A Tale of Two Printers

Around eight years ago, I wanted to start making my own prints and after some research, I purchased an Epson Stylus Pro 3880 printer. All things proceeded as one might hope until problems started to appear about a month ago when I was printing for upcoming IACC competitions. These problems took the form of large black lines about 1/4-inch-wide and about one inch long, intermittently and randomly appearing first on the paper margins, and later in the body of the print. No amount of checking and cleaning (and YouTube video watching) made any difference, and getting the printer serviced was both impractical (ship to Calgary) and expensive ($600 plus). The Pro 3800 model is also discontinued.

After much analysis and agonizing, I decided to purchase a new printer and decided on a Canon PIXMA Pro 100 printer. I thought I would share the process of enlightenment I experienced with club members.

My Requirements:

1. I want to print 12X16, so I produce a 16 X20 with two-inch matte

2. I needed the printer right away

3. The Stylus Pro 3880 replacement, a P800 is currently $1459 at Vistek

4. My 3880 still prints fine with matte ink for black and white on matte paper

Canon PIXMA Pro-100 prices:

Staples $499.99, Vistek $369 – but no stock in Edmonton, McBain 399.95

Amazon.ca $319.98 + FREE 2-day shipping ... Oh, I think I can decide

Pro 100 posing with my iPhone 6

Big and heavy, weighs 43 pounds

Supports multiple paper sizes, maximum print size A3+ (13 X17).

Can't print on canvas

No roll feed option

Paper: Because the printer uses dye-based ink, one should expect good results on glossy, semi-gloss and luster paper, not so much on mat papers. I usually print on luster, and I usually use the printer brand's papers (and sometimes Red River) so I ordered some 13 X 17 (A3+) paper, which arrived at the same time.   The Pro-100 supports custom paper lengths, up to about 25 inches – good for panos.

Ink considerations:

I don't print a lot and often have often erratic usage and the pigment-based ink cartridges on the 3800 are supposed to be prone to pigment particles settling, drying out and nozzle clogging if the printer is not used regularly – but I will admit none of this has happened to me. Apparently, dye-based inks might produce a little more vibrance in the greens and yellows.

I looked at ink costs:

3880:   Epson T580100 PhotoBlack 80 ml   79.00

P-100   Canon CLI-8BK Black 14ml   21.99 (CURRENLY ON SALE FOR 19.79)

Prices for ML

Epson   .98

Canon   1.57

The conclusion: The ink costs will be about 50% greater over a long time, less in the short run. On the other hand, the printer is less than 1/3 of the price of replacing my 3880...

The printer is shipped with what appear to be a set of full size (not starter) ink cartridges.

Setting up the printer:

1. Unpacking: The printer comes with the print head and the ink cartridges NOT installed. Remove the printer from the box, don't drop the print head, and locate the installation instructions. Do not run the CD – follow the instructions. Do not connect the printer to your computer yet.

2. Remove all the packing and orange tape – including the manual paper feed area at the back of the printer. Plug it in and turn on the power button, wait until the white power light stops flashing.

3. Leaving the power on, unwrap and install the print head. Look carefully at the instructions, don't try to push it in if it won't fit – you're likely trying to put it in backwards.

4. Unwrap and remove the orange plastic cover from each print cartridge and install it in the proper slot. Not the orange cover rotates off, by pushing (rotating) the lever – it's up to you to figure out which direction.

5. Run the included setup CD. Note that the setup will allow you to select what software to install. If you already use a software package for image processing you only need to install the drivers. **Note that one driver is always selected by default – but you also need to install the XPS driver, you will see it listed at the bottom of the software selection list.**

6. Connecting to the computer: Although WIFI is supported, I always connect printers with a USB cable; there is a very short cable supplied with the printer, so I needed to buy an extension.

During the setup you will need to insert 2 sheets of 8 ½ X 11 plain paper. MAKE SURE you close the door which closes down in front of the paper. If not, you will find out that the software does not handle errors in a very intuitive manner.

