paper. Only a minimal amount of time is spend switching between sheet and roll paper. The same technique can be used to do a nozzle check.

I also conducted various printing tests using different profiles to see what each did. The results were across the board and are difficult to share visually given the fact that a photo of a print will never show

what the actual print looks like. However, it is important to note that the Epson profiles for Enhanced matte paper are actually not bad at all and provide satisfying results which can



Nozzle test pattern

then be tweaked according to the individual requirements of each image. Next I plan to print a test image from Photodisc and compare it to the same image printed on the dye version of the Epson 10,000.

It is interesting to know that the 9600 is able to print reports detailing various aspects of a print job as well as reports detailing all print job done on your machine. These reports include how much ink was used for a given print, in milliliters, and how much paper was used, in inches. Information on how much total ink and paper were used over the life of the machine is also available. This image of a nozzle check pattern shows some of this information. Again, there is no need to use expensive photo paper to print such reports. Plain, letter or legal size paper will work just as well.



6/24/2002 — Maintenance tank and metamerism

First, the draining cart: the 9600 comes with a “Draining cart” which is basically an empty ink cartridge whose purpose is perform and ink change from matte black to Photo black, or vice-versa.

This cartridge is inserted in place of the black ink cartridge when the black cartridge is changed from Photographic Black to Matte Black ink (or

vice versa). The draining cartridge, because it is empty, prevents the printer from sucking ink out of the black cartridge and thus allows ink to be completely drained from the black ink line. When draining is completed the draining cartridge is removed and replaced with the new black ink cartridge, either matte or photo black. The printer then proceeds to suck out ink from this new cartridge and to fill the line with the new black ink. Because all the other ink cartridges remain connected during this operation a large amount of ink from the other 6 colors is drained as well. It would be great if this wasn't the case as it is a very wasteful process, but for technical reasons there seem to be no other way right now. It certainly would be a big improvement if a solution was to be found so that only the black ink line is drained and refilled! I have not personally gone through this process myself because I only have the Photo Black cartridge right now. A matte black cartridge is on order but hasn't come in yet.

Second, metamerism. This was a big issue with the previous generation of Epson pigmented ink printers. For those unaware of what metamerism is it simply refers to the ability of certain pigments to change color depending on which light source they are viewed under. Typically, with Epson pigmented ink, prints would have a correct color balance when viewed under tungsten light (indoor, artificial lighting) but would exhibit a green cast when seen under outdoor lighting conditions (natural light either from open shade or direct sun).

The new Epson Ultrachrome inks, I am glad to report, are free of metamerism. In this respect these ink represent an enormous step forward. My metamerism test was very simple: I took 2 prints of the same image, one printed on Epson Glossy Photo Paper and the other on Epson Enhanced Matte paper, alternatively in direct sunlight and under tungsten light in a room with no window light. I honestly could

not see a trace of green color shift. I was very careful to focus on middle grey areas -I actually printed a gray scale for this purpose- and again I could not see any green shift anywhere on the gray scale. I also

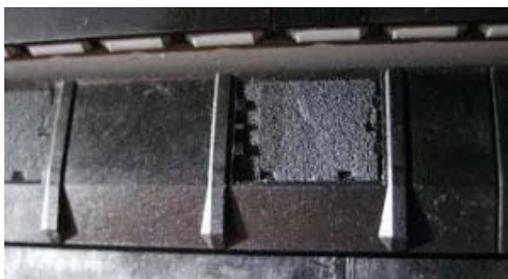


performed the same viewing test with images printed on the Epson 10,000 and could see some amount of green shift on the 10,000 prints, especially in middle grey areas. Epson did improve the firmware for the 10,000 and 7500 in order to reduce metamerism, namely by changing the firing order of the print head, but although this reduced the problem it did not eliminate it completely. The new Ultrachrome inks are, in my estimate, a complete solution to the metamerism problem.

Third, deep blacks. I am getting softer blacks on the 9600 than on, for example, the 1270 or other printers using Epson's photographic dye inkset. This

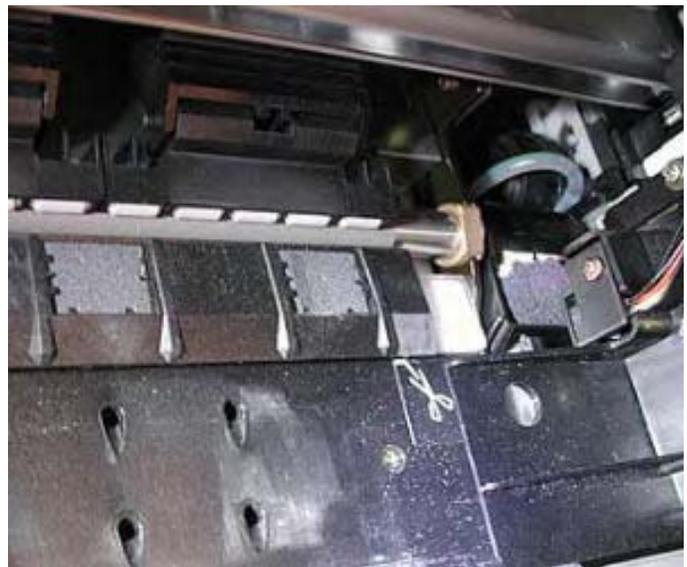
is to be expected, unfortunately, since pigmented inksets typically produce softer blacks than dye inksets. However, I believe that custom profiles should be able to generate better blacks. Paper also plays a role in getting deep blacks. So far I have only printed on Epson Enhanced Matte and on Epson Photo Glossy. I have a 44" roll of Parrot ULtra Lustre paper on order and I will report on how this paper performs as soon as I receive it. By the way, Parrot Digigraphic is the Epson dealer where I purchased my printer. They offer a wide variety of paper and profiles which you can see at <http://www.parrotcolor.com>

Fourth, black "color." The 9600 generates very neutral blacks. The 10,000 on the other hand, generates slightly warm blacks. This is also good news since while it is possible to create warmer blacks though color adjustment when starting with a neutral black it is nearly impossible to make a warm black neutral when the natural tendency of an ink set is to create warm blacks.



6/25/2002 — Borderless printing; search for an ideal paper

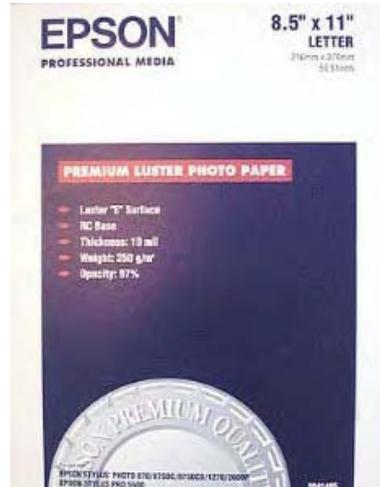
Close up of a single pad



The print head at far right and two borderless ink pads (grey squares).

1. Borderless printing

The 9600 is able to create borderless prints on paper of certain specific width. To get borderless prints you first need to enlarge the size of your original file by 2 or 3 mm. This little bit extra dimension will allow the printer to print slightly past the borders of the paper. Technically, this should result in ink being deposited on the edges of the paper, upon the area where the paper rests during printing. However, Epson has strategically placed small sponges at specific intervals, which correspond to standard sheet paper and roll paper width, to catch this excess ink. Those sponges, which actually feel rather hard to the touch, are visible by opening the front door of the printer and looking to the back at the level of the printhead.



2. The search for the ideal paper

I realized today that I was shipped the wrong paper with my printer. I ordered an extra roll of photo-quality paper and was shipped a roll of Glossy Paper-Heavy Weight, SO 41291, which is actually designed for use with dye inks in the 7000 and 9000. I actually conducted tests on this paper and wondered why the print quality wasn't that great. I contacted Parrot and wait for their word as to what to do now.

In the coming days I plan to test Epson's Premium Luster Photo Paper and Epson Premium Glossy Photo Paper. I personally prefer photo-quality papers for most of my work although for certain images I do like the look and feel of fine arts papers. However, one thing at a time so for now I'll stick with finding a photo-quality paper that I like.

The matte black and light black 220ml cartridges have not arrived yet although I have ordered them at the same time as the printer.

6/26/2002 — Testing photo-quality papers

Today was spent on testing two photo-quality papers for best output: Epson's Premium Glossy Photo Paper (PGPP) and Premium Luster Photo Paper (PLPP).

Both papers deliver much deeper blacks than regular Photo Quality paper and than Epson's Enhanced Matte paper. This is arguable of course since it is after all a matter of personal taste, however visually this is the impression I got. The glossy finish of these papers gives prints a photo-like feel and appearance.

My favorite of the two is Premium Glossy Photo Paper. This paper, to my judgment, actually delivers deeper blacks than Premium Luster as well as more saturated color. PGPP is basically able to generate a higher level of contrast and create photo-like inkjet prints with pigmented inks.

Premium luster is also very nice but does not deliver a black as deep as PGPP or the same color contrast



and intensity. I also could live without the slight grain of this paper. Again, this is a matter of taste as this slight texture does not affect the quality of the output.

But the best is yet to come, so read on.

The most satisfying discovery today came when I compared a photograph printed with dye inks on an Epson 3000 on Epson Photo Paper with the same photograph printed with pigmented ultrachrome inks on the 9600 on Epson Premium Glossy Photo Paper. The two prints are nearly undistinguishable and this without print manipulation in Photoshop, just by using the Standard Epson profiles provided with the 9600. After a first comparison I noticed that the 9600 Ultrachrome print exhibited darker shadows than the dye prints as well as a lack of yellow. I therefore made a second print on the 9600 with an adjustment layer lightening the shadow areas (the trees on the right side in the photo below) and adding some yellow (actually lightening the blue layer with an adjustment curve). Here are the results:

Pigment print (top) and Ultrachrome print (bottom)

The photograph was taken with an Epson 3100z digital camera with both prints under the same light source. This is not a collage and no adjustments were made to the original digital photograph other than setting the white point on the print border. There is some reflections at the bottom of the Ultrachrome ink print but other than that it should be clear how close those two prints are.

Keep in mind that you are looking at two completely different ink sets and that the color gamut is almost similar! This shows how far pigmented inks have come when used in combination with the right paper.

In my estimate the Ultrachrome inkset produced a much more satisfying red in the foreground than the dye inkset as well as more pleasing blue shadow areas behind it. The only area which requires work are the trees which could be lightened further. However, the blacks are robust throughout and I don't feel a need for deeper blacks on this paper.

Parrot Digigraphics is sending me a replacement roll of Paper compatible with the 9600. The problem due to a wrong reference number. I also have a roll of Parrot Ultra Gloss Lutre paper on order. I will be reporting on their respective performance as soon as I receive these.

6/28/2002 — Built-in paper cutter

Today a short entry on the 9600 built-in paper cutter. On a roll-fed printer, of 44" width, having an

automatic and built-in method for cutting the paper after printing is very important. Doing this by hand is impractical and would result in prints being damaged by either a wrong cut (cutting part of the print off or cutting into the print) or damaging the print by bending or “kinking” it while attempting to cut the paper off the printer.



Cutting head assembly

The blade, which has a triangular shape, is located at the right. The spring allows the head to retract when not in use. This assembly is positioned next to the printhead and travels with the head. It is located in a circular slot and held in place by a swiveling holder. Below is a photo of the holder open and closed.

The blade assembly can be easily removed by swinging the cutter holder and pulling out the blade assembly.

Cutting is operated in several passes. First, the blade cuts a small startup cut on the left side of the paper from the paper outwards. Then it cuts up to halfway into the width of the roll (22” on a 44” roll), moves to the right sides, and follows the same approach in reverse. The goal of this complex cutting procedure is to avoid tearing the paper by cutting directly from one side to the other. First, the blade may not be able to start a cut from the outer side of the paper without pushing the paper in and risking tearing it. Second, cutting all the way across may result in an uneven cut as the paper is pulled to one side during cutting (a little like cutting with a ruler while lifting the ruler slightly and seeing the blade “swerve” off the expected line...



Cutting blade holder closed (left) and open (right)

6/27/2002 — Testing Parrot Ultra Gloss and Ultra Lustre papers

Today I continued testing papers. I received a roll of Parrot Ultra Gloss and samples of Parrot Ultra Lustre papers and proceeded to print the same image I used yesterday and which appears on the photograph of the dye and Ultrachrome prints. Parrot Ultra Lustre paper has a smooth luster surface, without the slight texture of Epson's Premium Luster. Somewhat in between Epson Premium Luster and Epson Premium Glossy.

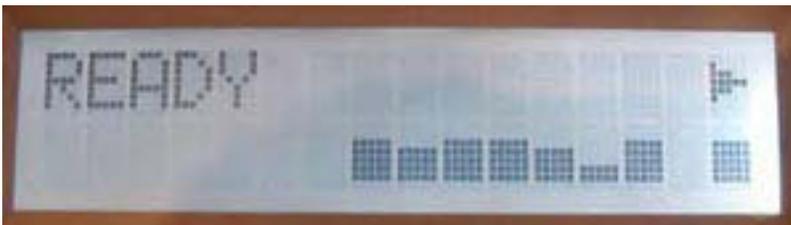
Both papers performed very well with Ultrachrome inks using the Epson settings and profiles. Shadows come out a little dark with the Epson profile and would need more separation something which can be fixed with a custom profile. These papers are also slightly "warmer" than Epson's comparable Premium Glossy and Premium Luster. The sky area in the image actually comes out warmer and with a slight red tint to it, something which is actually pleasant to the eye.

My findings today confirm those of yesterday, namely that Epson's Ultrachrome inkset is able to produce pigment prints which rival dye prints. In some ways Ultrachrome prints have a more photographic feel to them, especially when printed on heavy photobase material such as Epson's premium Glossy or Parrot Ultra Gloss. There is absolutely no digital artifacts to these prints (no "dots") and the quality is superb at 720x720. In fact I am now printing routinely at 720 because I cannot see any difference visually with 1440. The files I print are at 300dpi at the actual print size. On the 9600 they print without banding or dots, even highlight areas, just smooth, continuous photographic tone.

6/29/2002 — Testing Epson Glossy Paper-Photo Weight; Firewired card; ink level indicators

Today I tested Epson's Glossy Paper-Photo Weight. This paper was sent to me by Parrot Digigraphics in replacement of Epson Glossy Paper-Heavy Weight which was sent to me by error. I have only good things to say about this paper. The Epson profile for it is very good and the color density and maximum black density are excellent. Shadows, or dark areas, do not "block up" as much as with Epson Premium Glossy or Premium Luster. Although this paper is not labelled "premium" or "luster" in effect it has the look and feel of a premium paper with semigloss finish.

The difference between Glossy Paper Heavy Weight — which is designed for dye inks— and Glossy Paper Photo Weight — which is designed for Pigment inks— is night and day. This shows how important it is to choose the media you will be printing on carefully. It also shows how easy it is to make a mistake and print on the wrong paper. These two papers have nearly similar names and thus mistakes are prone to happen. For this reason it is best to use the Epson part number rather than the name when ordering.



The the LCD screen on the printer control panel shows a visual display of each cartridge level at all times.

From left to right this display shows the black cartridge, light gray, cyan, magenta, light cyan, light magenta and yellow. The last indicator, at far right, shows the fill level of the maintenance tank. As shown here this tank is used up 30% (70% remaining space for ink waste). I find this level quite alarming as

this printer has hardly seen any use. If the same use rate continues for the maintenance tank 9600 owners should get ready to change the maintenance tank at the same time as a set of ink cartridges is replaced! In my case I'll have gone from not knowing that maintenance tanks existed to having to stock them up as I do for ink cartridges. Also notice that the light magenta goes down faster than other colors in my case. This is obviously largely based on the type of images printed but it would be interesting to know if other users have noticed the same thing. I did pull out the maintenance tank to look at it and from what I can see it only shows minimal ink fill, not the 30% the software claims to be the case. Here is a photograph of the ink tank taken today so you can judge for yourself:

I also installed a Firewire card on the printer. This should make printing faster, although so far I have not noticed a difference. Since I am printing small images right now this may be why. The ink cartridge level does come up much faster though when invoked in the printer driver.



Before and after the Firewire card was installed



Roll paper loaded in the 9600

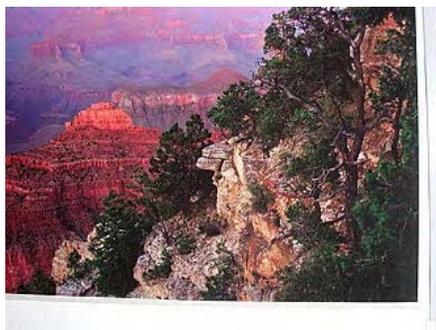
6/30/2002 — Profiling the 9600

Today I conducted several printing test using new profiles made by Uwe Steinmueller with the Gretag McBeth Eye One profiling software/hardware combination.

Comment by Uwe Steinmueller: “These profiles were created using one of the latest EyeOne units with an UV cutoff filter and the EyeOne Match software. Review to follow”

These printing tests are visible below in photographs taken with my Epson 3100z digital camera. I prefer to photograph test prints rather than scanning them since, in my estimate, this replicates real-world viewing conditions better. In each of the two sets of photographs below the Eye One profile print is on the right while the Epson profile print is on the left.

Epson Profiles:



Enhanced Matte Paper

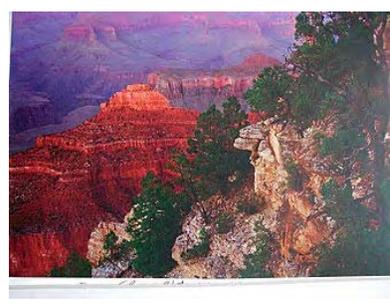


Photoweight Gloss

EyeOne Match profiles:



Enhanced Matte Paper



Photoweight Gloss

The two papers used are Epson Enhanced Matte (top row) and Epson Glossy Paper Photo-Weight (bottom row). Epson Glossy Paper Photo Weight is not actually recommended for the 9600 as it is a dye-based paper. However, since I had the profile I thought I would give it a try.

