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Wednesday, 10 August 2011

Introduction to Digital Printing

By **Ctein**

This is the first of several aperiodic [*i.e., discontinuous —Ed.*] columns on getting started in digital printing. Mike asked me if I would do some articles geared toward people who are just getting into it, and I agreed that was a good idea, so here we go. The intended audience is folks who haven't done any serious digital printing but would like to. It doesn't matter if you have wet darkroom experience or not. You're starting anew, regardless. Folks with considerable darkroom experience will have a leg up artistically and aesthetically, but, technique-wise, they're in the same boat as everyone else. It's a brand new learning curve.

In truth, one of the ways experienced darkroom printers get themselves in trouble is not realizing that. When they dive into digital printing expecting it to be the same, they frequently become frustrated or disillusioned with the mediocre quality of their prints. Don't let that happen to you. Accept that no matter how proficient you are in the darkroom, it will take you months to years to become really good at digital printing.

Your very first task is going to be choosing a printer. Pretty much anything made by the four major players—Epson, HP, Canon, or Kodak—will produce decent-looking color prints, as good or better as you could have made in the darkroom. Doesn't matter whether they're four-ink, six-ink, eight-ink, or ten ink; they can all produce very good results. It's all in how you use them. Most printers made by these four companies will also offer decent print permanence (to check for certain, go to the Wilhelm Research site) with some cautions that I will get to in the next column; it doesn't matter whether they use pigment-based or dye-based inks.

I'm not saying there aren't differences. I am saying that you have to be a sophisticated printer for the differences to matter. Otherwise it's like being a beginning photographer and fretting about whether you should be settling on Nikon, Canon, or Leica lenses.

If you're one of the small minority whose primary interest is black-and-white printing, you'll need to be pickier in your choices. You'll want a printer with at least two levels of black ink (normal and light) and three is even better. Your basic four-color printer or, really, any printer with only one black/gray color of ink in it is not likely to make you black and white prints you'll be happy with.

If you don't know how to research printers really carefully, stay away from the second tier companies such as Brother and Lexmark. Some of their printers are great. Some are garbage. Some produce really permanent prints. Some produce prints as ephemeral as tissue paper.

Something else to stay away from: the so-called "aftermarket" inks and papers: the stuff you see advertised that costs a fraction of what the printer manufacturers' inks and papers cost. Many of them will produce significantly poorer-looking prints. And just about every single one of them, in any combination, will produce prints that are 10 to 100 times less permanent than the manufacturers' goods.

Yes, the printer manufacturers are going to charge you an arm and a leg for print supplies. You're just going to have to learn to live with that.

There are good third-party inks and papers out there. They aren't cheap, either. Especially the papers.

My advice? Stick with the manufacturers inks, beyond question. Try the manufacturers' highest-grade photographic papers first. If you find one of them that you like pretty well, stick with it. Only look into third-party premium-quality papers if you can't find a manufacturer's paper you like.

Once you become a really good printer, then you can become a fine connoisseur of inks and papers. When you're beginning, it's like fretting about which fine wine goes best with a Happy Meal.

Does that mean I think you should just pin all the printer names on a corkboard and throw darts at them? No, but to decide what printer you should buy, you'll need to take other factors into account. That'll be the topic of my next column in this subject.

That column won't appear for several weeks, however. Next week is the occasion of my 200th TOP Column (canyabelieveit?) and I have something special planned for that one. And the week following, my next Grand TOP Print Sale begins! Stay tuned—Mike will give you the details.

Ctein

If it's Wednesday, it must be Ctein—back on schedule. Long known as an expert in fine printing, Ctein was one of the last masters of the esoteric and difficult dye transfer process, and now makes part of his living as a custom printer making inkjet prints. —MJ

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Posted on Wednesday, 10 August 2011 at 11:51 AM in Ctein, Printers and Printing | Permalink

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Comments

I haven't read the entire post yet :-) But I am so glad you are starting this series. Really looking forward to learning how to get quality prints.

Posted by: Jallu | Wednesday, 10 August 2011 at 11:58 AM

Thanks Ctein for this - I will be following the series, aperiodically.