Note also the main paper feed is called the "Rear Bin" and the one actually in the rear is called the "Manual feed".
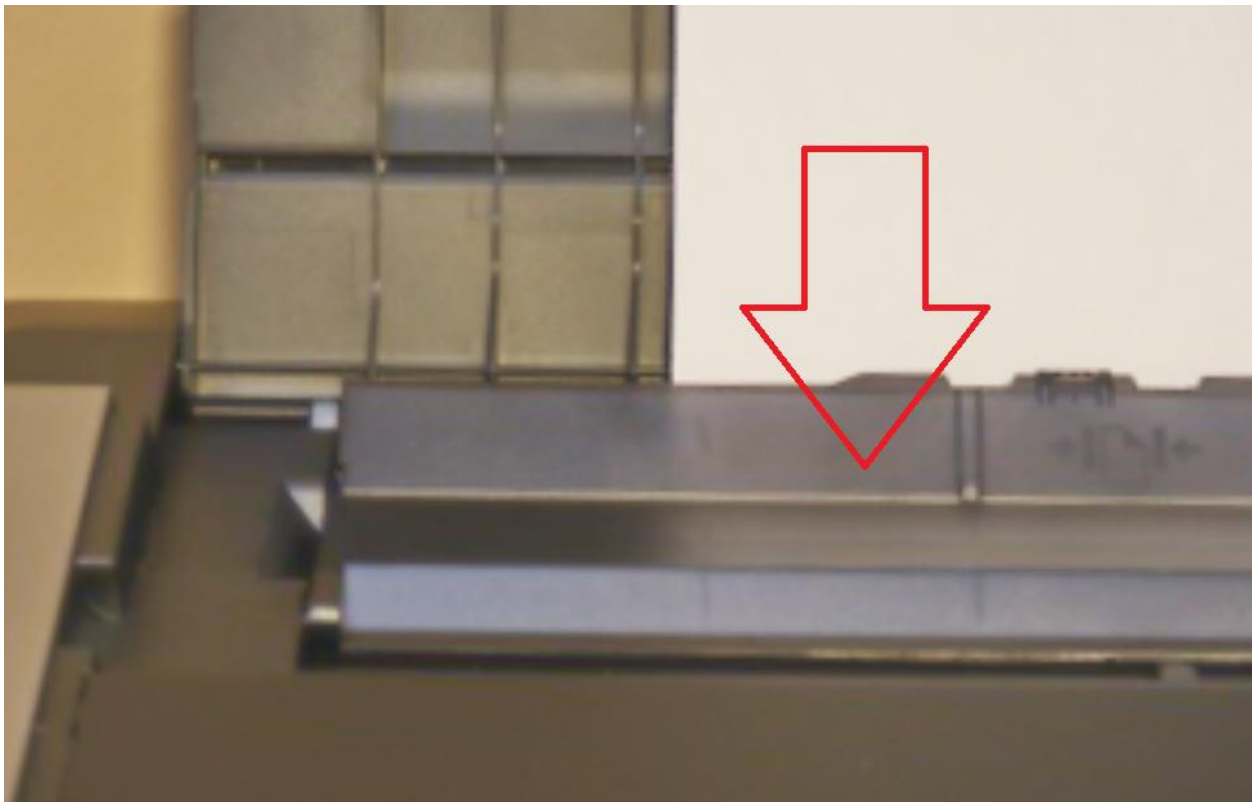

Printer Profiles

Note that the installation should install the profile for current canon paper types. If you are using some other brand of paper, you will need to locate, download and install profiles for the PRO-100 from the paper manufacturer.

Getting Ready to print

1.	Profile your monitor, paying special attention to brightness settings if part of the process. I used my Spyder 5 Pro for monitor calibration.