These images are a close approximation of the actual prints although, as you know, it is not possible to show exactly what prints look like on a computer monitor.

Anyway, what becomes immediately apparent from these test photographs is that prints done with the Eye One profiles are more saturated, have a more pleasing color balance and show more open shadows than prints done with the factory-supplied Epson 9600 profiles. This is good news! This example also shows how different the same image can print just by changing the profile used. In both examples all the variables were kept constant the only change being the profile used. Again, a major difference here, and for the best which proves how important it is to use the correct profile.

The same remarks about color saturation, better shadow areas (more open shadows with better details) as well as better blues and magentas were also apparent when looking at a test print of a Photodisc print target. I did not photograph this print however as the difference were much more subtle and thus harder to see. The changes between the two profiles with an actual photograph are much more dramatic.

One more note: when using Image>Mode>Convert to Profile in Photoshop 7 the Eye One profiles give

me a screen image which closely matches the actual eye-one profile print. However, with the Epson profile the screen image does not match the print made with this profile as accurately. This is another positive aspect of Eye One profiles since getting an accurate preview image is very important.

7/1/2002 — Black and white printing

Today I printed in black and white. I was curious to see the quality of black and white prints on the 9600 and even more curious to find out if there would be a color cast on these prints as is sometimes the case with inkjet printers and monochrome images.

Here is a run down of my approach today.

The methodology:

- * I printed with all 7 inks by selecting “color” in the printer driver.
- * I opened a black and white file, converted it to grayscale, then converted in back to RGB just to make sure no color casts had been inadvertently introduced in the image.
- * I printed on Enhanced matte and Epson glossy Heavy Weight using both the Epson profile and the Eye One profile for enhanced matte. I used only the Epson profile for Glossy Heavy Weight as I do not have the eye one profile for that paper yet.
- * I used the Photo Black ink for all prints. I received the Matte Black cartridge today but have not tried it yet.

The results:

To my delight all black and white prints printed without any noticeable color cast. The prints done with the Epson profile printed warmer than the prints done with the Eye One profile. The Eye One profile prints were very neutral. However, I personally like slightly warm black and white prints (the way selenium toning gives a slight warms to chemical prints) so I personally lean towards the prints done with the Epson Profile. However, if I want a completely neutral print the option is there and I just have to use the Eye One profile.

Both the prints done on Enhanced Matte and on glossy Heavy Weight came out neutral. I did not have to do any curve adjustments in photoshop. The slight warm tone I just mentioned is really not a color cast, rather a subjective preference. As a matter of fact until I placed the prints done with each profile next to each other I could not tell the Epson print was warmer. To my eye, without a point of reference, it looked perfectly neutral.

I tried to photograph these prints but the differences are too subtle to be represented accurately in a photograph.

I was concerned with the lack of the Grey Balancer, in which I had placed a lot of hope and which will apparently be available with the 2200, Epson’s desktop Ultrachrome printer. However, given how neutral black and white prints come out on the 9600 there is really no need for the Gray Balancer software utility.

7/2/2002 — DropColorSyncProfile utility

I have been working with the 9600 for over a week now and it is time to take a break. I will therefore

be away for several days and there will not be any diary entries during this time. When I return, I will proceed with testing new profiles for the 9600.

A useful tool if you work on a Macintosh is the DropColorSyncProfile utility which will make profiles created on a PC ColorSync compatible and thus usable on a Mac.

An article on the 9600 and on Ultrachrome inks will be published on “The Luminous Landscape” in the coming days so keep an eye out. This article summarizes my conclusions after working extensively with the 9600 and Ultrachrome inks. The information contained in the article is not redundant with what I wrote in this diary.

Happy Fourth of July to everyone! I’ll talk to you again when I come back.

7/12/2002 — Printhead dryout update

I came back from a week-long trip yesterday and did not have time to do any additional printing or testing. However, I did find a few minutes to do a printhead test to see if the inks dried in the head while I was away and if there was a need to do a cleaning cycle. To my great pleasure the printhead test came out perfect, with none of the nozzles clogged whatsoever, and this right after the printer was turned on. This is good news as I live in Arizona and the outside temperature here reaches 100 degrees fahrenheit. I do leave the swamp cooler on at all times while I am away since it adds humidity to the air and keeps the temperature at 75 degrees fahrenheit or so. However, I was curious how this arrangement would work with pigment inks which are thicker than dyes and more prone to clogging.

I had many questions about profiling and about where to find profiles. The custom profiles I used for the tests posted in my diary were made by Uwe Steinmueller using the Gretag McBeth Eye One (UV unit) profiling system. I found these profiles to work very well for the 9600.

Also, an article summarizing the breakthroughs introduced by Ultrachrome inks and by the new 9600, 7600 and 2200 printers is now online at <http://luminous-landscape.com/9600.htm> This article is quite different from my diary and not redundant at all information-wise.

This is all for today as I have to leave again for a show. I will be back in about 12 days so if you have any questions you will have to be patient and wait until my return to get an answer.

Thank you to all for your interest in this diary. From the feedback I got so far you seem to find it quite helpful which is wonderful.

7/26/2002 — How empty is empty?

Today I powered the 9600 again after a two week absence. I did a printhead test right away as this is my regular approach. A couple of nozzles were clogged, nothing serious. One of the ink cartridges was low on ink -the light magenta- and when I tried to run a cleaning cycle from the software driver the software wouldn’t let me do it because of the low ink level in the cartridge. I therefore attempted to run the cleaning cycle from the printer itself and was able to do so without problem. Clearly, the printer cleaning command, on the control panel, bypasses the driver software.

As I was printing the cartridge low-ink light flashed and after about 25 8x10's is finally lit up permanently and I had to change the cartridge. This occurred during printing but no harm was done to the print. After inserting a new 220ml cartridge printing started again right away and no lines were visible in the finished print.

Out of curiosity I opened the old cartridge to see if ink was left in it. This is an easy process which I completed with a screwdriver. I was careful not to use a sharp tool to prevent puncturing the ink bladder.

To my surprise the silver-colored bladder which holds the ink was half-full. I have no idea how much ink was originally in the cartridge but from pressing on the bladder it is clear that it could not contain much more than twice what was left in it when I opened the cartridge.

The dotted line on the ink bladder shows the level of leftover ink. I drew this line myself.

I wonder how much ink will be left in an “empty” 220ml cartridge? Hopefully no more than in a 110ml cartridge... Clearly, ink has to be left in the cartridge prior to replacing it to prevent the printer from sucking air into the ink lines. This is why cartridges are never fully empty when they are replaced. However, in this case the amount of leftover ink is overkill. My guess is that the Epson engineers played it safe because these are new printers and they did not want to run into problems. However, now that we know more about these printers it would be



upgrade so that we do not have to waste ink unnecessarily.

7/27/2002 — The waste is real!

Regarding the half full ink cartridge being:”empty” there has been posts remarking that opening the printer door, or lifting the ink cartridges lock lever, both while the inks were originally being loaded in a new printer, would result in cartridges being used only partly because the printer got lost in its ink count.

However, in my case, I can attest with 100% certainty that I did not open the printer door or move the cartridges lock lever during initial ink loading. I read the notices located on the printer and in the manual asking not to do this prior to loading the inks and followed all the directions to the letter.

The 50% waste in ink, my guesstimate as to exactly how much ink is left in the “empty” cartridge, is therefore due solely to how the 9600 calculates how much ink is left in the cartridge, and not to any wrong doings from my part.

7/31/2002 — Production printing

Today I started doing production printing on the 9600. Using the regular Epson driver and the custom profiles from the Eye-One I created files in Photoshop 7 on which I tiled the same print many times over to print on the full 24 or 44" roll width. Here is a photo of what this tiling looks like. A 24" roll was used in this case.

This tiling process is much easier if a RIP is used. I will be reviewing Image Print 5.0 for Macintosh later on and will be able to report on how tiling works with Image Print.



Finally, just for your information, here is

what a 220ml cartridge looks like in the printer. The ink cartridge receptacle door no longer closes since a 220ml cartridge is twice the length of the 110ml cartridges.

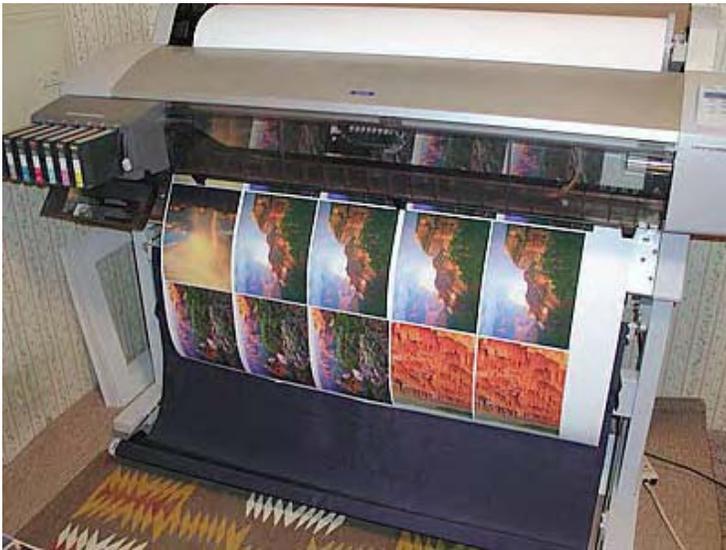


8/1/2002 — How to tile a photograph in Photoshop

I received several requests for explanations on how to tile a photograph in Photoshop so that it can be printed in multiples from a single file. I thought I should post this process so that everyone can benefit from it.

Tiling is very simple. First, open the file you want to print in Photoshop. Then, use the Canvas Size command to enlarge the width of the canvas to the width of your paper, either 24" or 44" or whatever size you are using. Then, enlarge the height of the canvas, with the same command, to a multiple of the number of prints you want to tile.

For example, with an 8x10 print tiled 3 times, as in the photo in my diary, you would create a 24 inch wide by 20 inch tall canvas which will hold 6 copies of the image you want to print. My image was actually smaller than 8x10 which allowed me to leave a gap between each print as well as leave a white border.



Then, select the image with the selection tool, copy it and paste it as many times as needed (5 times in my case). Then move it to the exact place you want it on the canvas. You will, at this point, have 6 layers in your file. After each photo is in the right place flatten the file, save it, and print it.

That's all there is to it.

When I review ImagePrint 5.0 you will see that there is are very sophisticated tiling capabilities built into the program, capabilities which makes tiling a lot easier and faster.

8/2/2002 — 32x40 photograph on a 44" wide roll

Today I created the largest print so far on the 9600: a 32x40 inches photograph on a 44" wide roll. The result is superb. Prior to printing at this size I did three test prints, 8x10's on letter size paper. The profile used this time was a Spectroscan/Profile Maker 4 Pro profile made by Jay Arthur of Castroville, Texas.



8/4/2002 — Testing profiles

Today I tested a new profile made by Uwe Steinmueller with the Eye One profiling system but using a new target developed by Bill Atkinson. This new target differs from the Eye One profile in the following way that it uses many more patches.

The prints obtained with the profile made from this target are, in my judgment, better than the same photographs printed with the Eye One Profile made with the regular Eye One target. In fact these prints are very close to prints of the same photograph made with a Spectroscan/Spectrolino system using a Spectroscan profile. So far the Spectroscan profiles, made for me by Jay Arthur, have proven to be the ones I like best. However, as I learned today, the Eye One profile made with Bill Atkinson's new target are very close. This is good news as the Eye One profiling system is far more affordable than the SpectroScan profiling system (unfortunately there is currently no official support from GretagMacbeth for other targets).

Editor note: We will not answer emails which discuss these new targets. But our news group is the right place for such a discussion and we are open to share the details (with permission of Bill Atkinson).

The regular Eye One profiles create prints which exhibit significantly more contrast (mainly darker and/or less open shadows) and slightly less saturation than prints created with a spectroscan profile (very open and beautiful shadows). The new profiles based on Bill Atkinson's targets create prints which have just slightly more contrast (much more open shadows) than prints made with a Spectroscan profile. The color saturation is still slightly lower than prints made with the Spectroscan profiles. Of course these remarks apply to an image which has been perfectly color corrected and whose contrast has been adjusted to my taste prior to printing. My remarks are also based on comparing 3 prints made from the exact same file and on the exact same paper all with the exact same settings except for the profile used.

8/19/2002 — Details about printing the 32x40 photograph of the Colorado River in Grand Canyon

The original is a 4"x5" transparency created on a Linhoff 4x5 with a 150mm Rodenstock lens. The transparency was scanned at 2000dpi on my Imacon Flextight 3 scanner. No upresing was done as I scanned the file so as to create a 32 by 40" file at 300 dpi right off the scanner. The original scan was done in 16bits and is about 800 megabytes. I have to store it on a DVD since it won't fit on a CD Rom disc.

The file was printed at 1440 dpi and the final print shows no grain and no dots. You can stand 2 inches away and it looks perfect in every way.

8/28/2002 — Dry Mounting

The 9600 continues to run like a charm and my busy schedule has been putting it through its paces. I am printing more and more of my work on the 9600 now and also printing more and more larger pieces. I continue to favor Parrot Ultra Luster paper as my favorite semi-glossy paper. For matte Paper I favor Epson Enhanced matte paper, a sample of which came with the 9600. For both I use profiles made by Uwe Steinmueller and Jay Arthur.

Dry mounting:

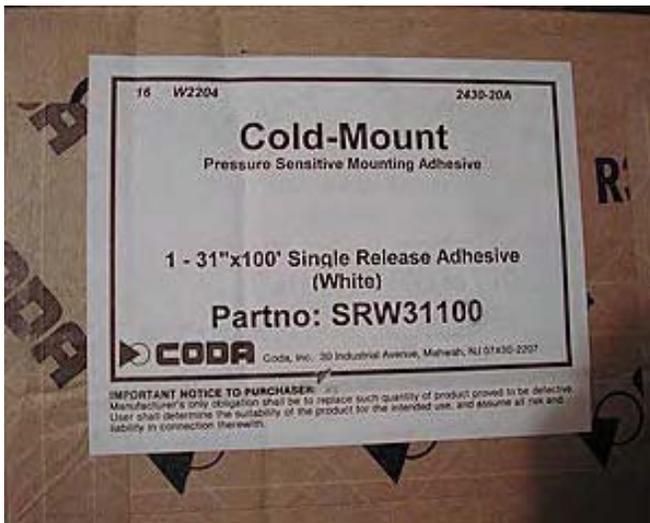
Large prints need to be dry mounted. Otherwise it is very difficult to get them to lay flat except if they

have framed directly under glass with a sheet of foam core behind them. However, while this insures flatness, the print may stick to the glass and be damaged.

The best is thus to dry mount the print. But with a 32x40 print this can be difficult. I normally dry mount my prints using Coda's dry mounting adhesive products (I don't have their web site address but their phone number is 201-825-7400). Coda manufactures cold adhesive mounting materials, meaning that no heat is necessary to make the adhesive sticky. Instead, you just peel off a protective sheet to expose a layer of double-sided adhesive material and adhere the print to this material on one side. Then you adhere this sandwich (print plus adhesive) onto a mounting board such as matboard or other rigid surface.

I personally use Coda's single release white adhesive and purchase 31"x100 feet rolls. This works well for print sizes up to 16x20 since this size can be dry mounted by hand using a rubber brayer (a rubber-coated print roller).

The adhesive has a white color, instead of being transparent. Some photographic papers are partly transparent, that is they let in some light through the back, and the white surface of the adhesive helps maintain the brilliance of the print by making the back side of the print perfectly white.



Here is the label from an unopened box of Coda adhesive so that you have all the necessary information should you want to place an order.



Here is a roll of double sided white Coda adhesive material.



Rubber brayers used for pressing photographs onto the double sided adhesive material. These rollers have a soft surface, that is the beige colored surface is deformable and thus less prone to damaging the print surface. I like them better than hard-surface rollers. The box behind the rollers shows the plastic layer normally used on cutting tables in restaurant kitchens. I actually purchased it from a restaurant equipment company: Central Restaurant Supplies. My current table is 36" wide by 5 feet long and I do all my mounting and cutting on it.

Because this surface is made to cut on it does not damage cutting blades and can take repetitive cutting without being damaged. As you dry mount photographs on a roll of adhesive you will need to trim the adhesive around the photograph and then trim the photograph itself. All this cutting can be done right on this table without any need to move the print (moving a print in the process of being dry mounted is not recommended).

However, for sizes larger than 16x20 a mounting press needs to be used, especially with prints done on photographic quality paper. These papers are harder to dry mount due to their plastic backing. When dry mounting a print with a roller onto an adhesive material the paper needs to stretch a little bit in order for the print to lay flat on the adhesive sheet. If this stretching does not occur bubbles will form between the print and the sheet of adhesive. These bubbles occur primarily with papers that have a plastic backing. These papers, which usually include the gloss and luster photo-like papers, do not stretch at all when they are mounted and thus air trapped under the paper has no place to go. The air thus stays there and forms a bubble. Once this happens there is nothing to do to remove it and the print is ruined.

Therefore, if you want to dry mount photo-quality papers with a plastic backing, you need to use a dry mounting press. Coda manufactures such a press, in width up to 44". These are basically roll-presses which feed the print together with the adhesive between two heavy duty rollers. These presses can be hand operated via a crank or motor operated with the speed of the motor adjustable and the motor operated via a foot pedal. I recommend the motorized version since you will need to have both of your hands free to feed in the print.

Such presses are both heavy and expensive. The 44" motorized press weights 300lb and costs in excess of \$3000. The 34" press is more manageable at 100lb and approximately \$2500 with shipping. I personally recommend this model as it is more manageable weight and cost wise. Of course, you will have to consider where to install this machine.

