

Photo Paper

Palm Creek Computer Club





Introduction

- It was only a few years ago when we would often disappear into our basement darkroom in the early evening and not emerge again until the sun came up over the horizon. Under the gloomy yellow glow of a dim darkroom safelight, we projected negatives through our enlarger to expose sheets of light-sensitive paper, which we then ran through a series of caustic chemical baths and washes to produce and fix photographic images. It was hard, smelly, time-consuming work, but wonderfully creative and satisfying, because we ended up with great-looking enlargements that we could sell to clients, give to friends, or exhibit.





Introduction

- Alas, the digital revolution has relegated darkrooms, developing solutions, and light-sensitive photo papers to the realm of buggy whips and 8-track stereos.
- What hasn't changed in the transition from chemical to digital, though, is the need for a print medium specifically suited for photo output. Today, though, instead of being light-sensitive, photo paper must be formulated and matched both for the user's purpose and the specific printer technology.
- This raises the obvious, inevitable question: What kind of paper should I be using for my printed photos? And the familiar answer is... it all depends.





Photo Paper: Not Your Ordinary Everyday Paper

- The ideal paper for your individual photo-printing needs depends on the make, model, and technology of your photo printer, but there's one kind of paper that, as a rule, isn't what you want: standard copy paper.
- Without exception, photos printed on plain paper look flat, chalky, and lifeless. Worse yet, colors will look severely subdued, most details in the highlights and shadows will disappear, and, if you're using a color inkjet printer, the paper will be overly saturated with wet ink, causing it to crinkle and corrugate. This kind of paper is only good for test photo prints used for positioning or sizing purposes.





Photo Paper: Not Your Ordinary Everyday Paper (cont'd)

- Next up the media chain is paper specifically formulated for laser or inkjet printers. These papers are shinier and less porous than plain paper, and, being coated, they also have a slicker look and feel.
- Unlike plain paper, they don't mush, spread, or become overly saturated, colors are more vibrant, and images display greater detail in highlights and shadows.
- But they're nowhere near as bright, sharp, or colorful as true photo paper, and are best suited for documents that mix text and pictures, as opposed to showing off your photographs.





Photo Paper: Not Your Ordinary Everyday Paper (cont'd)

- To create the best possible enlargements—ones that look as if they came from a professional processing lab—you will need to print on true photographic paper. Photo paper looks, feels, and acts quite differently from plain paper and laser- or inkjet-specific paper. It's thicker, brighter, and more opaque. Most amateur-grade photo papers have a glossy surface—a shiny, smooth coating, or a varnish, made of clay or resin. Aside from its aesthetic aspect, there are several compelling reasons why all photo papers, glossy and otherwise, are coated:
 - To help the ink dye or pigment permeate the paper properly, or the laser toner properly bond to the surface.
 - To minimize dot gain (the tendency for ink to leech, spread, and blur).
 - To guard against fading, discoloration, and ozone damage.
 - To reduce drying time and prevent photos from sticking together.
 - To protect against fingerprints, smudges, and water spots.
 - To (ideally) improve the tonality of the printed image.





Coordinated Teamwork: Matching Your Photo Paper to Your Printer

- It's important to note that not all photo papers are identical. So, to choose the kind that works best with your printer, as well as fulfills your aesthetic needs and expectations, you need to know some things about photo-paper technology.





Coordinated Teamwork: Matching Your Photo Paper to Your Printer

(cont'd)

- First and foremost, photo paper must be matched to your specific type of printer. Photo paper formulated for laser printers won't work well in inkjet printers, and vice versa. That's because lasers use high temperatures to fuse their grains of color toner to the paper.
- Inkjet photo paper, on the other hand, is designed to print at much lower temperatures. If you put inkjet photo paper into a laser printer, the coating might actually melt, and that could damage or even destroy the OPC drum inside your laser printer. Conversely, laser photo-paper coatings won't correctly receive dye or pigment from an inkjet printer, and the ink may run and smear rather than adhere, possibly gumming up your printer's innards.





Coordinated Teamwork: Matching Your Photo Paper to Your Printer

(cont'd)

- For most users, the best photo paper is the kind made, branded, or sold by the company that makes your printer. You'll usually see the best results—in terms of printability, image quality, color fidelity, and longevity—buying paper made by the manufacturer.
- That's because each manufacturer can precisely match its ink formulas and paper substrates for optimum quality in a way that no third-party company can.





Coordinated Teamwork: Matching Your Photo Paper to Your Printer

(cont'd)

- That isn't to say that you should completely steer away from third-party photo papers. Generic and third-party consumer-level photo papers can not only be significantly less expensive, but they can also provide users with an array of different surfaces and textures not available from the printer manufacturer's catalog of photo papers.