But I can tell you which wine goes best with a Happy Meal. Buy the very cheapest rough red wine that you can find, preferably in a tetrapak carton (once in Sardinia I found a local shop that dispensed wine from a pump into your own container. That was epic stuff). Open it 24 hours beforehand, so that it oxidises. Maybe the odd fly will fall into it to add some protein. Hopefully the increased "roughness" will mask the taste of the Happy Meal.

Posted by: James | Wednesday, 10 August 2011 at 12:20 PM

Ctein, I've been waiting for someone of your stature in the printing world to clear up these kinds of issues for a long time. This is going to be a very useful series of articles. Props to Mike for the suggestion.

Posted by: Bahi | Wednesday, 10 August 2011 at 12:22 PM

Surely aperiodic means 'at irregular intervals'. All the posts are 'discontinuous' with respect to each other. Sorry! but Mike started it.

Posted by: Richard Parkin | Wednesday, 10 August 2011 at 12:48 PM

Jallu, you can "get" quality prints quite easily -- pay somebody really good, like Ctein, to do your printing. :-)

Learning to *make* quality prints yourself will be more work. Quite possibly more satisfying, and depending on how many prints you need made, might be cheaper too; especially if you can't pass on the cost of professional printing to your clients.

Posted by: David Dyer-Bennet | Wednesday, 10 August 2011 at 01:01 PM

Is there a printer equivalent to pixel peeping?
I admit to being guilty on more than one occasion...

Posted by: Alan | Wednesday, 10 August 2011 at 01:31 PM

A wealth of information in this article for a beginner like myself. Thanks!

Posted by: Mark Morris | Wednesday, 10 August 2011 at 01:31 PM

Thanks for this series. This is dead on with what I'm looking for (multiple blacks? I had no idea.).

The tough part will be waiting for the next article.

Posted by: Eric W | Wednesday, 10 August 2011 at 02:31 PM

Looking forward to it. I use my admittedly ink-short 2880 fairly regularly, and so far have loved the results. Way better than a 1080 pixel web image. The difference between a print from it (on good paper) and a print ordered from Smugmug is significant. One thing I gave up on, though, is printing straight from Lightroom since they always come out dark. No idea why. Qimage was recommended, and I've had great results ever since.

Posted by: John Krumm | Wednesday, 10 August 2011 at 02:33 PM

I absolutely disagree with James' advice above regarding wine & Happy Meal. You actually should get the best wine you can afford and throw away the Happy Meal.

Apart from that, looking forward to reading the next instalment in this discontinuous/aperiodic/irregular series.

Posted by: Cyril | Wednesday, 10 August 2011 at 02:35 PM

Thanks Ctein,
looking forward to this series as I much prefer taking photos to doing the computer/printing side of it.
I did a bit of B&W printing in my teens with a family friend wedding photographer, but they were never contrasty enough for my liking, and never did colour.
I've done more digital printing for printerless friends than I have for myself, so your tips will be very interesting.

all the best phil

Posted by: phil | Wednesday, 10 August 2011 at 02:47 PM

Many HP printers used to have the option of fitting a "grey" cartridge which made B&W easy but that option appears with fewer HP models as time passes.
If your B&W printing is only occasional, rather than predominant, then using Canon paper with a Canon printer may be "near enough" - use someone else's paper though and you'll be in for a nasty green or purple tinged shock!

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Posted by: Robin P | Wednesday, 10 August 2011 at 03:00 PM

"...any printer with only one black/gray color of ink in it is not likely to make you black and white prints you'll be happy with."

I would argue that point. The Epson 2200,4000, 7600, etc. were producing wonderful black and white prints in their day, but only if using a third-party RIP such as either the inexpensive QuadToneRIP or the very pricey Imageprint. Back then, as today, the OEM drivers, at least for for b/w printing, were substandard. I know a lot of folks use Epson's b/w module, but as it's not color-managed, it's hit and miss.

The $50 QuadToneRIP, while only working on select Epson printers, is the best investment any beginning b/w printer can make. Heck, even a lot of pro's are using it for exhibition work.