If you don't want to use a mounting press (I won't blame you) and still need to dry mount your prints, then I would recommend printing on Epson Enhanced matte and dry mounting the print on Coda single release white adhesive using a rubber roller. Enhanced matte does not create bubbles when it is dry mounted in this fashion. Of course some practice will be necessary and you may ruin a couple of prints in the process.

You will also need the help of a second person to hold the print while you roll it down. You will also have to work on a perfectly flat and clean surface. Brush the back of the print and the surface on which you are working with a framing brush before you start.

Also, make sure you have plenty of room to work on and that you have all the necessary tools and supplies handy. Once you start, there is no turning back and once the print is on the adhesive it is there for good!

Dry mounting is not an easy process so email me at alain@beautiful-landscape.com if you have any questions.

Good luck to all.

8/29/2002 — Dry mounting continued

Daige offers reasonably priced mounting presses and equipment. I have not tested their products so cannot comment on their performance. However, it is a resource which provides a nice alternative to Coda's presses.

A few indispensable dry mounting tools:



From top to bottom and left to right we have first, an anti-static cleaning brush from Kinetics. This brush will clean the print while removing anti-static electricity. Static tends to attract more dust to the print so this is important. Make sure you clean both the front and the back of the print. When dry mounting the back is actually more important since this is where dust will be trapped in the adhesive and create bumps on the print surface.

Second we have two different X-Acto knives, the fancy chrome model being actually made by X-Acto and contoured to follow the shape of your hand. On the right we have a more common model which I actually prefer. Below that are visible some replacement blades. Very important. Make sure to always have a sharp blade so change the blade often. A dull blade will scrape the adhesive under the print rather than cut it neatly and cause a lot of problems. Make sure you have plenty of blades available. In quantity these cost less than 5 cents each so nothing to worry about.

Third we have a more traditional cleaning brush which I use to clean the table and the prints prior to framing. Again, you will need a cleaning brush, no way around that. Just make sure you get one which doesn't lose its hairs or these will become a permanent part of your framed artwork!

Finally, a metal ruler is a must. This one is graduated in inches and centimeters, a nice feature for someone like me who fluctuates between the two systems. I use this ruler as a guiding edge when I trim prints with the X-Acto knife. When I cut the adhesive around the print I usually do this hand held, without a ruler because using a ruler on a sheet of adhesive isn't practical as the ruler sticks to the adhesive.

9/12/2002 — Dry mounting, Profiling, wasted ink, firmware, UPS

Dry mounting

I received a lot of feedback on my dry mounting diary entry and this has prompted me to go over a couple of details today.

I received questions about the appearance of the print borders after the print has been dry mounted using cold mount adhesive. The answer is that the appearance of the print borders is not all that important because these borders will be covered by the matting. Of course, you want the borders to be as neat and professional looking as possible but if they are not 100% straight this is nothing to worry about. The mounting technique I described is geared towards matting the print. Traditionally a mat covers about 1/4" of the photograph on all 4 sides. Because the photograph is taped to the mat from the back I normally leave a small white border around the photograph so that there is enough paper under the mat to tape the photograph.

If you want to mount your photographs but do not plan to mat them then a different approach should be used. In this case you need to trim your photograph so that there is no white border at all. You also need to make sure that the trimmed edges are perfectly square and neat. The way to proceed after the print is mounted onto the adhesive and trimmed is to prepare a sheet of mounting material -matboard for example- cut to the exact size you want. Usually this means a standard frame size such as 8x10, 11x14, 16x20, etc.

Then you need to measure your photograph precisely and deduct these measurements from the size of your mat board. For example, if your photograph is 8x10 and the mat board piece 11x14, this means you have 3 inches available in the height and 4 inches available in the width. Divide this extra space in two and you have the width of the borders which will surround the photograph: 1.5" borders on the height sides and 2" borders on the width sides. Carefully measure these borders on the mat board and mark the location of the photograph lightly in pencil. Peel off the adhesive backing and lay the photograph in the space you just traced in pencil. Roll it with the rubber brayer and that's it. You just need to erase the pencil marks and you are done. Usually a small pencil mark in each corner is all you need since erasing long lines after the photograph is mounted can be difficult if not impossible.

If you mount a lot of photographs with this method then this shortcut will be helpful: make a ruler out of a piece of mat board the height of the height borders and slightly longer than the width of your mat board. Then mark on this ruler the exact location of the width borders. After that you can simply lay this "ruler" along the top of your mat board piece and align the photograph according to the border markings you inscribed on it. This will work great if you have to mount many photographs of the same size. If you mount different size photographs you can either make "rulers" for each size or inscribe different measurements on the same ruler.

Profiling

I am currently in the process of profiling my Imacon Flextight 3 scanner with the help of Jay Arthur. Jay is preparing a series of transparency targets which I will scan. Then Jay will read these scans with his software and prepare custom profiles for my scanner. I will report on the progress of this process as it unfolds. I expect to see a significant increase in scan quality once profiling is completed.

9/17/2002 — 220ml cartridges; wasted ink; firmware update; Uninterruptible Power Supply



All seven 220ml cartridges have been installed

First, I now have all seven 220ml ink cartridges installed in the 9600 and here is what it looks like. The ink cartridge door no longer closes, which is unfortunate. It is easy to take it out and I will probably do so next as I do not plan to install 110ml cartridges again.

Wasted ink

There has been reports that a significant amount of ink is left in a 220ml cart when it shows “empty” on the 9600 control panel (solid red light on). I cannot personally agree or disagree with these reports since I have not yet run one of my 220ml

cartridges dry, so to speak. As soon as this happens I will report on how much ink was left in it.

Firmware update

There is also rumours that Epson will post a 7600/9600 firmware update on the Epson website, in the driver download area. This firmware update is supposed to reduce the amount of ink left in “empty” Ultrachrome ink cartridges. Again, I have not seen this firmware personally but as soon as it materializes I will report on its availability.

Uninterruptible Power Supply (UPS)

I ordered an Uninterruptible Power Supply (UPS) to provide power to my entire computer system in case of a power interruption. This decision was motivated by A. a recent increase in the number of power interruptions where I live and B. the unneeded stress which comes from worrying that the power will go off in the middle of printing a 32x40 on the 9600. Usually the power interruptions are no more than the lights going off and then back on but this is enough to turn my whole system off and ruin a print. I should be receiving the UPS this week and again will report on how well it works when I have it installed.

9/18/2002 — Firmware update

The firmware update for the 7600 and 9600 is available on the Epson website. Right now only the Windows version has been posted but the Macintosh version should be available soon. Simply follow these links to download this update:

7600 Ultrachrome firmware update:

<http://support.epson.com/hardware/printer/inkjet/pro76u/index.html>

9600 Ultrachrome firmware update:

<http://support.epson.com/hardware/printer/inkjet/pro96u/index.html>

Epson Technical Support says that the firmware update will not become activated until the next time you replace a cartridge. This means that cartridges that are installed when the firmware is updated won't see any changes regarding how much ink is used. The changes in ink use will take place only with new cartridges installed after the firmware is updated.

Here is a user report on the 9600 from Ian Adams of Cuyahoga Falls, Ohio. Ian's experience provides valuable insights on the 9600:

"I received my Epson 9600 Ultrachrome printer 10 days ago. When I assembled the printer and began charging the ink lines, the printer stopped after five minutes, with all the lights flashing, and a message "Fatal Error...contact Epson Service Center". Turns out that although I had removed the retaining screw that locks down the print head, I had neglected to remove the aluminum print head retaining bracket.

Fortunately no damage was done and after restarting the printer the ink charging process completed itself without incident. I called Epson and suggested that they highlight this matter in the user manual. So far, I have made 20+ prints in the 20x24-inch and 24x30-inch sizes, using Double-Weight Matte and my favorite paper, Premium Luster. Most of these prints have been from scans of 6x8cm Velvia transparencies scanned at 240 dpi on my Nikon 8000 ED film scanner, and adjusted in Photoshop 7.0. The prints are superb, and print quite quickly...about 12 minutes for a 20x24 and 25 minutes for a 24x30.

I like to make small test prints on 8.5x11-inch sheets before using the roll paper for the larger print sizes, and have found that following Epson's instructions for loading single sheets does not work well with 8.5x11-inch paper, which tends to get sucked into the printer and then ejected back up, often contacting the bottom of the roll paper cover causing the paper sheet to buckle and misalign. Instead, I simply open and close the paper release lever, then lower an 8.5x11-inch sheet of paper into the printer until it meets resistance, line the paper up and press the Pause button. This works well and has eliminated the problem. The Epson folks tell me that 8.5x11 is really too small to be used in the 9600, but my method seems to work OK and allows me to save some paper.

My preliminary tests show virtually no difference in quality between 720 dpi and 1440 dpi, so I plan to use 720 dpi for the most part and save on ink and printing time.

After the initial loss of ink required to charge the printhead lines, I've been quite impressed by the low ink usage of the 9600, as reflected in the detailed Printer Status and Job History Reports that I print out from the Selectype menus on the printer control panel. I use about 1.5-2.0 ml of ink for an 8.5x11 test print, 4.5-6.0ml for a 20x24 print, and 7.0-9.0ml for a 24x30 print. Light Cyan, Light Magenta and Yellow inks have been used the most, followed by Light Black, and a smaller volume of Photo Black, Magenta, and Cyan inks.

Like you, I have purchased a full set of 220ml replacement cartridges, and do not plan to buy any 110ml cartridges in the future."

9/19/2002 — Uninterruptible Power Supply

Today I installed a UPS in my system. I work with a fairly complex system consisting of 3 Macintosh computers and displays -one Power Mac with a 17" monitor, one G4 with a Cinema Display and one iMac- a total of 5 printers including the 9600, a CD writing drive, two scanners -Imacon and flatbed, a phone and a stereo system (more about this last item later). All of these are now powered through the UPS. The UPS I selected is able to support up to 950 W, or 1400 VA, which is enough for this system especially since I very rarely have everything powered-up at the same time.

A UPS is basically a battery-powered back-up power supply. During normal operation it uses current from a wall outlet. If the power goes off it instantaneously switches to its battery supply so that your system can continue to work without any interruption. In fact to test the UPS I powered everything up and then unplugged the UPS from the wall outlet. Nothing stopped working. The battery kicked in and things continued to run as usual.

The time that your system can be powered by a UPS battery will depend on the load placed on the UPS.



Typically, the more items powered through the UPS the shorter the battery backup will supply current to these items. For example, with just one computer and printer on, my UPS should be able to provide battery power for about 30 to 40 minutes. With everything on the battery probably wouldn't be able to provide power for more than a few minutes. This is no problem as most of the power interruptions I have experienced so far last only a second. Typically, the power goes off and then comes right back up. However, it is enough to ruin a print or a scan, waste an unsaved word processing document, or interrupt a phone conversation and force you to call your party back. With the UPS you can say goodbye to power interruptions. And if the power goes off for an extended period of time I can always turn off some of the computers in my system so that only those that are working on critical applications -printing or scanning in my case- stay on.

The UPS front panel

The green leds on the left side show the charge level of the battery. In this instance the leds show that the UPS is fully charged. The green leds on the right side show the load placed upon the UPS. In this case the load is minimal

since I only had the G4 and Cinema display on. Each green led represents a 20% charge or a 20% load. The green led at the top indicates that the UPS is running in normal mode. If it was running in battery mode an orange light would come off next to the battery symbol below it.

This particular UPS (Belkin F6C100-4) retails for about \$380 including shipping. However, if your system is smaller you may not need a 950 W UPS and can therefore purchase a smaller, and thus less expensive, UPS.

A UPS is heavy, about 50 lbs in this case, but once you place it in an inconspicuous place, you probably won't have to move it again so that is not really a problem. Just make sure that it has room around it since it needs to be cooled on a constant basis. Cooling is achieved via a fan, very similar to a computer fan, and this fan creates a constant noise (about 40 decibels). It is only slightly louder than the noise made by my G4. The only difference is that you have to unplug the UPS from the wall outlet to cause the fan to shut down.



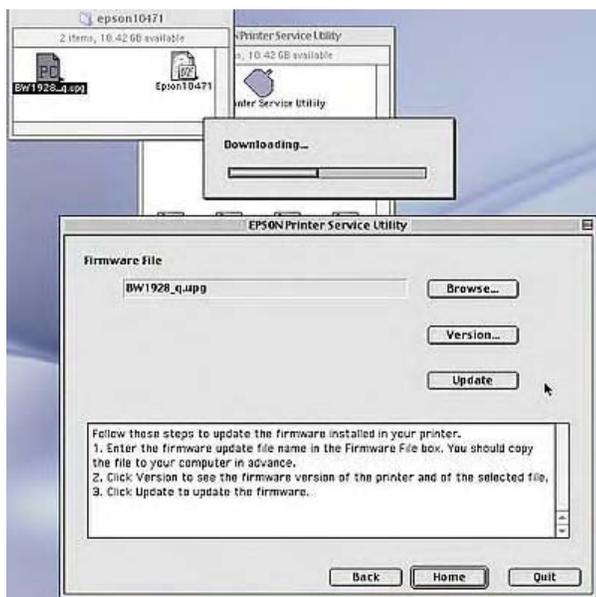
I mentioned that my system includes stereo components (all Rega) and that those are also connected to the UPS. Because the UPS filters the current going through it and delivers a highly stable current the stereo sound has been unmistakably improved. This is a great side benefit. Of course, a UPS is overkill in this respect as a good quality line filter would be sufficient. However, there is no doubt that the quality of the electrical current going into a stereo system has a direct effect upon the quality of the sound produced by this system.

A UPS may or may not be in your future. You may live in an area where you have a highly dependable electrical supply. In my case this is not the case. Plus, in the summer there are a lot of storms in the Southwest and each

storm brings with it its load of power interruptions or shortages. Now, the storms can come. I am ready.

9/27/2002 — Firmware Update; ideal humidity levels

The 9600 and 7600 firmware update is now available for Macintosh as well as PC's. Epson posted the Macintosh version yesterday I believe. Just follow the links in my previous diary entry to download it.



Firmware update completed.

I performed the firmware update on my 9600 today without any problems. The update is done via the Epson Printer Utility which you must download at the same time as the firmware update. The Epson Printer Utility is used for three functions: updating the firmware, aligning the printhead, and power-cleaning the printhead when the regular cleaning cycle isn't enough.

Screen shot of the firmware update in process

Apparently the Epson Printer Utility can be used with other Epson printers. I have not tried it but if someone

does please let me know what you find.

Can one encounter problems if letting a printer sit idle for weeks?

I received this question today over email and since this situation will sooner or later happen to any of us I thought it would be useful to post my answer here.

There should be no problem letting a 7600 or 9600 sit idle for weeks as long as you do two things:

First, run a printhead test twice a week or as soon as you return home if you have been away. Just power up the printer and run the test using a letter size sheet of paper, not a roll of paper. If the test is okay, just shut off the printer. You are done. If it is not okay run a cleaning cycle and print a second test afterwards. Don't run a cleaning cycle just for the sake of running it as it will waste ink unnecessarily. Do the printhead test first to make sure cleaning is necessary.

Second, monitor the humidity level in your house and specifically in the room in which the printer is installed. I recommend a 45% humidity level or so. To do this you will need a hygrometer, an instrument used to measure the ambient humidity level. If the humidity level is too low you will have to buy a humidifier. These can be found easily and the smaller models are not that expensive. The only thing to keep in mind is that they need to be refilled every one or two days.

Dry conditions are the number one cause of printhead clogging. I know this from personal experience since I live in Arizona where the weather is very hot and dry in the summer. You want to have enough ambient humidity to prevent the printheads from drying out. But, you don't want too much humidity since it is unpleasant and will cause paper to wrinkle. Hence the need to monitor humidity levels with a hygrometer so that you know precisely what is going on.

If you are away for long periods of time, and if you live in dry conditions, then a regular humidifier won't work since you won't be able to refill it. Of course, you can ask someone -a friend or neighbor- to do this for you but it is not always possible. An alternate solution, so that constant humidity is added to your home, is to have a mister, a device which sprays a fine mist of water- professionally installed in the air conditioning vents of your home or office and have the mister connected to a hygrometer. The cost of such a system is about \$600 (if you find a better price let me know) and this system is self-sufficient. You set the hygrometer to the humidity level you want and when humidity falls below this level the hygrometer triggers the mister which sends water into the air vents until the humidity level reaches the desired percentage. In very dry conditions, when owning expensive printers, this system becomes a necessity rather than a luxury.

10/18/2002 — 220ml cartridges; production printing

I finally ran one of the 220ml cartridges “dry”. I say “dry” because, as we all know, these are far from being empty when they can no longer be used. I immediately opened the cartridge and here is what the remaining ink looks like:



The dotted line shows the level of remaining ink. About 1/4th of the ink is left in the cartridge. You can contrast this photograph with my previous photo of an “empty” 110ml cartridge. I think the 110ml had more ink in it left but I didn’t actually compare.

I am now running the new firmware so it will be interesting to see if there is as much ink left in this cartridge the next time it runs “dry.” The new firmware only kicks in, as far as ink usage is concerned, with cartridges inserted after the firmware upgrade was completed.

For those of you who are curious to know what I am printing on the 9600 here is another production photographs. These are 8x10’s ganged up in photoshop on a 44” wide file and printed all at once.

10/19/2002 Manual Paper Cutter

Today I installed a manual paper cutter accessory on the 9600 (Epson Part at \$499 list price). As the name implies this allows me to cut the paper manually. I found that I much prefer to cut paper that way than to use the automatic cutter. The auto cut feature wastes too much paper to my taste (or I have not figured out how to use it so it won’t waste paper).

At any rate cutting the paper myself allows me to minimize paper waste by keeping the white margins around prints to a minimum.



Manual paper cutter in raised position (left) and in lowered position (right)

The manual paper cutter is attached to the printer via two screws. It is positioned above the paper while printing and lowered to make a cut.