Coordinated Teamwork: Matching Your Photo Paper to Your Printer

(cont'd)

- Take note, though: If you have an inkjet printer and wish to print on generic or third-party photo paper, you must match it to the kind of ink your printer uses. Depending on your make or model, your inkjet requires either pigment- or dye-based ink, and never the twain shall meet. Like laser paper in an inkjet, using photo paper formulated for pigment ink in a dye-ink-based printer may produce bizarre colors, smears, smudges, or even ink running off the page. The same consequences can occur using dye-designed photo paper in a pigment-based inkjet printer.





Coordinated Teamwork: Matching Your Photo Paper to Your Printer

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- Fortunately, you don't have to know whether your printer uses dye or pigment inks, if you simply check the paper package or the company's Web site for compatibility. Most paper manufacturers helpfully list the makes and models of printers that work with their papers. If your printer isn't listed, take a pass on that paper, no matter how appealing, attractive, or economical it may be.





What Sets Different Papers Apart?

- Depending upon the manufacturer, photo paper is categorized in to up to five major aspects. It's worth knowing what they mean as you comparison-shop between papers within a given maker's line.
 - **Paper Weight**
 - **Paper Surface**
 - **Color or Brightness**
 - **Non-Paper Media**
 - **Archivability**





What Sets Different Papers Apart?

(cont'd)

- **Non-Paper Media**

- Some photo papers aren't paper at all. Among the many different types of media you can print on are canvas, linen, or silk. Regardless of the surface, texture, media, or weight, all are coated with some sort of varnish or patina that prepares the media to receive ink and protect the image.
- Then there are specialty, or novelty, photo papers to consider. These include scored sheets for easy detachment (for passport pics, student headshots, and photo-ID pictures), paper with adhesive backs (for pasting in albums or attaching to documents), and acetate or clear plastic media, for use on overhead projectors or lighted display panels.
- For pure fun, you can even print postage-stamp-like photos that kids love to stick on everything from refrigerators to book bags.





What Sets Different Papers Apart?

(cont'd)

- **Archivability**

- One of the photo-printer industry's biggest buzzwords is archivability, or, how long a photographic print will remain unchanged before it begins to fade or discolor. Many photo papers proudly proclaim that they will resist image deterioration for 100, 150, or even 200 years. The inks used, and how the prints are stored, both come into play, but one of the major factors is the composition of the photo paper itself.
- Archival paper is always made from acid-free, chlorine-free materials. The better the paper, the longer it should last. Of course, because digital photo paper has been around, at most, for only a few decades, the only way such claims can be made is based upon accelerated tests, a simulation of conditions, and projections, not actual experience. So unless you plan to live to a ripe old age, there's no way you can be certain that your photographic prints will outlive you. Rather, what we consider more important than arbitrary ratings is having a rigorous image-handling plan that ensures that you keep multiple original digital copies of your images. That way, if you're no longer around and the printed copies of your images handed down to family have faded out, they will still have an original digital file to use for printing off a new copy, if desired.





Protecting Your Printed Photos

- Since there are no universally accepted, industry-standard ratings or gradings that you can reference and compare, the best way to tell if a certain photo paper is what you want is to read the package label or Website description carefully.
- Here's a general rule of thumb of when to use what kind of photo paper. Standard-quality photo paper is economical, easy to handle, and most suited for everyday photos and snapshots. The next bump up in quality (whatever the manufacturer's nomenclature happens to be) is heavier and brighter, and is designed for purposes such as scrapbooking and picture albums. Top-of-the-line photo paper is made of archival, heavyweight stock whose formulary helps produce whiter whites, blacker blacks, and more accurate colors. It's the best paper to use for displays, exhibitions, framed prints, and other purposes that demand the highest print quality possible.





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When You Want to Print Like the Pros

- Professional photographers and artists have a special relationship with the media they choose when printing their pictures. We've heard pros wax poetically, talking about the texture, tonal responsiveness, and feel of certain paper/ink combinations. However, the papers they use are a quantum leap in quality (and price) ahead of those used by consumers.





When You Want to Print Like the Pros (cont'd)

- The papers (and other media, like canvas or silk) that pros use are specifically formulated for professional-quality printers from companies such as Canon, Epson, and HP. These include media from the particular printer companies, plus from highly respected third-party manufactures, such as Hahnemuhle, Ilford, Mohawk, and Premier. As with consumer photo papers, the nomenclature used to describe pro media varies widely.
- Pros often protect their prints by spraying them with a special photographic fixative, such as PremierArt's Print Shield or Lyson's Print Guard. If you go that route, be sure to follow the instructions carefully, regarding humidity, temperature and safety precautions.





When You Want to Print Like the Pros (cont'd)

- Holding a beautifully printed photo printed your hands is a sensual experience that goes beyond just viewing it. And that can make the time and expense of printing like a pro worth every minute and dollar.
- Taking and making photographs with digital cameras and color printers is a quantum leap in accessibility and ease of use than the way we did things in the old film-and-darkroom days.
- That is, as long as you print on the right photo paper.