I hope that, in the upcoming series, RIP's get a mention as they are so essential.

Posted by: Chuck Kimmerle | Wednesday, 10 August 2011 at 04:09 PM

Ctein - you say "pretty much anything made by the four major players — Epson, HP, Canon, or Kodak — will produce decent-looking color prints."

Can I just check - I presume this only applies to their inkjet printers? I have a colour laserjet from HP (2600n) for office purposes - is there any point trying to get decent photo prints out of that? Thanks.

Posted by: Jim | Wednesday, 10 August 2011 at 04:38 PM

Does the past tense in 'was one of the last masters' mean that the supplies for dye transfer finally have run out?

Posted by: Mrten | Wednesday, 10 August 2011 at 04:42 PM

The fact you have undertaken an explanation of this nebulous and needlessly complicated subject makes me believe in unicorns and rainbows. This is obviously a subject that could span many books (and has), so I raise my glass and toast the forthcoming conflated elucidation! About time someone with real chops gave me the lay of the contemporary "state of the art".

I wasted thousands needlessly, because in 2003, the amount of knowledge was shared by only a chosen few. You could read all the books and it wouldn't have mattered a damn, because the target was changing so rapidly, and Mac OS was in a state of flux.

There were the days I loaded expensive cut sheet and then turned to mecca in hopes of divine providence.

Posted by: yunfat | Wednesday, 10 August 2011 at 05:13 PM

I'm really excited about this series. Thanks for doing it. I'd love to see more beginner guides here.

Posted by: Bryan | Wednesday, 10 August 2011 at 05:27 PM

This series will be most appreciated.

When it's done, if you'll revise the text to make it specific to Lightroom...supplemented with screenshots to illustrate suggested techniques...this could readily become a marketable ebook.

I'll buy it.

Posted by: Michael Matthews | Wednesday, 10 August 2011 at 05:42 PM

Mrten,
Perhaps Ctein might want to supply his own response, but the answer as far as I know is "very nearly"...

We (Ctein and TOP) hope to do one last "blowout" dye transfer sale in a year or two in which he will offer a select few full-sized (16x20") prints. He'll make as many as he can as long as the materials hold out. The idea will be to use up the last of his stock of dye transfer materials, and at the close of the sale he will officially end his distinguished dye transfer printing career. (Can't recall whether he plans to close his darkroom as well.)

I'm sure Ctein will clarify if that's not correct....

Mike

Posted by: Mike Johnston | Wednesday, 10 August 2011 at 06:25 PM

Wow, perfect timing! I was just thinking earlier this week that I'd like to get into printing myself. Really looking forward to these articles.

Who knows, maybe they can form the basis for a future book?

Posted by: Kostas | Wednesday, 10 August 2011 at 06:45 PM

Thank you Ctein! I am just now looking at new printers and this background will be helpful. Please if possible comment on the dedicated black and white ink/paper sets if you can. I am considering a printer to just do 8 x 10 black and whites.

Posted by: Mark OShaughnessy | Wednesday, 10 August 2011 at 07:20 PM

Dear Jim,

Yes, inkjet printers only.

~~~~~~~

Dear Marten,
~~~~~~~

Mike mis-wrote the tense. It should have said, "Ctein is one of the last masters..." I haven't stopped doing dye transfer printing yet, either for myself or for clients.

But, otherwise, Mike has laid out the future. Allowing for the best laid plans, etc. etc. sometime in 2013 we'll offer up perhaps 200 prints for sale-- 50 or 40 16x20 prints each of 4 or 5 photographs selected from my dye transfer portfolio. (No, these will not be $100 prints, but the price will likely be a third of my regular price, so they'll be quite a bargain.)