The cutting head is operated with the grey lever protruding in the front. It cuts with a circular blade. The paper is caught in the vertical slot on the cutting head and cut by the circular blade when the head is pushed to the right.



Front view at the beginning of a cut (right) and at the end of a cut (left)

These are just tryout cuts using blank paper. The manual paper cutter is able to cut heavier paper stock, such as the Somerset Velvet Photo-Enhanced, than the built in automatic cutter.

12/02/2002 — Optimal conditions for operating the 9600/7600

Floor coverings

I have carpeting on the floor where the 9600 resides and it seems to work well. I prefer carpet to bare floors for rooms in which I spend a lot of time standing up as it is easier on my legs. The most important thing is to keep the room dust free as dust can cause problems. This is particularly true if you use enhanced matte paper (from Epson) as this paper creates some “paper dust” which can clog the head and cause banding. I routinely vacuum the inside of the printer, behind the printer translucent door, to suck out any dust and other debris that may have accumulated. The currently-hyped “Shark” line of miniature vacuum cleaners is perfect for this task!

Air Filtration

Jay Arthur, who helped me profile my printer, suggested I use a room-size HEPA air filtration system. Although I have not done this yet I think it is a worthwhile consideration as well as a good idea especially if you also do scanning. Such a system will actually remove all the dust in one room as it is supposed to run continuously and thus filter the air on a constant basis.

Humidity levels

Humidity is an important consideration and one that is often overlooked. Epson recommend about a 45% humidity level. The humidity level in any given room can be easily checked with an inexpensive hygrometer available at most hardware stores (I got one at Ace Hardware for \$5). If the humidity is close to 45% you don't have to do anything. If it is below that (as in Arizona) I recom-

mend you add a humidifier to your room. If it is above that (a rare case) you would have to consult with an expert as I have no personal experience. One of my previous diary entries goes in depth about the different types of humidifier. In my experience, most clogs are due to either a low humidity level (the air is too dry) or debris caught in the print head. Controlling the humidity level and vacuuming the inside of the printer on a regular basis will help prevent most clogs.

Static electricity

Static can be a problem but I don't think printers are much affected by it. It certainly is a major problem with film and scanning and the way to take care of it is to use anti static brushes from Kinetronic. Anti static floor coverings can also help but I personally haven't had to go that far yet.

Profiling

Of course you will need to profile your printer for optimal results. Uwe Steinmueller can do this for you at a minimal cost (editor: see our profiling service). If you seek professional and reliable results, which I assume we all do, profiling your printer is a requirement.

12/03/2002 Matte black or photo black?

I received many questions about which black I use and whether I switch from one black to the other so I thought a synopsis of my approach is in order.

I am currently using the photo black ink and I do not change from one black to the other. I find this too costly and time consuming. The Photo black works great for both glossy and matte papers, you just don't get as deep a black on matte paper as you would with the matte black, but still it looks great otherwise I wouldn't do it.

If you use both glossy and matte papers on a regular basis and want the best blacks on both papers I recommend you get two printers and equip one with matte black ink and the other with photo black ink. This makes a lot more sense than switching back and forth between blacks on a single printer. The cost of wasted ink will, in the long run, pay for the second printer, especially if it is a 7600. I am personally considering this option seriously.

12/09/2002 — 9600 Q&A

The following questions and answers are from a real email conversation and we hope you find them interesting.

Question #1:

What criteria did you use to decide on the 9600 vs 7600?

I am thinking of getting ImagePrint and ganging up images (prints for people for some side money) but on the other hand I have read that neither is really a production printer (in which case the 10600 is recommended). How often would prints greater than 24" be needed. This has been a big debate for me.

Answer:

Criteria: Maximum print size. You can use the 220 ml carts in the 7600 so this is not a factor. Just maximum print size - I can print 30x40's and 40x60's on the 9600, that's all. And yes, it is a production printer. Not as fast as the 10600 but not slow either. Ganging prints up (see my diary entry on this subject) saves A LOT of time! Printing speed per foot isn't the only thing you need to look at. It takes a lot of

time to load and eject hundreds of sheets of paper on a desktop size printer! Also, keep in mind that the 10.600 has only 6 inks (no light black) and thus will not be able to create the same quality prints as the 9600. In short, the 10,600 is the fastest Epson printer but the 7600/9600 have the highest print quality of all Epson printers at this time (December 2002).

Question # 2:

For test print purposes, is either printer easier to work with than the other for small (8x10) single sheets?

Answer:

No. Neither were designed for that purpose although it is possible to feed an 8x10 sheet for test purposes or to do a printhead test.

Question # 3:

Did you get involved with the dye vs ink decision?

Answer:

Yes. I love the 9600 because it creates the look of dyes with pigments.

Question # 4:

I have quite a few messages on different lists going into the dmax debate regarding paper/ink combinations and UC inks in general. There have also been messages on bronzing with glossy papers. Have you had enough time to test many papers and find one that you would recommend for good dmax (similar to traditional prints from a lab)?

Answer:

I have no qualms with the 9600. If a paper bronzes, then I just stop using it and switch to one that does not bronze (see my precious diary entries for which papers I prefer). You really only need a couple of papers realistically, papers that work for you. So who cares if some papers bronze or do this and that? Just don't use them. Problem solved!

Question #5:

Has the new firmware update resulted in less ink left in the cartridges at replacement time?

Answer:

Yes. But I have not finished a cartridge installed after the new firmware yet. Watch my diary for updates when that happens.

Question # 6:

In addition to the 46% humidity solution for preventing clogging, I have also read that if the printer is left on 24/7 it will help also.

Answer:

Sure, but why do this when you can simply control the humidity level in your home? Plus, it is good for you to live in an environment that is not too dry. And, if it is very very dry having your printer on all the time will still result in clogging (and wasted ink). Plus you are at the mercy of a power shortage (or someone accidentally unplugging the printer) unless you use a UPS backup. And even then the backup will only provide power for a finite amount of time. Why leave anything to chance?

Question #7:

I thought leaving the printer on saves ink? Had the impression that when you turn it on, it goes through a cycling process?

Answer:

Yes, but the reason why it is not drying when on is because ink is being constantly fed (very slowly) through the print head. I don't have hard data on this but I would be willing to bet that this consumes just as much ink as if turned on and off.

Question #8:

Slightly off topic, but how do you feel about film vs digital? I am shooting 6x6 and scanning with a Minolta Multi Scan Pro (probably should have saved for an Imacon??) but have been tempted by the new DSLRs coming from Canon and Kodak.

Answer:

I stay away from digital cameras right now. Except for an Epson 3100z which I use only to take photographs to illustrate my articles and this diary I shoot exclusively on film for my professional work. I love to experiment but spending untold thousands for a product which may be (or will be) obsolete in a year is not my idea of a wise investment. So I use film and scan it on my Imacon Flextight 3 scanner and get excellent results. I will go fully digital when a 4x5 back, or a medium format back, which is both practical and affordable (relatively speaking) is available.

Question #9:

I am coming to the harsh reality that I should have spent the extra money and gotten an Imacon. From what I understand it generates a very clean blue channel whereas my Minolta has a fair amount of noise in the channel :-(

Answer:

Imacon is great. As usual, you get what you pay for.

Question #10:

Since I am hoping to get some income from printing other people's work, would you say that the 9600 would be better then? The other thought I had was to get the 9600 and then use 24" or smaller rolls until the volume got enough to justify going to 44" rolls. Does that sound like a viable solution?

Answer:

No. the smaller rolls will actually cost you more. If you have a 9600, you need to use the 44" rolls. Just gang up prints on a 44" wide file. It all depends how much you want to spend on this printer purchase. Look at the cost of a 44" roll as an investment. You pay less per square foot of paper with a 44" roll than with a 24" roll. Even if you don't use it very fast the 44" roll is still a better investment.

Question #11:

Would doing printing for others be asking for more trouble than it is worth? Any suggestions on where to look for pricing ideas?

Answer:

Well, anything you want to do well will entail a lot of work, and yes some trouble, and also competing with other people who offer a similar service. Look up fine art giclee printers on the net for pricing ideas. Nothing is easy otherwise we'd all be doing exactly what we want and having a blast at it. Those of us who manage to do so have to work hard and be smart!

Question #12:

If you were to print for others, would you still limit your selection of papers?

Answer:

Yes. I just can't be everything to everyone. Plus, I cannot spend my whole life testing papers. At some point it is necessary to say "I like these materials, they give me the look and the quality that I want, and I am going to use them until something significantly better comes along."

Question #13:

BTW, I know you are using profiles that Uwe did for you, but have you tried the Atkinson profiles?

Answer:

Yes, but to be top-notch profiles need to be made for your own printer on your papers of choice. Bill Atkinson's profiles are better mainly because of the custom target he designed. I recommend you use his target to profile your printer. You do need to get custom profiles to get the best possible results. Ready-made profiles, even if some are better than others, will not deliver optimal results. (Editor: Also the Atkinson's profiles are not targeted for different viewing conditions D50 & D65).

Question # 14:

You didn't post a follow-up to whether or not the firewire card worked faster than USB?

Answer:

I can't really tell if there is a difference. Plus, I'm not about to make print speed test by plugging the printer via USB and via Firewire alternately. I just can't justify the time this would take. Mainly having Firewire gives me the confidence that I couldn't get a faster connection to the 9600. Again, why take a chance? It's not that much for a Firewire card so I decided to put all the assets on my side by using a firewire connection. If you don't want to spend that extra money I don't think you will be significantly penalized speed wise with USB except on large files. But again, with the 9600 most files are large.

Question # 15:

You didn't post a follow-up to how fast the maintenance tank filled up or how often it would have to be replaced?

Answer:

Right now my maintenance tank is about 60% full.

Question # 16:

It looks like there might be a contradiction in your entries (if I understand correctly). In the entry for 6/30/02 you stated that Epson Glossy Paper Photo Weight is not intended for the 9600 since it is dye based. In the entry for 6/29/02 you stated that Epson Glossy Paper Photo Weight is designed for pigment inks and the heavyweight paper is designed for dye inks?

Answer:

I'm not sure. The two names are so similar that they confuse me. If someone knows which is which for sure please email me the information and I will post it to my diary.

Question # 17:

Are your favorite papers still the Parrot Ultra Lustre and Epson Enhanced Matte?

Answer:

Yes although when framed under glass right after being printed images done on Parrot Ultra Luster create a film on the inside of the glass. This is caused by fumes (gazes) released from the ink-paper combination. These gazes get trapped in the frame and are deposited on the inside of the glass, effectively creating a veil over the image. Waiting for the print to dry may solve this issue but I don't always have the luxury of time. So when time is short I print on Epson Enhanced Matte.

12/10/2002 — Windows driver bug

This entry was sent by Ian Adams

Windows bug:

1. After weeks of research, I found out that there is a bug in the Epson 9600 software that, in conjunction with Windows 2000, prevents the user from making large prints of 40x50-inches. Almost makes me wish that I used a MAC! 30x40-inch prints are no problem, but I have several orders for really large (and profitable!) prints that I want to be able to produce. As a solution, I've purchased ImagePrint 5.0 from Colorbyte Software in Tampa, Florida. I expect to install ImagePrint later this week, and will let you know my impressions after some testing. Joel Hill, of The Cleveland Clinic, which has a 9600, says that ImagePrint resolves the "big print" limitation in Windows and provides numerous other advantages, including flexible formatting, faster printing, and better quality prints than the Epson software drivers. We shall see.

(Editor: Jim Collums reported the same bug with the 9000/9500 a year ago to Epson. He installed Win98 on his print server to solve the issue. We use ImagePrint for the our 7500 and 2200)

9600 custom cover



This image shows a very nice cover I had custom-made for my Epson 9600 by W. G. Computer Supply of Harvard, Illinois. The cover dimensions are 64" x 28" x 40", to allow for the 220ml cartridges. The cover is very rugged and cost \$62.95. The URL for W.G. Computer Supply is www.wgsupply.com

12/27/2002 9600 — Print Quality & Profiling

continue to receive voluminous quantities of emails from Epson 2200, 7600 or 9600 users asking me about they can get the highest quality prints from their printers. Clearly those users are not

doing better. When I ask if they have profiled their printers the answer is no.

I want to stress again, as I have already done in this diary on several occasions, the crucial importance of profiling your printer. In the past profiling may have been less important with previous Epson printers. I got very nice prints with my non-profiled Epson 1270 for example and with other Epson printers as well. But with Ultrachrome printers Epson made it a necessity to calibrate each printer individually. I am not sure why this is but the fact is that it has to be done in order to get the full printing quality potential from your printer.

A number of readers also believe that only papers not listed in the list of provided “canned” Epson profiles (the profiles provided by Epson with your printer) need to be profiled. This is inaccurate. The profiles provided by Epson (what I call the “canned” profiles) will not enable you to get the best quality prints from your printer. To get the highest quality you need to have a custom profile made for each paper you are using, irregardless of whether or not there is a canned Epson profile for this paper. This is because each Ultrachrome printer is unique and prints with its own slight shifts in color and density. Profiling allows you to compensate for those slight (but very significant) differences.

Profiling in essence is done via a two step process: first, you download and print a color target. This target consists of an image with a multitude of squares of color plus white, black and grays. Second you mail this print to the person who is creating the profiles for your specific printer. This person, the “profiler” so to speak, reads the target using a spectrophotometer. This machine compares the value of each square, as printed by your printer, to the value of a reference square and records the differences. It then creates a reference file -the profile- in which the difference between what your printer prints as a color and the perfect color reference for the same color, is recorded. This file contains this information for all the squares of color, black, white and grays in the profiling target. This is done for each paper you intend to use. This profile is valid only for your specific printer. Of course it can technically be used in a different printer but the information contained in the profile will not be 100% accurate and will thus not enable you to create the best prints possible. A canned profile is basically a profile created for one specific printer but used in a multitude of other printers. As you can see this approach cannot result in optimal print quality.

When you print an image on a specific paper you select the custom profile which was created on your printer for this paper. The profile tells the printers how to adjust each color, and each density, so that it matches the reference file. In effect each imperfection, each deviation in color and density that your printer may introduce is accounted for and corrected.

In a perfect world each printer would be created equal and each printer would print each color in an exactly similar manner. All cadmium reds (for example) would be the same, no matter which printers they would be printed on. In this perfect world we could line up one thousand Epson 2200, 7600 and 9600, have them all print a 10” square of Cadmium red, and all the resulting squares would be exactly, identically, 100% similar in tone and density.

The problem is that we do not (as yet) live in this perfect world. If we line up these 1000 printers and have them all print this same 10” square of Cadmium Red, they will, unfortunately, all print a slightly different shade of Cadmium red. Some will print dark Cadmium Reds, some will print light Cadmium reds, some will print Cadmium reds that look slightly greenish and others will print Cadmium reds that are a little yellowish. Others will print Cadmium Reds that are not very vivid and

yet others will print Cadmium Reds that we will have never seen before. Yet others will surprise us and make us believe that Cadmium Red isn't everything we have been told it is. That it isn't as vivid as we thought it was, that it is really more Magenta than we thought it was. And yet some other of these Epson printers will make Picasso rise out of his grave and proclaim that there should be laws punishing people who print Cadmium reds in such a horrible and distasteful manner.

So to make everyone happy, and to avoid the riots and complaints and other mental-illness inducing events caused by poor printing quality PROFILING was invented. Profiling provides all these printers, not two of them agreeing on what Cadmium red should really look like, with a reference file to which they can refer each time they print a particular color. Profiling in this sense is like a dictionary. If we disagree regarding how "neglige" should be spelled then we can refer to the dictionary to tell us exactly how it should be spelled. Without dictionaries we would all be left guessing creatively as to whether it should be "negligea," "Neagligier" or perhaps "naigleage." clearly a thousand other spellings can be thought of, all sharing a common quality: inaccuracy.

So if you are not happy with what your 2200, 7600, or 9600 printer is printing ask yourself this question: did I custom-profile my printer? If the answer is no do so, and do so for each paper you are using. Only then will you be able to assert the full potential of your printer.

01/05/2003 — Moving the Epson 9600

We moved our Epson 9600 printer. This part of our diary you can find in my other diary "How to Move your Studio".



12/28/2002 — 9600 vs. 7600

The comparison between the 7600 and 9600 is still a hotly debated topic and one which generates many emails. Clearly, the main difference between these two printers is the maximum width, 44" versus 24". This means you can print a 40"x60" on the 9600 while you can only print up to a 20"x30" on the 7600 (with 2" wide borders all around). If you don't sell or display photographs larger than 20" you may be content with the 7600. If you need larger prints, up to 40" wide, then only the 9600 will satisfy you.

But there is another aspect to consider, and that is the cost of paper per square foot. This is particularly important if you do production work. A 44"x100' roll of paper does not cost a whole lot more than a 24"x100' roll. Yes, 44"rolls cost more, but they don't cost twice as much as 24" rolls, not even a third more. This means that larger width rolls are more economical. I don't have price figures right now but doing a quick search for those prices will prove my point.

Another important consideration, which has little to do with maximum image size, is the ability to gang-up prints on a file. You can simply gang-up more prints on a 44" wide file than on a 24" wide file. This in turn means faster printing speed since you can print more images at once. If you do production work this is an important consideration. This also results in less paper wasted since tiling images on 44" width gives you more leeway than on 24" width. Take 16x20 prints for example: while you can only print one on a 24" width you can print two, in the 20" direction, on a 44" roll and have a one inch border around each of them. No paper is wasted and you can print two of them at the same time.

Obviously you can print two 20"x16" on a 24" roll one behind the other. But in my estimate this takes longer and is more costly paper wise. Of course there is the price difference between these two printers, and we can go on about computing this price difference versus the cost savings of larger rolls of paper.