2.	Download a printer test image, such as below
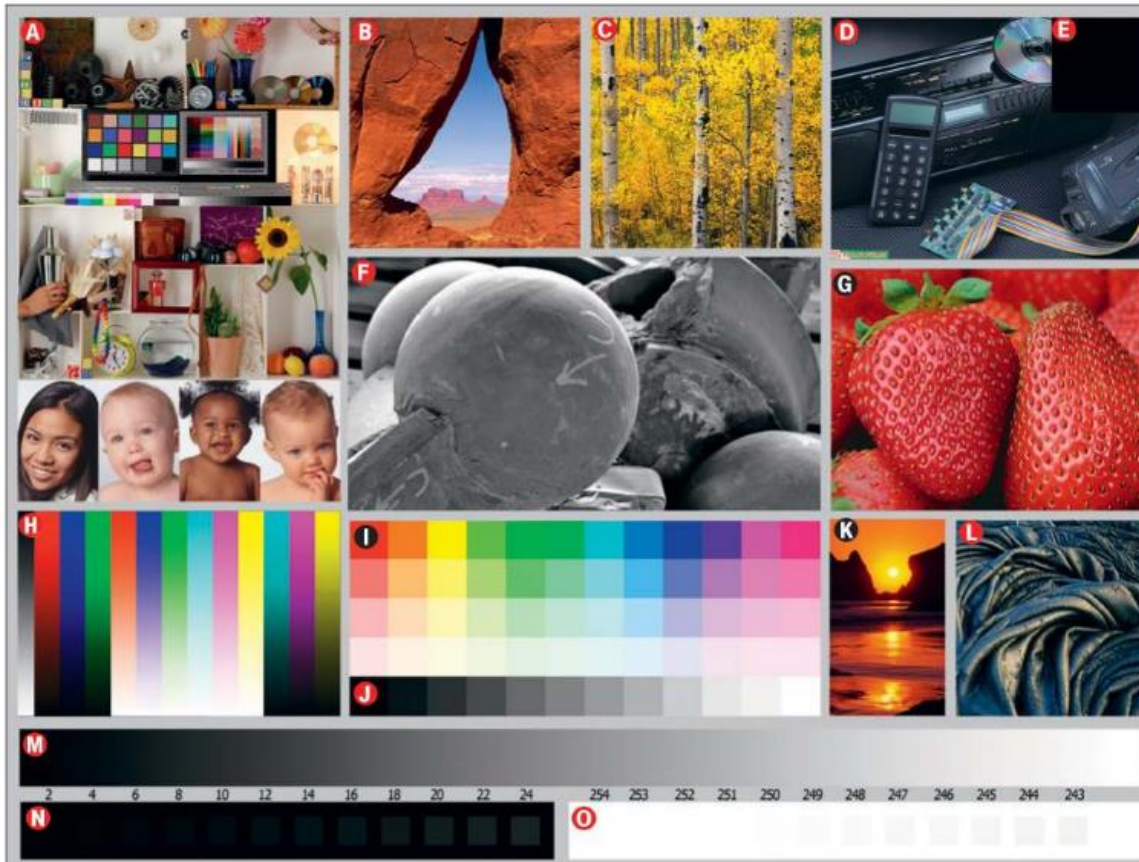
3. Go online and update your drivers – my printer shipped with v2.10 of the XPS Driver, the current version is 5.86

4. Load the image into your editing software, call your print dialog. Make sure you select the XPS driver. This is the 16-bit version, and it should provide better results than the default 8-bit version. Note that you have to select the correct profile and remember to turn off printer color management. This is done in the "Main" tab in the driver, select color/ Intensity "Manual", press the "Set" button to display the "Manual Color Adjustment" Dialog. Click the "matching" tab, select "none", press OK. Easy huh?

5. Load your paper and press the Print button(s). Note that Windows has problems with the setting of the focus to a newly displayed dialog box, so you may have to press the "Print" button twice before anything happens.

First impressions

Wow! I printed on Canon Luster Pro Paper, using the correct driver and just wow! The colors on the image above were closer than I imagined possible, and very vibrant. The skin tones (A) were right on, there was no banding in the grey and color (N and H)ramps, and the strawberries (G)were accurately red. Even the colors on the CD (E) were reproduced accurately.

Why does my print NOT match what's on my monitor after profiling and all that stuff?

A couple of points here:

1. It will never match exactly for all sorts of reasons, the main being that the monitor is back-lit and a preprint is viewed by reflecting light.

2. Maybe you'll feel better if you realize the image will not look exactly the same even from one calibrated monitor to another on the same computer.

3. That being said, one possible cause is that the monitor is set too bright during your image processing.

Can't I just crank up the exposure a stop or so in my image editor to compensate?

You will find that this won't work as well as you were hoping as you will simply blow out your highlights. How do you imagine the printer driver handles blown highlights? If you guessed that it just prints white (equals the color of the paper), you're right!

One thing you might experiment with:

Make a stamp of your final image in Photoshop. Create a luminosity mask which excludes the highlights and the very darkest areas of the image (Sort of "extended mid-tones"). Set the blend mode to screen, opacity to about 80%. Of course, this whole thing depends on how bright your monitor is …

Any suggested resources?

Fine Art Printing for Photographers, Rocky Nook, Uwe Steinmueller and Juergen Gulbins