That will use up the majority of my dye transfer paper. What paper remains after that I'll use to make up a few more prints of my favorite photographs for my inventory and then I will indeed close down the darkroom.

~~~~~~~

Dear Michael,

I have made truly insignificant use of Lightroom. Mikkel Aaland has written extensively on it. See "By Mikkel Aaland, From O'Reilly"

pax / Ctein

Posted by: ctein | Wednesday, 10 August 2011 at 07:44 PM

@ Cyril,

oh, I agree. But when with younger children, throwing away the Happy Meal is *infra dig* and results in you being seen as a "less cool" father. When with adults, absolutely. I'm not sure I know any adults with whom I would wish to share a Happy Meal. Possibly Satan, but only if he had mine.

Posted by: James | Wednesday, 10 August 2011 at 08:22 PM

...addendum to my last. I once had the pleasure of spending a business week in Santa Barbara (Goleta end). My company was cheap, so no hire car and therefore I had the two local delights of iHop and an In and Out franchise for supper each evening. In and Out was to me as a visiting Brit about 10 times better than any other burger joint I had hitherto had knowledge of, but it was still a burger joint. One night of the six I spent there we had a company-funded dinner at a restaurant called Julienne in Santa Barbara, at which I seem to recall eating mostly vegetables to try to regain some form of balance.

Posted by: James | Wednesday, 10 August 2011 at 08:37 PM

RIP = "raster image processor". Whatever that means.

Posted by: Dave Kee | Wednesday, 10 August 2011 at 08:53 PM

Dear Chuck and Mark,

Folks who are dedicated to B&W will find this short series of columns largely disappointing, because they are a minisculely small fraction of the audience and this is a broadly-directed and fundamentally superficial overview. Do not underestimate the import of the word "Introductory" in the title.

I have no experience with the dedicated third-party ink and paper sets. I also don't think they fall into the "introductory" category.

As for RIPs, some folks swear by them, but I've done fine without. And, again, not introductory material in my judgement.

pax / Ctein

Posted by: ctein | Wednesday, 10 August 2011 at 10:34 PM

Mike,

This is very picky .... but:

I have just read the first line of the article and I already have something to say, not to Ctein but to the Editor, I quote:

"This is the first of several aperiodic [i.e., discontinuous —Ed.] columns ..."

Well, turns out that any column that does not appear all the time is discontinuous. We could say for example that Ctein's weekly column is discontinuously published, but *it is periodic*. That is to say it appears every Wednesday, well, mostly, but let's be reasonable here, so it is periodic.

A periodical is a magazine or newspaper published at regular intervals. In fact mathematically, unless you are performing an action *all the time*, we could say that the action is performed "discontinuously" (well, it is more complicated than that, but no need to get that picky).

Aperiodic means then the series will appear not on a regular fashion, or *without a period*, not as a periodical, like a weekly column, magazine or daily newspaper.

Sorry but the mathematician in me just could not stay quiet.

Best (from an aperiodic commenter in your blog).

Posted by: Alberto | Wednesday, 10 August 2011 at 10:56 PM

HP or Kodak? Decent....yes just like that two buck chuck goes decent with a two buck Happy Meal.

Canon makes one...count 'em one...good near great near pro (DX shooter) & pro b&w printer.
~~~~~~~

But Epson.....my dear fellow is that a matte black cartridge in your pocket or are you just Happy to see me.

Cheers & hope your serious series concludes with a Happy Ending.

neely fallon stumptown, or

Posted by: neely fallon | Wednesday, 10 August 2011 at 11:21 PM

"(well, it is more complicated than that, but no need to get that picky)"

Alberto,
Too late.

Mike

Posted by: Mike Johnston | Wednesday, 10 August 2011 at 11:30 PM

Ah, one tip.....don't be cheap on paper since what you want there is realiable quality and STICK WITH IT. A fact that any analog printer knew (I used Agfa 318 and 118 as memory serves and in two gradations (hard and soft) but it still aplies. Same as for inks, buy ink from Inkrepublic or from any printer manufacturer as you please, but STICK WITH IT. Use the same printer untill it fals apart physically, just STICK WITH IT. I'm a scientist and as a scientist I'm treating my print setup as a scientific experiment with the FILE being the only variable to the proces, thank you. You can use all kind of fancy color profiles as you which and please (it will be helpfull of course), but nothing beats the simple rule of limiting your variables (and knowing them inside out) in the first place.