Many of my decisions are made on the basis of peace of mind. By acquiring the 9600 I know for a fact that I got the largest Epson Ultrachrome printer available. End of the story. This gives me peace of mind. To make a comparison I just purchased a Leica M7. I could have got an M6, after all the only difference is that the M7 has automatic exposure, and saved some money. But by getting the M7 I gave myself the peace of mind that comes with knowing I have the latest M Leica

01/19/2003 — Soenar Chamid 9600 Setup

Here is the setup Soenar Chamid, of Holland, uses for his 9600 (Email soenar@chamid.nl Website <http://www.sportfotografie.nl>)



This is how Soenar describes his setup: "When I had the Epson 7600 the rolling cart was a perfect solution. It had the exact size as the printer and I could put my rolls of paper inside. When the Epson 9600 arrived the original stand took too much place, so I choose this set up near the wall."

As you can see there is more than one way to "skin a cat" as they say or to setup your 9600 printer (in this instance). Soenar's solution is interesting since he decided not to use the stand at all although the stand comes with the 9600 at no extra cost.

Soenar has difficulties printing very long photographs: up to 160 inches. I cannot help him with this issue as I never encountered it. Here is his original email. If you have an idea of what is causing the problem he describes please email him.

“Some time ago I started reading your diary. In August I started working with the Epson 7600, in December I switched to the Epson 9600. Till now I printed without any problem my photograph's 90x140 cm, so about 40x56 inch.

At the moment I'm trying to make banners up to 160 inches. But it does not work. With Photoshop 7.0 I (Windows XP) I could see in the preview that it was not possible. The preview of PrintPilot gave a correct view.

But after exactly 250 cm (100 inches), the Epson 9600 printed lines. White stripes (0,5 inch) after a pictureline (0,2 inch), then again a white stripe and so on till the printer passed 160 inches. What a waste.

Do you have any experience with this?
Do you know a way to solve this problem?”

01/20/2003 — Print of the month

I receive a lot of emails asking me to describe the quality of prints done on the Epson 9600, and/or the combined quality of an image scanned on my Imacon Flextight 3 and printed on my Epson 9600. No matter how hard I try there is simply no easy way to put this into words. The best, and perhaps only way, to witness this quality is to see an actual print.

To make this possible I am working on a special offer which will make it possible for you to purchase one of my photographs, at an attractive price, and see for yourself what the combination of top equipment, great profiling and good printing skills can do. The image will come with a description of the equipment used, the profiles used, the paper used, etc. Since I use the profiles that Uwe Steinmueller made for me you will also be able to see how these profiles will help you get the best print possible at the same time.

01/22/2003 — Qimage

Soenar Chamid received a number of responses regarding the difficulties he was having printing very long files. Here is Soenar's feedback on these responses as well as a very interesting (and inexpensive) solution to his problem:

“I had five reactions at my question. Scott Diese was one of them. He advised me to try Qimage Pro 2003.

I downloaded the trial version and the result was remarkable. I installed the program last Monday and till now I printed 3 prints on canvas 80x385 cm (32"x154" approximately). It is unbelievable that this software costing about \$40 can manage this file.”

01/25/2003 — Alain's Print of the Month 1/2003

Last week I announced a special offer which will make it possible for you to experience high quality digital photographic prints first hand. I worked out the details of this offer over the week and here it is!

1/29/2003 — Fix for Win2K file limit bug

I received this information today from Mike Putman. I use a Macintosh and so cannot comment on any aspect of it but if you use a PC this should be helpful to you.

“I found out from some folks who work at Microsoft that there is a printing limit of 4 billion pixels in Windows 2000 with any service pack and Windows XP without service pack 1. This works out to about a 40X50-inch print, give or take a few inches. The bug and the fix are described in Microsoft’s Knowledge Base Article 318365.

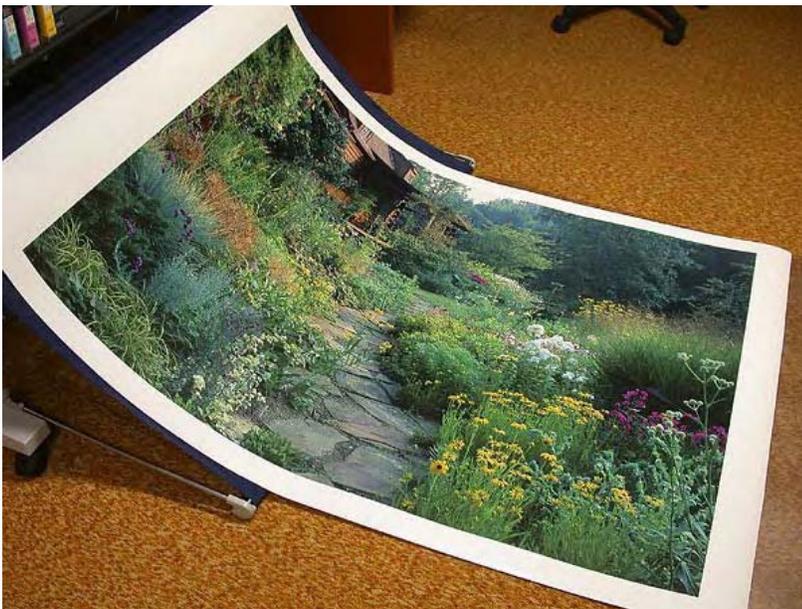
<http://support.microsoft.com/default.aspx?scid=kb;en-us;318365>.

This hot fix seems to cure the problem for me running Windows 2000 service pack 3. This is a tricky bug to track down as some graphic software packages have pixel and size limitations (which cause similar problems), while others totally avoid using the Windows print software (thus avoid this bug). So, this cure may not work for everyone.”

2/4/2003 — Very Large Prints

Here is an entry from Ian Adams detailing the process he uses to create very large prints using Image Print running under Windows:

“Here is my first 40x55-inch Ultrachrome print from the Epson 9600. It’s a 187 meg file at 150 ppi, and printed beautifully in about 30 minutes at 1440 dpi using the ImagePrint 5.0 RIP. I had a larger version, at 200 ppi, but the 150 ppi print is indistinguishable from it, even close up. For a print this large, viewed from several feet, 150 ppi is more than adequate, though 1440 dpi is needed to avoid the minor banding and slight loss of color saturation that occurs at 720 dpi.



There are several operations that need to be carried out to produce prints this large on the Epson 9600 using Windows 2000 or XP:

1. Make sure you have plenty of free space on your hard drive.
2. Make sure you have downloaded from Microsoft’s website and installed the “hot fix” for the Windows 2000 and Windows XP bug that puts a 4 billion pixel size limitation on a print file. This fix is included in the current Service Pack for Windows XP, and will be in the next Service Pack for Windows 2000.
3. ImagePrint allows you to rotate the image in the print window before print-

ing it, in order to align a horizontal print with the paper roll. However, this requires the creation of a large temporary file that takes up lots of space. It's better to rotate the file in Photoshop before reading it into ImagePrint, thereby eliminating the need for the temporary file.

4. If you plan to attend to other business while the print is printing on the Epson 9600, turn off your Windows Screensaver, or set the interval to at least an hour, and turn off the Windows Power Management feature as well. Both of these Windows features can cause an occasional interruption of the communication between the printer and the driver, causing the printer to "freeze" part way through the printing process. The printer console on the Epson 9600 will read "printing", but by then you've lost the rest of the print."

Ian Adams

I also want to remind everyone that the "Print of the Month" offer expires in 7 days only (it's getting close!). This is a great offer which is having a lot of success, and one that you should not miss if you are interested. If you haven't had a chance to read this offer just click here to find out all the details. If you have been hesitating just remember that you are covered by my 100%, no questions asked, "take one year to decide" money back guarantee. This offer is a wonderful way to first see for yourself how a print scanned on the Flexlight 3, and printed on the 9600 looks like and second add to (or start!) your photographic print collection.

2/7/2003 — Much less ink waste

First empty 220ml ink cartridge using Epson's Firmware update

Yesterday I emptied my first 220ml cartridge installed after performing Epson's firmware update on my 9600. This "event" was something I have been waiting for since some time in order to compare how much ink would be left in the cartridge with how much was left in 220ml cartridges installed with the old (original) firmware.

The great news is that very little ink was left in the "empty" cartridge. I did not measure the ink but I can report that it was approximately one fourth to one fifth of what was left in a 220ml cartridge prior to the firmware update.

I unfortunately forgot to take a photograph of the empty cartridge showing how much ink is left. But I did open the cartridge and drained the ink into a plastic bottle (I keep the leftover ink because my wife uses it for art projects), and therefore I know for sure that very little ink was left.

The next time a cartridge goes empty I will take a photograph of the empty ink bladder. Until then, rest assured that the firmware update is effective in reducing the amount of ink left in "empty" cartridges.

Also, as a side note, I just want to remind you that my first "Print of the Month" special offer expires in just 3 days! That's right, only 3 days left to get "Antelope Light Dance" at a price never seen before and never to be seen again afterwards! So if you haven't checked out this incredible offer yet click here and do so now. And if you have been hesitating well, time is running out! Just remember, at this price you are not taking a chance at all, plus, you are covered with my 100%, no questions asked money back guarantee or exchange in case you are not satisfied.

2/12/2003 — Printing the Print of the Month

I am in the process of printing “Yucca at Sunrise, White Sands National Monument” for my second special “Print of the Month” offer. This image is printed on Epson Glossy Paper-Photo Weight, a paper which I have only briefly tested last year.

I have to say that right now “Yucca at Sunrise” looks wonderful on this paper. The paper is not a fully glossy paper but instead has a slight texture to it, visible if you tilt the paper towards the light, and this texture is somewhat irregular, as if you could see some of the paper fiber but ever so slightly. More glossy than Parrot Ultra Luster, but with a texture less uniform than Parrot Ultra Luster. As usual, describing the “feel” of a paper is a challenge!

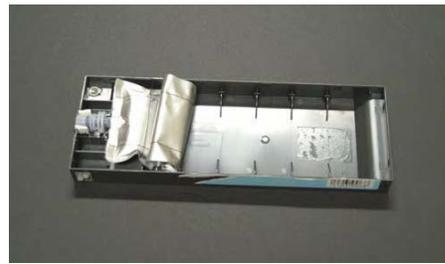
I chose this paper in contrast with the one I chose for “Antelope Light Dance” so that you can see the effect that two different papers can create. Many of you have ordered both prints which I think is wonderful. In fact, the print of the month offer is a great success.

Here is a photo of the two “Prints of the month” on my matting table. This shows you the matting style I chose for these two prints, a double mat with “desert sand” and “espresso” colors. These soft beige tones make the print really stand out since the brightest area is in the image and not in the mat. However, if you prefer a standard double white mat presentation, this is available as well. Make sure to email me separately if you want a white matting at alain@beautiful-landscape.com



3/12/2003 — Firmware update results in minimal ink waste in 220ml cartridges

As I reported before the 9600 firmware update results in a much lower, almost insignificant, ink waste. I noticed a much reduced ink leftover level in empty cartridges in my last cartridge change but, unfortunately, I forgot to take photographs of the empty cartridge. Well, this has been remedied by Ian Adams who just emailed me two jpegs of a light cyan empty 220ml cartridge. As you can see, almost no ink is left in the cartridge. This is very good news and will put to rest worries about wasted ink.



3/18/2003 — Epson UltraSmooth Fine Art Paper

Epson announced several new photographic inkjet papers at PMA earlier this month, among them UltraSmooth Fine Art Paper. Michael's Reichmann's preliminary review is now online and it is the first review of this paper in print anywhere in the world. Click on the url below to read Michael's review and find out the answer to his question "Is this the paper we've been waiting for?"

Review Note at Luminous Landscape

At this time Michael's review gives you all the information available about this new paper. I do not have samples of this paper at this time and so cannot do a print test myself (samples were distributed at PMA 2003, in Las Vegas, but I did not attend it). However, I plan to use the 500g, 24" x 30" sheets in the 9600 when they become available in April. If I like the print quality (and from the look of it it appears that I will) I may decide to do one of my Print of the Month releases on UltraSmooth Fine Art. Stay tuned!

By the way, if you have not taken a look at my third Print of the Month now is a good time to do so. This month's print is one of my all-time favorites, one that Steve Kossack calls "My signature image." Check it out now by clicking here .

3/19/2003 — Using roll paper on the 9600

Yesterday I received an email asking about how to handle roll paper waste on the 9600:

"The 9600 tends to forward too much paper from a roll and every new printing job has almost 10" of white paper wasted in front. How did you manage to solve that?"

Roll paper waste can be a serious problem. My solution when I use a roll of paper but want to minimize paper waste is to choose "sheet" paper in the print dialog box. Then I go to "customize paper size" and I enter a sheet size the size of my Photoshop canvas (basically the size, in inches, of my file or my tiling of several images on one sheet). Then I close the "customize" box and proceed with printing as usual.

In the main print dialog box, the one where you choose which profile to use, there is a paper size indicator in the top left corner. This thumbprint shows the size of the file you are printing and the size of the custom paper size you just created superimposed onto one another. This helps visualize if your custom paper size is the appropriate size. If it is too big you will have large white borders all around your image. If it is too small your image will be cropped. In this last instance the printer driver will alert you that "part of the image will be cropped out" when you attempt to print. I found that making the custom paper size 1" larger than the canvas size is a good idea. This results in a 05" border all around the image leaving enough room to safely trim and handle the print.

This approach basically fools the printer into thinking that there is only so much space to print on and results in an efficient use of the paper. The printer does not advance the roll 10" forward because, unlike on a 100ft roll, there is only so much paper surface to print on!

I do use the Epson manual paper cutter so using roll paper and cutting it on the printer is not an issue. However, you can also cut rolls on the printer by hand using a utility knife. See my previous diary entry on this topic.

Try it. You'll like it!

4/18/2003 — Proofing

I just completed a new series of images created in February and March of this year. In a new approach to proofing I proofed all 33 new images at once on the 9600 by ganging them on a 44” wide file and printing them all at once. Here is the result of this process:

After printing was completed I cut, double matted and signed each photograph. Each image is visible on my site at <http://www.beautiful-landscape.com>



You can compare the real image to those coming out of the 9600.

Because my system is entire profiled, from my scanner to my monitor to my printer, I was able to get beautifully pleasing results from the very first print. In fact, only one proof was made as no further adjustments are necessary. What you see is all I printed so far. Now, I am ready to print larger images.

4/24/2003 — Using roll paper with “sheet paper” option selected

One of my recent diary entries dealt with avoiding wasting roll paper by simply selecting sheet paper while roll paper was actually loaded in the printer. I forgot to explain how to avoid having the whole roll unwind itself when the print is done. This is what you need to do:

When the paper starts to come out of the printer it will pour out until the entire roll is unwound. This is because the printer thinks there is a sheet of paper in there and is waiting to “see” the end of the sheet. Since there is actually a roll of paper it will unwind the whole roll.

So, watch the print come out (you’ll have to stay near the printer so you don’t miss it) and when the print is completely out of the printer simply lift the paper loading handle up. This is the big grey handle on the top right of the printer (at least in the 9600). The paper will stop unrolling right there and then! Cut the paper off then push the handle back down and press the pause button. The paper will then be reloaded to the starting position for printing.

Usage reports

Also, for those curious to know all the details about ink and paper consumption InkjetArt has a link to a tutorial showing you how to print a paper and ink usage report on your 9600 and 7600:

http://www.inkjetart.com/pro/7600_9600/status_and_job_info.html

Before you launch into printing this report keep in mind that a detailed report on ink and paper consumption is printed each time you do a print head test. Personally, this is plenty enough information for me. This automatic report also indicates how much ink is left into the ink purge maintenance drawer. This last bit of information is indicated as a percentage of remaining space. For example 11% means that the drawer is actually 89% full.

5/12/2003 — Reset -don't replace- your 9600/7600 maintenance tank!

Here is how you can reset the maintenance tank on your 9600. I tested it, because my maintenance tank was nearly “full” (the red light was blinking) and it works like a charm. Try it, you’ll like it. It will save you the cost of a new maintenance tank plus shipping, sales tax, and the time spent finding one. This tip was posted to the EpsonWideFormat list by Jesus Gomez.

- turn off your printer
- press PAPER SOURCE+PAPER FEED+CUT/EJECT buttons at the same time and keep them pressed
- turn on the printer
- you can release the buttons
- A new hidden menu does appear
- press DOWN, CLEAR COUNTERS option should appear
- press RIGHT
- press UP, MAINT TANK should appear
- press RIGHT
- press ENTER (CUT/EJECT button)



Here are photos of the different screens you will see as you go through this process. The photos are in chronological order, from top to bottom and left to right.



5/17/2003 — Power Head Cleaning

If you have tried to “clean a clog” on your print head from the print driver or from the printer control panel both without success you may want to try this third possibility which Epson calls the Power Head Cleaning:

This operation is done from the Epson Printer Service Utility software. This is the utility which is used to upgrade the firmware on the printer. It is available as a free download from the Epson site. Look for my “software update” entry in this diary and you will find a link to the download page.

Here’s how to do it:

- 1- From the Printer Service Utility main menu select click on “Printer...” and select your printer in the chooser.
- 2- From the function drop down menu in the Printer Service Utility software select “Power Head Cleaning.”
- 3- Click “Next” to continue
- 4- Click “Start” to run a power head cleaning. This cleaning will run for approximately 2.5 minutes and will use more ink than a regular print head cleaning. For this reason it should be used only after you tried to clean the print head through the control panel.
- 5- During the Power Head Cleaning “Wait” will be displayed on the printer’s LCD control panel and the “pause” led will be blinking
- 6- Click home to return to the printer service utility main menu or quit to exit the Printer Service Utility program.

This information is provided by Epson’s technical information “pro76ups.pdf”. It was tested on a Macintosh G4 running OS 9.2

Print of the month #5 now available: I have just released my fifth print of the month. It is available here. Proceeds from this special offer allow me to continue writing this diary and help support outbackphoto.com. Thank you to all who have ordered or will order a “print of the month”!

5/18/2003 — Maintenance tank reset update

My Maintenance Tank reset entry generated a lot of positive feedback. One question keeps coming up so I thought I would address it here. A lot of readers want to know either

- 1-What did you use as an absorbent replacement for whatever Epson uses in the tank?
- 2- what did you do with the “old” tank?

The answer to both questions is “Nothing”! I just left the tank, and the pads in it, exactly the way there were before the reset. I didn’t change the pads and I didn’t change the tank. The whole idea here is to not change anything and instead continue using your old tank. In my case the tank is not truly full although the printer says it is full. In fact, the pads in the tank are not even soaked with ink at all. A lot more ink can be absorbed by the pads before the tank overflows and ink starts to spill outside.

Obviously Epson is playing on the safe side here just as it was playing on the safe side regarding “empty” ink cartridges before it released a software update late last year. In my view Epson should release a software update for the maintenance tank as well. But, if this doesn’t happen, we now know how to reset the maintenance tank so we can continue using the same tank until it is really full.

In fact the presence of a reset -clearly hidden in the printer’s control panel software- shows that Epson knows that the maintenance tank may not be full when the printer says it is full. Otherwise, why would this reset be there?



My maintenance tank. When this photo was taken the tank was “full” according to the printer. Thanks to the hidden “reset” command I am able to continue using this tank.

5/19/2003 — Ultrachrome printing costs

I get numerous emails asking me what is the cost of printing with the 7600/9600. This link gives you the most thorough paper and ink combination costs I know of:

http://www.inkjetart.com/pro/7600_9600/cost_page.html

Keep in mind that this table does not take into account the cost of ink used during printhead cleaning. Although it is hard to quantify how much ink is used during head cleaning I have heard that the printer uses 16ml on average for each cleaning. This must be added to the cost of each print.

There are a number of other issues regarding ink use and several of these are mentioned below the table. Make sure to read these footnotes.

7/18/2003 — Epson Wide Format Yahoo Group Email List

If you have questions about your 9600, or about other Epson wide format printers, an excellent resource is the Epson Wide Format Yahoo Group email list. You can subscribe to this list by clicking here:

<http://groups.yahoo.com/group/EpsonWideFormat>

From there you can choose to receive either individual messages or daily “digests”. The digest version includes all the messages sent to the group in a 24 hour period. I strongly recommend subscribing to the digest version because you will only get one email a day instead of 10’s or 100’s of emails (depending on how active this group is) if you choose the individual message option.

You can also search the archived list files at:

<http://groups.yahoo.com/group/EpsonWideFormat/files/>

This will give you a good idea whether or not the topic you are interested in has already been covered. It is usually faster to find the answer to your question that way instead of posting a message to the list.

Fall 2003 Digital Fine Art Photographers Summit

If you want to learn more about using your printer for fine art consider attending the Fall 2003 Digital Fine Art Photographers Summit.

<http://www.outbackphoto.com/summit/summit2003/summit2003.html>

If you are a photographer, are printing digitally, and want to meet top people in the industry today, find out all the details on the latest product and software, listen to in-depth presentations on a variety of topics related to digital photography and get your work reviewed by professional photographers then you cannot afford not to be there for this unique event! Find out all the latest details here, download a pdf registration form and fax it back today!

9/15/2003 — Using Roll paper on the 9600 and 7600

Here is a better way to avoid wasted paper when using roll paper on the 9600 and 7600:

- 1- Set printer control panel to “Sheet”
- 2- Load your roll paper in the printer.
- 3- Once the roll paper is loaded, and the printer says “Ready” (status light is green and not blinking) select “roll paper instead of “sheet” on the printer control panel.
- 4- Select “Sheet paper” in the Epson printer driver
- 5- Select “custom paper size” and enter the size of your photograph, plus a 1/2 or 1 inch border all around the image as the page size. That way your image will print on the side of the roll, instead of the middle of the roll.
- 6- If you want you can tile several images together and print on the full width of the roll.
- 7- Print. The roll paper will not unwind past the length of the custom paper size you have indicated in the driver.

9/17/2003 — The 9600 and 7600 Paper Sensor

The Epson 9600 and 7600 use a light-sensitive paper sensor which allows the printer to find out where the edge of the paper is. This sensor is what permits these printers to load paper precisely in the printer.

The problem is that this sensor is very sensitive to extraneous light. If you have direct light shining into the printer, either from above or through the tinted plastic cover on the front of the printer, this sensor can be “thrown off” and unable to function properly.

If you are having difficulties with issues related to loading paper, or ejecting paper properly, check if there is direct light shining into the printer, either from an overhead light or from a window. If there is, move the printer to a different location, turn off this light when you are printing, close the blinds, or take any other action to block off this light source.

I cannot provide you with a photograph of this sensor because it faces the paper and is located behind the printhead. To clean it, if cleaning is necessary, you need to use either compressed or canned air.

9/21/2003 - Power Cleaning

If the normal cleaning cycles do not do the job (the ones you control via the printer dialog box on your monitor), try a hardware power cleaning, via the printer control panel (on the printer). Here are the steps you have to go through on the control panel:

- 1- Ready
- 2- Selectype
- 3- Printer Setup
- 4- Scrool down to Maintenance
- 5- Selectype
- 6- Power Cleaning
- 7- Selectype
- 8- Exec
- 9- Press Eject

This tip was provided by Jon Dokken.

9/23/2003 — The future of the Epson 9600-7600: are there new wide format Epson printers on the horizon?

It has been roughly 15 months since the Epson 9600 and 7600 were made available in June 2002. Already, rumors have started to emerge regarding the next wide format Epson printer. I am receiving emails regularly asking me what I think will happen and whether or not this is a good time to buy a 9600. Here are my answers.

Should I buy an Epson 9600 now (late September 2003)?Yes. We know it is a good printer, we know it can do beautiful fine art prints with nearly no metamerism, and we know it has a very good color gamut. Get one now, use it as much as you can, and plan on recouping your investment within 6 months to a year.

When will the next wide format Epson printer come out? My guess (don't hold me to it, I have no insider information) is that the next wide format Epson printer won't come out until mid-2004.

Why? Because first, we usually hear rumors about the next version of a printer up to 6 months prior to its introduction, and second, because these rumors are followed by a significant price drop on the printers up for replacement. So far neither has happened.

What will this next generation 9600 (9700?) look like? My guess is that the next "9600" will be an 8 color printer. We may actually get a printer with more than 8 inks as well. This next printer may be based on the ink technology of the just-announced Epson 4000 (the replacement of the Epson 3000 and perhaps 5000). The new 4000 is an 8 color printer. There is speculation as to what the 8th ink is. It may be a 3rd black. For example, the 4000 may offer the possibility of having both blacks (photo and matte) installed at the same time. Users would then be able to choose photo black or matte black based on their needs without having to swap cartridges and waste a large amount of ink unnecessarily.

Will Epson fix the ink waste caused by changing from one black ink to the other? Certainly the biggest gripe about the 7600 and 9600 is the ink waste caused by swapping black ink cartridges. While the possibility of using 2 different black inks, each optimized for either glossy or matte papers, is endearing, in effect doing so is both impractical and expensive. Solving this problem, so that black ink changes can be done "on the fly", should be one of Epson's priorities. This is why I both hope and expect that we will see a dual "matte and glossy black" version of the 9600.

How will this work? There will be three black inks installed in the printer at all times: matte black, photo black and light black. When a print head test is made all three black will print, and if the printhead needs to be cleaned all three black heads will be cleaned. However, when printing, only one of either the photo or matte blacks will be used. How is this done? simply by not having one of the printheads fire, just like certain print heads do not fire when a certain color is not printed. For example, supposing you are printing a solid magenta color, no other printhead will fire except magenta. Epson knows how to do this and need to implement it so it works with matte black and photo black.

How will this affect me? Well, as far as print quality is concerned, a dual black version will not improve print quality. It will only make black ink changes fast, easy and inexpensive. If you have a 9600 or 7600, and don't change black ink, don't give it a second thought. If you change black inks a lot, and already have a 9600 or 7600, you may be able to pick up a second 9600, or a 7600, at a discounted price :) and use two printers, one with matte black and one with photo black. Of course, if space is a concern (those printers are big!) you may want to get the latest version.

What if the 8th ink isn't black ink? This is certainly a possibility. Since the 9600/7600 already have 2 blacks, 2 cyan, and 2 magentas my guess is that the additional color ink will be light yellow. I don't know how much light yellow will improve print quality since a second yellow will essentially enlarge the orange gamut. It will certainly help the color gamut of warm tones and sandstone canyon walls ;)

Can there be more than 8 inks in the next wide format Epson printer? Certainly. In fact, there are already wide format printers running more than 7 or 8 inks. Some have 12 inks: 3 densities of ink for each color (regular, light, super light). Some have more than 12 inks. Increasing the number of inks is an effective way to increase color gamut. However, this approach makes running a printer much more expensive since there are both more cartridges to replace and more spare cartridges to stock. Can we have a second

yellow and 3 blacks for a total of 9 inks?I see no reason why not. In fact, having it all is nice. However, the issue here is cost versus color gamut. We know there will be an added cost because of the additional ink colors. But, at this time we don't know if there will be a significant color gamut improvement. The same remark holds true for a 12 ink Epson, one with 3 shades for each color. At any rate print quality improvements in inkjet printing today are linked to increasing the number of colors.

11/26/2003 — Printing problems when running Mac OS X Panther and Photoshop CS

Have you upgraded to Mac OS X Panther? Have you had problems printing with your 7600 or 9600 from Photoshop CS after this system upgrade? If yes, you are not alone. In the past few days I have received several reports of users having severe problems printing on Epson wide format printers (including previous models such as the 9000 and other machines) using PS CS and Panther.

The problems include slow printing times and inaccurate colors. The solution is no doubt on its way but is not available yet. The cause seems to be the way Apple is implementing printer drivers in Panther. OS X is still "a work in progress" and Apple and Epson are not communicating effectively in the development process. These printing problems affect mostly large files.

Epson will no doubt release a Panther upgrade to their wide format printer drivers. However, what do you do in the meantime?

I recommend you go back to OS 9.2.2 and print from there using Photoshop 7 (PS CS only runs on OS X). I personally use several Macintosh computers, therefore doing so is not a problem. However, you have to transfer your files from one Mac to the other, over a network connection, and this extra and unnecessary step is a hassle.

In short, use Panther and PS CS to prepare your files then print them from OS 9.2.2 and PS 7 from a different machine. You can also print from the same machine running Mac OS Classic (I have not tested this configuration though).

The good thing about using two computers is that you can work on a new image while the previous one is printing. The bad thing is you wonder why you bought a new computer in the first place :) At any rate, this is another good reason not to sell your old computer or trash your old version of Photoshop.

After writing the entry for PS CS and OS X Panther problems I received this possible solution for Richard Cover:

Richard experienced similar problems and noticed that his printer connection in the printer setup utility was set for "USB". He changed this to "Epson USB" and everything went back to the way it was with OS 9.2 and Photoshop 7.

If you are having these problems try Richard's solution and see if it works for you. If it does, or if you find another solution, make sure to let me know by email at:

alain@beautiful-landscape.com

2/27/2004 — Epson Ultrasmooth paper

I just tried the new Epson Ultrasmooth paper on my Epson 9600. I have to say that this is a success. I love this paper!

Ultrasmooth has been promised by Epson for a long time and is just becoming available. It comes in both rolls and sheets, in 250 gram and 500 gram versions. The 500 gram version is only available in sheets since it is too thick to be rolled.

At this time I tried the 250gram, 17"x 50 feet roll. The roll fits in the 9600 although it is much smaller than the usual 44" rolls I normally use.

Since Epson does not provide profiles for Ultrasmooth yet, and since I did not have this paper profiled yet either, I used my Epson Enhanced Matte profile with Ultrasmooth as recommended by Epson.

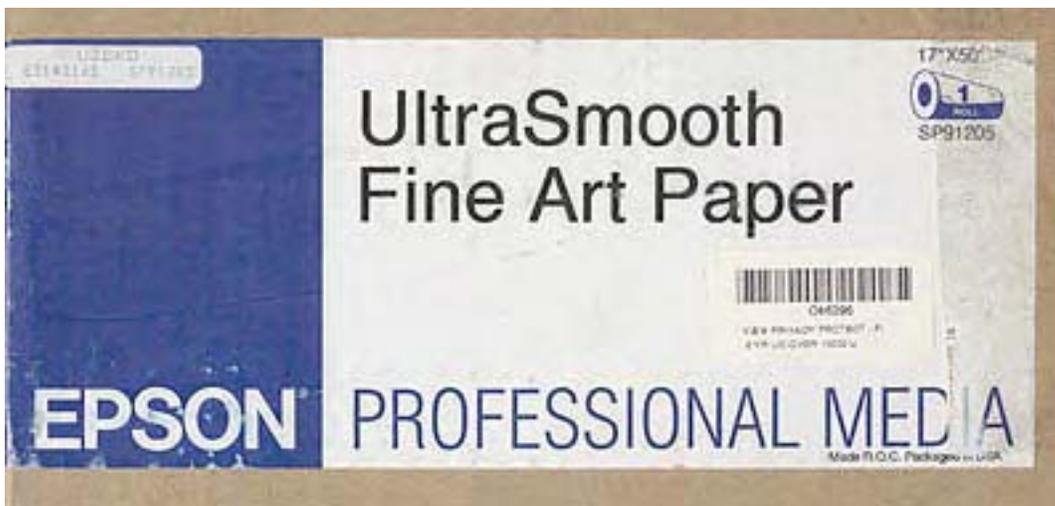
The results are great. The prints look wonderful with this profile. I will of course have it profiled but at this time I can say that using enhanced matte profiles with Ultrasmooth works very well.

The quality of Ultrasmooth can best be described as "Fine Art Paper." This paper does not have optical brighteners, meaning that you don't get this pure white, sometimes almost "too white" appearance that some papers have. Instead you get a nice, smooth, velvety quality with an off-white tone to it.

This paper also has one of the finest textures I have ever seen on a matte paper. The smallest details are rendered perfectly and come out extremely sharp.

I plan to make this paper my primary paper for fine art. I also plan to purchase 24"x30" sheets as soon as possible. These are 500 gram sheets which mean you do not have to mat or dry mount these prints. You can simply leave a nice wide border all around the print, create a deckled edge, and add your embossing stamp for a beautiful "Museum quality" appearance.

My current print of the month (actually 2 prints this month) are printed on Epson Ultrasmooth. Click on "Prints" on this site's homepage to read all about it. If you want to see this quality for yourself this is a great opportunity to do so while building up your fine art photographs collection. And if you haven't tried Epson Ultrasmooth yet you owe it to yourself to give it a try. If you like Enhanced Matte you will love Ultrasmooth!



4/7/2004 — Maintenance tank - replace or reset?

In recent weeks I have received a high number of emails asking about what to do when the maintenance tank is nearly full and the printer is saying so. It seems that a number of 9600's are getting to the point where their maintenance tanks need attention!

My recommendation is this: pull the maintenance tank out of the printer and inspect it visually. See if the tank is full of ink or if the pads still show some white padding. See if the ink is leaking out of the tank (hopefully not).

If the tank is full and the white padding is saturated with ink, replace the tank. If ink is leaking out replace the tank immediately.

If the padding is still able to absorb ink, and if it shows some white padding, reset the tank according to the instructions I provided earlier on in this diary. To see these instructions scroll down on this page and you will find them.

Resetting the tank is done through the printer control panel. Once the maintenance tank is reset the printer thinks a new maintenance tank has been installed and the maintenance tank counter goes back to zero. You didn't physically change the tank but you made the printer believe you did. This saves you the cost of a new tank and has no adverse effects on the printer as long as you make sure that the tank still had some white absorbent material in it prior to resetting.

After you reset the tank you will need to monitor the tank's capacity on a regular basis. If you use your printer a lot I recommend you do this once a week. Doing so is easy and only takes a few seconds. Make it a habit, each Monday for example, so that you don't end up with a full tank which is leaking ink all over the place! You want to save money but not create a mess which is going to take forever to clean and which may damage your printer.

I also heard that recent Epson maintenance tanks use a lighter padding material than previous maintenance tanks. If I am correct this new and lighter padding will result in maintenance tanks which fill up faster, which may or may not be resettable, or which can be reset only once instead of several times. If you purchased your printer a year ago or less you may have one of these new tanks. In this case, if you reset your maintenance tank, you need to be particularly vigilant about how full it really is.

4/16/2004 - Making big prints (42"x72") in Windows XP

I received this via email today. Jim had a problem printing large images to his Epson 9600. His prints are 42"x72" precisely. Here is the solution he implemented at the recommendation of Epson Technical support:

- First make sure (in XP) you have the SP1 and 1a service pack installed.
- Open the 9600 printer properties (start/printers and faxes/9600/ advanced tab/..) and click off "enable advanced printing features."
- Save that.
- In PS, click print with preview, open the printer and ensure the paper size is bigger than the print (roll paper selected, paper size is user defined, make a 44x76 page and save it).
- In the driver window, turn off "finest detail" (doesn't matter what the DPI of the print is, 360, 720 or 1440. Finest detail only applies to sharpened text).

- Save that and go back to your print with preview window.
- Image should appear correctly for printing.
- Hit print!

This worked perfectly!

4/20/2004 - Lightfastness

Recently I received a number of emails asking me to compare the lightfastness of Ultrachrome prints on glossy and matte papers. This is a relevant matter in the wake of Epson's release of the R800, a printer able to create glossy prints without bronzing. It is also of importance to 9600-7600 users who are printing on glossy and matte papers.

Apparently there seems to be a myth that goes something like this:

“Ultrachrome prints on matte papers are more archival than ultrachrome prints on glossy papers. “ Let's take an objective look at this subject.

First, the archivability of a print needs to be looked at on a paper by paper basis, not on a paper category --i.e. glossy vs matte, matte vs glossy, etc.-- basis.