And for Ctein, yeps he even knew an esotheric German dye transfer production outfit (damned that guy know everything :-)) but having said that, you can always ask a analog printing guy to pre- or postexpose a piece of inkjet paper.....:-).

Greetings, Ed

Posted by: Ed | Thursday, 11 August 2011 at 06:55 AM

I'm very keen on reading more of these columns, BUT... please use at least one column that brings in the horse as well as the cart: monitor and printer calibration. Ugh. I'm a reasonably literate guy technology-wise, but have yet to find a clear, simple tutorial on how to achieve true WYSIWYG between monitor and printer. This would include recommendations for good calibration software/hardware, and a step-by-step tutorial on how to proceed.

Even with the niftiest printer, beginners--and everyone else-- are going to face real frustrations when their brand new, Ctein-influenced printer spits out something quite different than what they saw on the screen.

Posted by: Terence | Thursday, 11 August 2011 at 12:46 PM

Man, everyone's a copy-editor.

I am sooooo glad it was Mike who stuck in that discontinuous quip and not me!

pax / Ctein

Posted by: ctein | Thursday, 11 August 2011 at 01:11 PM

Dear Neely,

No, that is simply wrong.

~~~~~~~~

Dear Terence,

"...true WYSIWYG between monitor and printer.." is not possible.

Again, this series is INTRODUCTORY (and, no, there will be no "Advanced" series published here at a later time). It is intended as broad and basic advice to people who are just getting started. Even if I decide to discuss monitor calibration, there will be no step-by-step tutorials on that nor on any subject. Sorry!

pax / Ctein

Posted by: ctein | Thursday, 11 August 2011 at 01:26 PM

"...a clear, simple tutorial on how to achieve true WYSIWYG between monitor and printer."

I agree with Ctein that it's not possible, and it's not because it's complicated or because of software or monitor short-comings. It's not possible because the monitor emits light, and paper reflects light. They are inherently going to look different at times (i.e. you'll never get perfect WYSIWYG).

For instance, let's say you produce a print that matches your monitor as perfectly as possible. When you then follow the exact same flow on the same hardware, but use a very different photo, it may not match quite as well.

So good tools and calibration and work flow will center you so that on average things are as good as they can be - as close to WYSIWYG as possible for the largest variety of images. But there's too much difference between the mediums themselves for things to ever be perfect across the board.

Posted by: David Bostedo | Thursday, 11 August 2011 at 04:12 PM
~~~~~~~~

Though being a complete beginner and happy about this new column, I am indeed interested in more specifics on B&W printing and on monitor calibration. If this column won't include topics like these, could you give us some hints on where to find more information about these issues?

Posted by: Mara | Thursday, 11 August 2011 at 09:53 PM

"No, that is simply wrong." Sigh....okay yes at the base entry level of say $70 bucks they are all pretty much the same. The rest we'll save for a day when I have the energy to do mortal, textual combat with you (I being the mere mortal).

Well.. back to drinking my two buck chuck in peace.

Cheers.

Posted by: neely fallon | Thursday, 11 August 2011 at 11:02 PM

Mara - I recommend taking a look at The Luminous Landscape's "From Camera to Print" video series. I found it very useful, but there's quite a bit more in there than just printing. It's the entire digital workflow including raw file processing.

Posted by: David Bostedo | Friday, 12 August 2011 at 07:40 AM

Thank you, David - this looks really helpful!

Posted by: Mara | Friday, 12 August 2011 at 09:32 PM

, , , ,

Posted by: schtbejggw | Saturday, 13 August 2011 at 04:40 PM

Dear schtbejggw,

No, no, no!

We solicit your COMMENTS, not your COMMAS!!!

[vbg]

pax / Ctein

Posted by: ctein | Saturday, 13 August 2011 at 09:34 PM

I recently picked up a refurb'd Epson 3880 and looking forward to learning this art and this column :-)

Posted by: RawheaD | Wednesday, 17 August 2011 at 04:21 PM

The comments to this entry are closed.