Second, we need to look at color prints and black and white prints separately. As we will see color prints and black and white prints, done on the same paper, do not have the same longevity.

Third, Wilhem Imaging provides us with reliable data in regards to the longevity of matte versus glossy papers done on the Epson 9600:

http://www.wilhelm-research.com/epson_9600_preview.html

1-Color Ultrachrome prints

According to the Wilhem pdf chart, and looking only at uncoated Ultrachrome prints framed under glass, Enhanced Matte Paper has a display life of 64 years while Epson Premium Glossy Photo Paper is listed at 85 years (displayed prints not framed). According to this data Ultrachrome prints on Epson Premium Glossy Photo Paper have a higher longevity --9 years more-- than Ultrachrome prints on Epson Enhanced matte paper.

According to the chart Epson Premium Glossy Photo Paper outlasts all other Epson papers except for the Epson Watercolor Paper Radiant White (Sheet) and Epson Ultrasmooth Fine Art paper.

One thing which helps explain the high longevity of prints done on Epson Premium Glossy Photo paper is that this paper, as well as other glossy and luster papers, use a very different type of coating technology than matte papers. Many glossy and luster papers use an ink-encapsulating coating. When the inks are deposited on the paper the liquid ink softens the coating which becomes porous. The ink immediately starts to “sink” into the wet coating and when this coating dries it effectively seals the inks into the coating layer, effectively encapsulating them.

The Epson R800, which embodies Epson's latest ink technology, adds one more layer of protection by applying a clear varnish to the print after printing is completed. This varnish further seals the inks

in the print, preventing them from evaporating or migrating to the surface of the paper. The paper of choice for the R800 is Epson Premium Glossy Photo paper. It's excellent lightfastness is great news to those of us who enjoy printing on glossy papers.

Glossy prints have one additional benefit when compared to prints on matte papers: they are not affected by **scuffing**. While **scuffing** can be minimized by coating the print and by careful handling it is a serious problem with matte papers.

2- Black and white Ultrachrome prints made with the full color Ultrachrome inkset
When looking at black and white prints Enhanced Matte paper is the longest lasting at 150 years. Second is Epson Ultrasmooth at 140 years and third Epson Premium Glossy Photo paper at 135 years.

It is interesting to note that longevity ratings are much higher for black and white prints. This is most likely due to the fact that, while all the inks are used, the main component of a black and white print is black and light-black ink. Clearly, Black ink is far less subject to fading.

Methodology:

Again, I am only looking at uncoated Ultrachrome prints, framed under glass. The reason for looking at uncoated prints is that potentially all prints can be coated but the chart only shows coating longevity ratings for a few papers. The reason for looking at prints framed under glass is that this is the presentation Wilhem considers "the single most important of the three display conditions listed." I also had to make a choice to avoid making this comparison unnecessarily complicated.

4/25/2004 - How to change from matte black to photo black without wasting money and ink

Today I received this tip from Rüdiger Schäfer who lives in South Africa. Rüdiger has posted this tip to the Yahoo Epson wide format forum and forum members confirmed that it works. I have not yet tested it because I do not need to change black inks at this time. However I decided to post the tip to my diary right away so that you can benefit from it immediately.

If you try this tip please email me at alain@beautiful-landscape.com to let me know how it worked for you.

Here it is:

How to change the photo/matte ink in the Epson 7600 and 9600 printers without using the costly Epson draining procedure:

1 – Make sure your printer is not switched on

2 - Open the ink cartridge lever in the ink cartridge bay

3 - Replace the photo black cartridge with the matte black cartridge (or vice versa)

4 - Leave the ink lever open !

5 –Using the printer control panel go into Maintenance Mode 2 by switching power ON while pushing the 'Paper source', 'Cut/Eject', and 'Paper Feed down' buttons.

6 - Press the 'Paper Feed down' button until you see "SERVICE CONFIG" on the display - press the 'arrow right' button. It then shows 'XXD' in the lower part of the display.

7 - Press the 'Paper Feed down' button until you see "NPD" - press 'arrow right' button. A value of '1' appears in the display.

8 - There are 3 possible value settings for NPD:

0 - no ink check

1 - pigmented ink (there should be a star "*" at this setting)

2 - dye inks

9 - Change NPD setting to '0' (no ink check) and press "Enter" - a star should now show next to the '0' value

10 - Switch printer off

11 - Switch printer on

12 - Close the ink lever in the ink cartridge bay

13 - Printer and driver shows the matte black ink is installed (or photo black ink)

You can use the same procedure to switch from matte black to photo black or photo black to matte black.

What happens is that once you change the ink in that way the printer re-sets the 'NPD' value back to '1' the next time you switch on the printer in the normal way (non maintenance mode).

At that point the previous black ink, either matte or photo black, has not been flushed out of the printer. Here is what you need to do to flush the remaining ink:

A- With the 7600:

The 7600 uses approximately 10 to 12 ml of ink before the previous black ink is flushed out.

1 - Create a 23"x 40" image in Photoshop and fill it with pure black (RGB 0,0,0).

2 - I use inexpensive matte paper and print that image at 720dpi.

3 - When you look at the finished print you will see that 2/3 of the print is photo ink as it looks a little bit dull and the rest of the print shows the nice dark matte ink.

4 - When this image is done printing the ink line is charged with matte black (or photo black).

B – With the 9600:

The 9600 uses approximately 20-22ml of ink before the previous black ink is flushed out.

Use the exact same procedure as described above but create a larger image: 43”x40”.

This larger image is needed to flush the longer ink lines of the 9600:

1 - Create a 43”x40” image in Photoshop and fill it with pure black (RGB 0,0,0).

2 - I use inexpensive matte paper and print that image at 720dpi.

3 - When you look at the finished print you will see that 2/3 of the print is photo ink as it looks a little bit dull and the rest of the print shows the nice dark matte ink.

4 - When this image is done printing the ink line is charged with matte black (or photo black).

6/1/2004 - How to flatten your 9600/7600 prints

Curling is a serious problem with photographs printed on roll paper. In this entry I provide two ways you can de-curl your inkjet prints.

1- First, Jerry McCollum developed a personal technique aimed at removing curl. Here is how Jerry does it together with instruction on how to build the jig you will need. Please note that I did not try this technique myself.

Materials needed:

- 3 inch PVC pipe
- 0.010” polycarbonate sheeting (comes in rolls, look for it on Google)
- packaging tape and a sheet of paper

I routinely cut 36” wide rolls into 24x36 sheets for my 7600. I currently use Hawk Mountain paper.

After cutting the sheets with a standard mat cutter, they roll themselves into tubes which must be de-curved into sheets before using them in the 7600.

I made two de-curlers. While one unit is de-curling, I am loading the other and then switching back and forth every minute to load tubes and unload sheets.

My tubes are 40” long

The polycarbonate sheets are 40x28”

The TWO sheets of 0.010” polycarbonate material I use on each tube gives me superior quality.

The polycarbonate sheets are taped to the PVC tube so that they open and close like 2 pages in a book. There is no tape between the two sheets. A piece of paper the thickness of the material I normally cut is glued around the PVC tube up to the edges of the polycarbonate sheets. This creates a contiguous surface when the tube is rolled (no seam pressure marks).

Use is simple. Work the edge of the curled sheet of paper between the polycarbonate sheets. The 0.010" polycarbonate is just stiff enough to keep the paper flat so it slides easily. Once the paper is slid between the polycarbonate sheets the tube is flipped and rolled. A simple Velcro band keeps the tube rolled while the other tube is loaded in exactly the same way. Once the second tube is loaded, the first tube is allowed to unroll.

Voila - flat sheets!!

Polycarbonate is the ideal material for this process because it takes repeated rollings yet always remains stiff. Through trial and error, I found that 2 sheets of the 0.010" polycarbonate are ideal for my sandwich on papers ranging from 100 gsm to 400 gsm.

2- Here is a second way to remove curl. This time you don't need to buy any materials since you can reuse what you already have.

- Use the cardboard tube at the center of Epson 24" or 44" roll papers
- Tape a long piece of 24" or 44" archival paper to this tube
- Place the photograph between the archival paper and the tube. Make sure the printed side is facing the archival paper
- Roll the curled photo paper and the Archival paper around the tube

6/3/2004 - How to calculate how much to charge for inkjet prints

Calculating how much you need to charge for inkjet prints can be challenging. Many factors go into figuring out the price you charge your customers. Keeping track of all these factors can be challenging.

I found an interesting solution in the form of a pricing software package offered by a company called Estimate. This software solution will work particularly well if you are in a "print for pay" situation, for example if you run a print shop and are making inkjet prints from customer files or if you photograph artwork and then create Giclee reproductions of the artist's work. If you are an artist, and are printing and selling your own work, you will have to include an extra pricing factor for the artistic value of your work.

You can download a free copy of Estimate here:

<http://www.pricingmadeeasy.com/estimate/products/estimate.php>

This full-featured demo version will run for 60 days. After this evaluation period you can upgrade to the permanent version for the price indicated on their web site.

Note that the part of estimate that applies to inkjet printing specifically is found under the “Quick Quote” menu and then under “Wide Format Prints”. Since the “Wide Format Prints” is a plugin you will have to add it to your order if you upgrade to the permanent version of Estimate.

Also note that Estimate offers two other programs for free:

Profit Watch which allows us to calculate the hourly fee you should charge to meet your income goals:

<http://www.pricingmadeeasy.com/estimate/products/profitwatch.php>

and Vendor Mate which allows you to keep all your suppliers information, catalogs and pricing in one place:

<http://www.pricingmadeeasy.com/estimate/vendormate/index.php>

Estimate, Price Watch and Vendor Mate are Windows-based programs.

Please note that I have no connection with Estimate and that I do not derive financial benefits from this diary entry. I received Estimate as part of a software package for a new mat cutter and thought it would be of interest to 7600 and 9600 users. Estimate can calculate pricing for a variety of applications besides Inkjet printing

7/28/2004 - Very large prints

Today I printed the largest print so far on the 9600. This print is precisely 35”x70”. It is made from a 6x4.5 transparency scanned at 8000 dpi on a Howtek drum scanner. The transparency was taken with a Fuji 645zi. The resulting scan is about 800mb. The original file was cropped at the top.

I previously printed this image in a longer panoramic version. This previous version is available in a previous diary entry.

This time I used more of the image and did a taller panoramic version. I like this new version very much.

The image was printed on Epson Canvas using Bill Atkinson’s Epson Canvas profile. Several test images (6”x10”) were necessary to insure that the color balance, the contrast and the density were optimized before the final print was started. I printed this image using the Super Microweave option in the printer driver. This increased the printing time considerably to well over an hour. However it insured a very fine print quality.

I had an interesting problem while attempting to print this image. I could not print the original 700mb, 300 dpi file. I kept getting an error message. Assuming this file was too large to be printed, or that I did not have enough Ram to print it, I progressively lowered the resolution to 240dpi while keeping the original image size. It printed without any problem at 240dpi. While the 240dpi print is beautiful it would be good to know why I couldn’t print it at a higher resolution especially since I had no problems printing 40x50 files at 300 dpi in the past. I print from Photoshop CS running on a double processor Macintosh G5 with 3.5 gigabytes of ram and a 130GB hard disc. If anyone knows why I had this problem please let me know as I find it puzzling.

The print will be stretched on stretcher bars custom cut and assembled to the exact size of this print. If you are interested in learning more about this mounting process I wrote a detailed and illustrated article describing how to do it. This article is available as a pdf file on the Briot's View CD.



12/4/2004 - Welcome back

I have not added new entries in this diary for some time. This is because I have just about covered every aspect of this printer :-). This diary has been a very interesting and informative journey.

I have a couple more entries to add at this time and then it will be time to move on to the next Epson printer. I just purchased an Epson 4000 and I started a diary on this site about this new Epson Printer: Alain's Epson 4000 diary. Take a look at this new diary because I believe you will find it just as helpful, interesting and thought provoking as my other diaries. You will also find out that the Epson 9600/7600 and the Epson 4000 have quite a few things in common. Therefore, some of what I will be writing in my new Epson 4000 diary will apply also to the Epson9600/7600, such as which papers I am currently using, how to print with RIPS and so on.

To continue with my previous entry here is a photograph of the completed canvas print I was working on in the last entry. Here it is, stretched, framed and proudly displayed as a centerpiece:



12/5/2004 - Epson 9600 Premier Art water resistant Canvas for Epson

I started using the Premier Art Water Resistant Canvas for Epson. Here are some of the most important aspects of this paper:

- You need to use Watercolor Paper Radiant White as paper choice in the Printer Driver > Print settings dialog box

This canvas has a higher contrast than the regular Epson Canvas. It prints well with the Bill Atkinson Premier Art Canvas profile available at <http://www.homepage.mac.com/billatkinson/>

- It is slightly sticky to the touch and has a certain smell to it while the regular Epson canvas has neither.

- It has a shiny or glossy finish and appearance. The shiny finish is more noticeable after printing. While this is good for light reflectance, it does hinder viewing the print since at certain viewing angles the print shimmers making it hard to see. Hopefully spraying the print will not diminish this effect. In my view a matte canvas finish is preferable. I believe Premier Art also makes a matte canvas.

- Premier Art, the same company that makes the Premier Art Print Shield Spray, makes it. In fact, on the flyer included with the Premier Art Canvas, they recommend you spray the finished print with...guess what... their spray! (why does this not come as a surprise? If you know, email me!) I was surprised that they recommend spraying their canvas since it is advertised as being waterproof. Usually, waterproofing is one of the most compelling reasons for spraying a print.

Well, the reason why they recommend you spray the finished print is because the canvas is coated with an ink-receiving layer that remains receptive, i.e. subject to change when exposed to the air and other contaminant. The ink-receiving layer will cause the print to deteriorate if it isn't "deactivated." The main risk is yellowing of the print, caused by the ink-receiving layer turning yellow. Spraying the print "deactivates" the coating by sealing it under the layer of spray, thereby preventing the print from yellowing.

Two other ways to prevent yellowing are to either frame the print under glass or laminate it. In either case the print is isolated from the air and from airborne contaminants,

In my estimate neither laminating a canvas print nor framing it under glass are valid options. To me a canvas print needs to be mounted and framed like a painting, by stretching it over stretcher bars and framing it without glass. If you want to learn how to stretch and frame your canvas print this way read my "How to stretch your canvas Prints" article in PDF format. This article is now available on my "Briot's View Articles CD" together with a formatted version of this diary complete with table of contents for easy searching, and copies of all my other diaries and articles published so far (over 30 articles total). You can order this CD here for \$19.95 only. This price includes shipping anywhere in the world: <http://beautiful-landscape.com/Articles%20%26%20Publishing.html>

- Besides the increased contrast and the waterproof quality I do not see much of a difference with the regular Epson canvas. The weave is the same, and the canvas thickness is the same. Since the canvas has to be coated you can dismiss the waterproof aspect since coating the canvas will make it waterproof anyway. That leaves you with the higher contrast as sole benefit of using this canvas instead of the regular Epson canvas. On the other hand the glossy aspect makes me think I may prefer the regular Epson Canvas.

12/6/2004 - Premier Art Print Shield Spray Coating

This is the Spray recommended by Premier Art for the Water Resistant canvas. Why do you have to spray water-resistant canvas? Well, good question! After all, the idea behind using water-resistant canvas is to not have to coat it. But, Premier Art does recommend coating this canvas anyway.

This fact first motivated me to use only Epson Canvas and not Premier Art Water Resistant Canvas. Since I will have to coat both of them, I might as well use a canvas that does need coating in the first place and is therefore less expensive since it is not pre-coated. Plus, if I decide to not Spray the regular Epson Canvas I get a matte surface, which I very much like. If I coat it I get a glossier surface, which is nice too but has a sheen and a slight glare to it.

But, to make sure I made the right choice I conducted a test which proved extremely worthwhile: I took four canvas prints as follows, put them in the sink and ran them under running water. Here are the four prints:

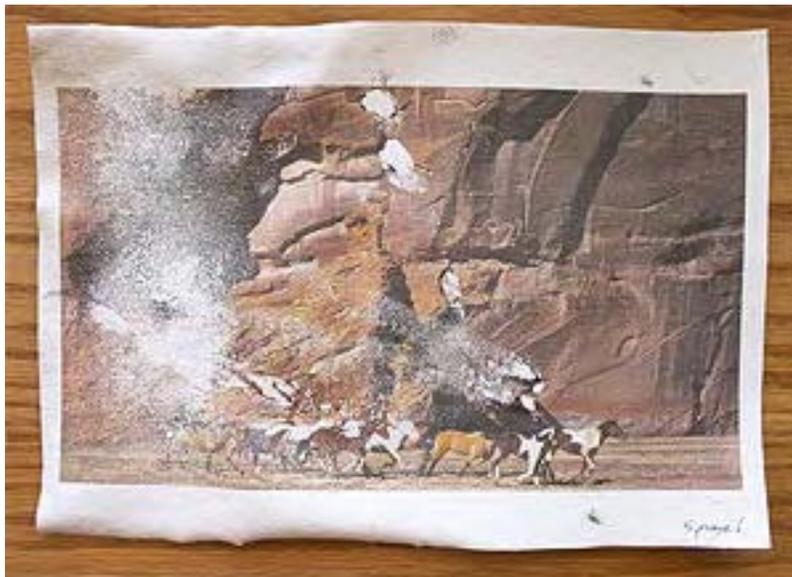
- Print #1 was made on regular Epson Canvas
- Print #2 was made on regular Epson Canvas coated with Premier Art Print Shield Spray
- Print #3 was made on Premier Art water resistant Canvas
- Print #4 was made on Premier Art water resistant Canvas coated with Premier Art Print Shield Spray

The results were as follows together with photographs of the prints after being washed:

Print #1 lost most of the ink on the canvas right after being placed under water. After rubbing it with my hands all that was left was an artistic looking smudge. Both the ink and the canvas coating ran off:



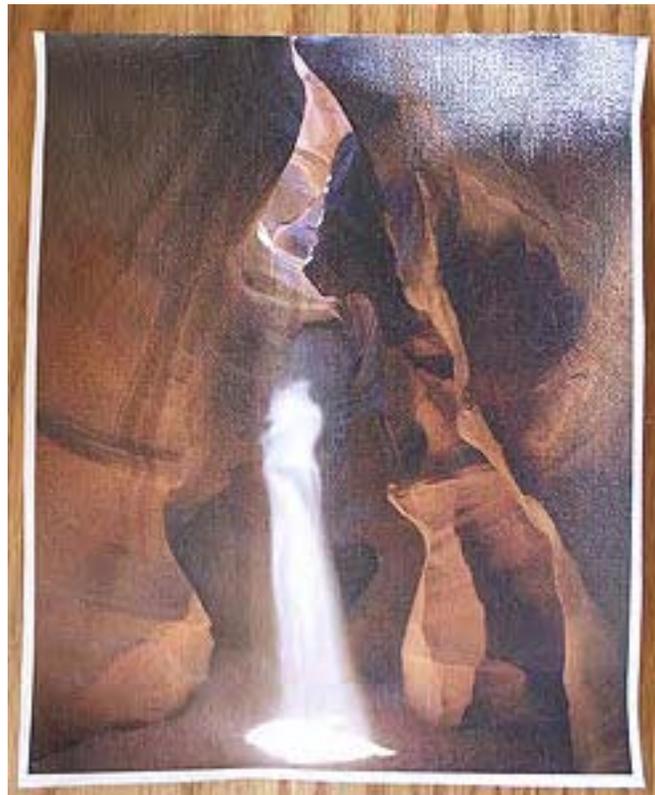
Print #2 held up pretty good under running water but started losing a lot of ink and some canvas coating after heavy rubbing:



Print #3 held up perfectly under running water without any ill consequences. After heavy rubbing it started loosing some ink:



Print #4 held up perfectly under running water. After VERY heavy rubbing some of the ink came off:



Detail of print #4:



Conclusions:

Being concerned with your canvas prints being waterproof – or being water resistant- is important. After all, it is likely that water -- or a cocktail :-) -- may be splashed onto the print at some time.

To make your canvas prints waterproof your best bet is to use the Premier Art water resistant Canvas and either spray it with Premier Art Print Shield Spray or not. As my tests showed me, the Premier Art Waterproof Canvas is waterproof right out of the box. Spraying it with the Premier Art Print Shield Spray does reinforce its waterproof quality but unless you rub the print heavily with water no damage will occur. Since the typical risk is water splashed on the print, and not heavy rubbing under running water, I believe coating Premier Art water resistant Canvas is optional.

If you are concerned with waterproofness I definitely recommend staying away from the regular Epson canvas altogether since my tests show that even coated it is only marginally waterproof and that uncoated it is a complete disaster in terms of waterproofness.

Do keep in mind that the above comments are only indicative of the waterproofness of each canvas and do not address the print quality, color and contrast of these two canvas materials. Color and contrast issues were covered separately in the previous diary entry.

12/7/2004 - Controlling the Amount of ink laid down through the Printer Driver > Print settings dialog box

Selecting a specific Media Type from the drop-down list in the Printer Driver>Print settings dialog box essentially changes the amount of ink laid down on the canvas.

On the Epson 2200 as you go down the list the ink amount goes up. This means that when you make a paper selection lower and lower down the list, you get more and more ink laid onto the paper. The lowest amount of ink laid down, for the 2200, is with “plain paper” selected and the highest amount of ink laid down is with “Watercolor Paper Radiant White“ selected.

On the 9600 the list is not organized the same way. The 9600 Media list may be reversed, i.e. it may go from the highest amount of ink (at the top of the list) to the lowest amount of ink (at the bottom of the list). I am not absolutely sure, but if it is then the Enhanced Matte Poster board which is the very last setting, at the bottom of the list, would get the highest amount of ink while the Double weight Matte Paper which is at the top of the list would get the lowest amount of ink. If you know for sure email me!

12/8/2004 - Service Manuals

Do you feel like learning more about how your printer operates? Do you want to read the manual that Epson Techs use to fix your printer? If yes, you can buy and download the service manual, and the parts list, for your 9600 from this web site:

<http://www.2manuals.com/index.php>

From there do a search for either Epson 7600 or 9600. You can also find the manual to many other printers, either Epson or other brands.

Two documents are available for the 9600:

- the Printer Service Utility User's Manual
- the Parts List

The Printer Service Utility User's Manual is very "thin" and duplicates information available from Epson, either in the printer manual that comes with the 9600 or in the firmware update package available from the Epson website (see prior entry on firmware update in this diary). The Printer Service Utility User's Manual does include software called the Epson Printer Service Utility. However, it will only run on a PC to which the printer is connected. It says in the manual that this program will only run on Windows 98. It did install on my Sony Vaio running Windows 2000. However, my 9600 is connected to my Mac G5 so I cannot use this program. So far I have not taken the time to disconnect the printer, reconnect it to my Sony Vaio, install the 9600 Windows driver and test the software.

The second document is the Parts List, which shows exploded diagrams of the printer parts with all the parts names and numbers listed separately. In my estimate this is more interesting than the service manual (and 1/3rd the cost), unless you want and can run the Printer Service Utility software.

Keep in mind that making sense of black and white exploded diagrams and parts list is not easy. Neither the "manual" nor the parts list explains how to take your printer apart or how to put it back together. Also keep in mind that it is a lot more difficult to put something back together than it is to take it apart... We've all had the experience of opening a watch, "fixing it" and then having parts leftover after we reassembled it... Those parts did come from inside the watch, and they must have a purpose. If you have had the experience of staring at those parts and wondering, "where do they go and what purpose do they serve?" you may want to think twice before dismantling your wide format printer...

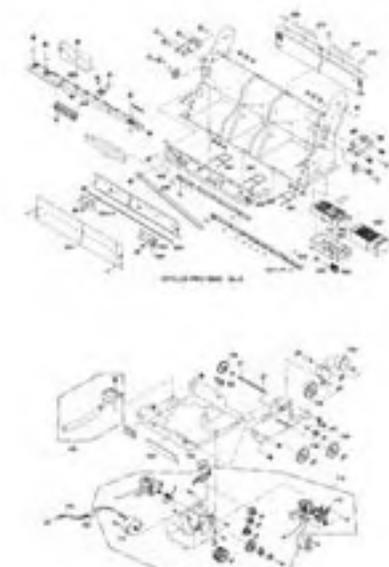
The cost for the 9600 manual is \$8.99. The parts list is \$2.99. They can be downloaded separately.

The service manual and the parts list are provided as PDF files, which, as any PDF file, can be opened on a Mac or PC.

Please note that we do not recommend you work on your printer yourself besides regular cleaning and maintenance (remember the watch story). If you decide to do so we will not accept responsibility for

any problems you may encounter. Repairs are best left to a certified Epson technician. Epson Technicians do charge a fair amount but they have factory training, extensive experience and their repairs are guaranteed by Epson. Fixing your printer yourself may save you money initially. But, if your repairs do not work you may end up spending more time and money than if you had called an Epson technician in the first place.

Here is a screen shot of two pages of the Epson 9600 Parts List



EPSON
STYLUS PRO 9600
Page No. 9

NB: Part Number rationalization - 10 digit part numbers in brackets are the old numbers for otherwise identical items

EPSON
STYLUS PRO 9600
Page No. 4

NB: Part Number rationalization - 10 digit part numbers in brackets are the old numbers for otherwise identical items

REF.	PART NO.	DESCRIPTION	QTY.	UNIT
01	01000	CONTRACTOR		
01	01001	COVER/OPERATOR		
01	01002	TRAY COVER/BLACK		
01	01003	TRAY COVER/CLAY		
01	01004	TRAY COVER/GRAY		
01	01005	TRAY COVER/BLACK/WHITE		
01	01006	TRAY COVER/CLAY/WHITE		
01	01007	TRAY COVER/GRAY/WHITE		
01	01008	TRAY COVER/WHITE		
01	01009	TRAY COVER/BLACK		
01	01010	TRAY COVER/CLAY		
01	01011	TRAY COVER/GRAY		
01	01012	TRAY COVER/WHITE		
01	01013	TRAY COVER/BLACK		
01	01014	TRAY COVER/CLAY		
01	01015	TRAY COVER/GRAY		
01	01016	TRAY COVER/WHITE		
01	01017	TRAY COVER/BLACK		
01	01018	TRAY COVER/CLAY		
01	01019	TRAY COVER/GRAY		
01	01020	TRAY COVER/WHITE		
01	01021	TRAY COVER/BLACK		
01	01022	TRAY COVER/CLAY		
01	01023	TRAY COVER/GRAY		
01	01024	TRAY COVER/WHITE		
01	01025	TRAY COVER/BLACK		
01	01026	TRAY COVER/CLAY		
01	01027	TRAY COVER/GRAY		
01	01028	TRAY COVER/WHITE		
01	01029	TRAY COVER/BLACK		
01	01030	TRAY COVER/CLAY		
01	01031	TRAY COVER/GRAY		
01	01032	TRAY COVER/WHITE		
01	01033	TRAY COVER/BLACK		
01	01034	TRAY COVER/CLAY		
01	01035	TRAY COVER/GRAY		
01	01036	TRAY COVER/WHITE		
01	01037	TRAY COVER/BLACK		
01	01038	TRAY COVER/CLAY		
01	01039	TRAY COVER/GRAY		
01	01040	TRAY COVER/WHITE		
01	01041	TRAY COVER/BLACK		
01	01042	TRAY COVER/CLAY		
01	01043	TRAY COVER/GRAY		
01	01044	TRAY COVER/WHITE		
01	01045	TRAY COVER/BLACK		
01	01046	TRAY COVER/CLAY		
01	01047	TRAY COVER/GRAY		
01	01048	TRAY COVER/WHITE		
01	01049	TRAY COVER/BLACK		
01	01050	TRAY COVER/CLAY		
01	01051	TRAY COVER/GRAY		
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01	01055	TRAY COVER/GRAY		
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01	01058	TRAY COVER/CLAY		
01	01059	TRAY COVER/GRAY		
01	01060	TRAY COVER/WHITE		
01	01061	TRAY COVER/BLACK		
01	01062	TRAY COVER/CLAY		
01	01063	TRAY COVER/GRAY		
01	01064	TRAY COVER/WHITE		
01	01065	TRAY COVER/BLACK		
01	01066	TRAY COVER/CLAY		
01	01067	TRAY COVER/GRAY		
01	01068	TRAY COVER/WHITE		
01	01069	TRAY COVER/BLACK		
01	01070	TRAY COVER/CLAY		
01	01071	TRAY COVER/GRAY		
01	01072	TRAY COVER/WHITE		
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01	01074	TRAY COVER/CLAY		
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01	01076	TRAY COVER/WHITE		
01	01077	TRAY COVER/BLACK		
01	01078	TRAY COVER/CLAY		
01	01079	TRAY COVER/GRAY		
01	01080	TRAY COVER/WHITE		
01	01081	TRAY COVER/BLACK		
01	01082	TRAY COVER/CLAY		
01	01083	TRAY COVER/GRAY		
01	01084	TRAY COVER/WHITE		
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01	01089	TRAY COVER/BLACK		
01	01090	TRAY COVER/CLAY		
01	01091	TRAY COVER/GRAY		
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01	01094	TRAY COVER/CLAY		
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01	01097	TRAY COVER/BLACK		
01	01098	TRAY COVER/CLAY		
01	01099	TRAY COVER/GRAY		
01	01100	TRAY COVER/WHITE		
01	01101	TRAY COVER/BLACK		
01	01102	TRAY COVER/CLAY		
01	01103	TRAY COVER/GRAY		
01	01104	TRAY COVER/WHITE		
01	01105	TRAY COVER/BLACK		
01	01106	TRAY COVER/CLAY		
01	01107	TRAY COVER/GRAY		
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01	01196	TRAY COVER/WHITE		
01	01197	TRAY COVER/BLACK		
01	01198	TRAY COVER/CLAY		
01	01199	TRAY COVER/GRAY		
01	01200	TRAY COVER/WHITE		

Here is a screen shot of the table of contents of the Epson Service Manual:

EPSON Printer Service Utility User's Manual

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Uninstalling the EPSON Printer Service Utility	13

12/9/04 - Loading large sheets or custom size sheets

You need to create a new sheet size in the page

Setup menu and type the exact dimensions of the sheet you are using.

Make sure that the width you enter matches the actual width of the paper. That is because the print head will actually measure the sheet of paper when it is loaded and if the sheet is smaller than the size you enter the “paper not loaded” message will come up.

Also keep in mind that sheets smaller than 8.5” in width cannot be loaded in the 9600. That’s because the minimum width the printer will accept is 8.5”. I have tried several times but I have not been able to load a sheet less than 8.5” wide. If you have, then let me know. I don’t mind if you prove me wrong because my goal is to provide accurate information.

12-10-2004 - Changing the blade on the Manual Cutter

I recently had to change the blade of the manual cutter. The blade wasn’t dull but it was leaving black particles on the paper each time I used it. It took me some time to find out where these black particles were coming from. Under close inspection it turned out that the cutting blades (there are 2, rolling one against the other to cut the paper) have a black coating on them and that this coating was starting to come off. This was due to the blades wearing out and starting to rub upon each other.

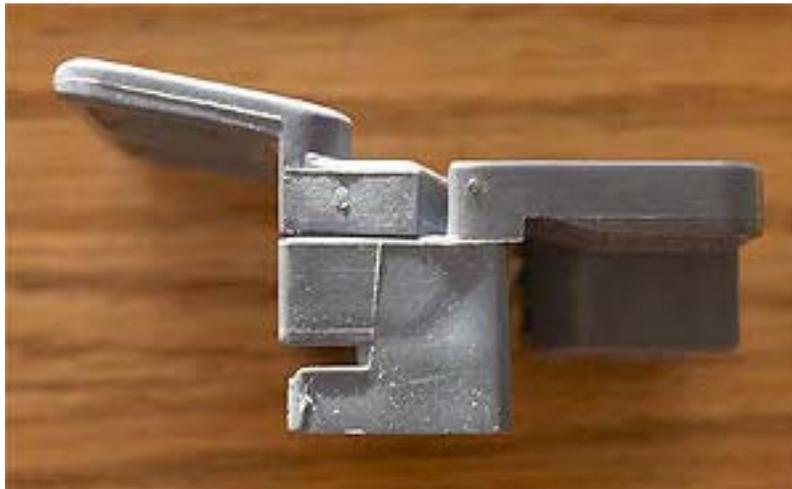
The cost of a replacement hand-cutter blade is about \$100. There is no way to sharpen the blades so you have to replace the whole cutter assembly. Doing so is very easy. Simply remove the screw located on the left side of the cutter-holding bar, slide the old blade assembly out, and then slide the new blade assembly in. There you are. It took 2 years in my case for the blades to wear out.

Please note that this is not the built in cutting blade. This is the blade for the optional manual cutting attachment. The built in cutting blade is located next to the print head and replacing it is an entirely different process. I personally do not use the built in cutter because doing so wastes a lot of paper.

Incidentally, the built-in cutting blade holder also acts as print head locking mechanism. If you need to move the print head simply open the printer door, push on the built in blade cutting assembly and the head will be freed from its resting area. The built in cutter is easy to locate: it is the only spring-mounted device near the print head. It is located in front of the print head. Just push on it to release the head.

Here are photographs of the paper cutter replacement blade and box:





12/11/04 - Saving paper by using Custom Page sizes & Auto Cut

Jack Fleisher emailed me this tip in response to the previous entry in which I wrote that “I personally do not use the built in cutter because doing so wastes a lot of paper.” Jack offers a simple workaround for this problem:

All I do is assign a custom sheet size in under the “paper” tab of the final printer dialog that is 2” taller than the print and the same size as the width of whatever roll I have loaded. With the 9600 you can set these in .01” increments or some equally small metric measurement, and I have to assume it is the same with the 7600. When I print and use auto-cut, the border is 1” on each side, or 2” total -- just what I set it to in the paper dialog.

I know if you let the printer calculate this automatically, you will get like a 6” and an 8” border top and bottom which is ridiculous. But there is no need to manually cut if you set a custom paper size first...

12/12/2004 - See you in the new Alain's Epson 4000 Diary!

Well, as I said a couple of entries ago, this diary is now coming to an end. Unless something significant comes along in regards to the 9600/7600, I will now focus on my new diary (as of December 2004): Alain's Epson 4000 Diary.

This has been a very exciting and educational journey and I want to thank all of you for making it a success. As of December 2004 this diary received just about 100,000 hits, quite a record for a printer that is far from being the best selling Epson printer. While I don't have exact numbers I do know that Epson sells relatively few 9600 when compared to smaller Ultrachrome printers such as the 2200, the 4000 or the R800.

Before I close I want to mention that this diary is now available in PDF format, complete with a table of content and in chronological order, starting with the first entry and proceeding to the last one. The PDF version of the diary is also re-organized for easier reading and some new material was added.

The PDF version is available on my just-released *Briot's View Articles CD*. This CD features not only my 9600 diary but also all my other diaries and articles available on outbackphoto.com and on Luminous-landscape.com. The CD also contains several unpublished articles such as my How to Stretch Canvas Prints article and other. Each article and diary is in PDF format making them very easy to print and read. Finally, the CD also features all the presentations I gave at the Fine Art Digital Summit in 2003 and 2004.

The CD is available for \$19.95, including shipping anywhere in the world. You can order it by clicking here:

<http://beautiful-landscape.com/Articles%20%26%20Publishing.html>

Again, a big thank you to all of you who have helped make this diary a success. See you in the new Epson 4000 diary! Please stay in touch and do not hesitate to email your questions or comments to: alain@beautiful-landscape.com

Alain Briot
Sonoran Desert, Arizona
December 15th, 2004