Inkjet Papers, Printers, and More



Topics

- Inkjet Papers
- Paper Tech Specs
- Inkjet Printer Choices
- Cost of Inkjet Printing
- Settings & Workflow
- Editing for Print

RED RIVER PAPER




Photo & Art Quality Papers

Photo & Art Quality Papers

Five categories of photo & art media

Understanding your options helps when considering new print projects

Photobase RC

Matte

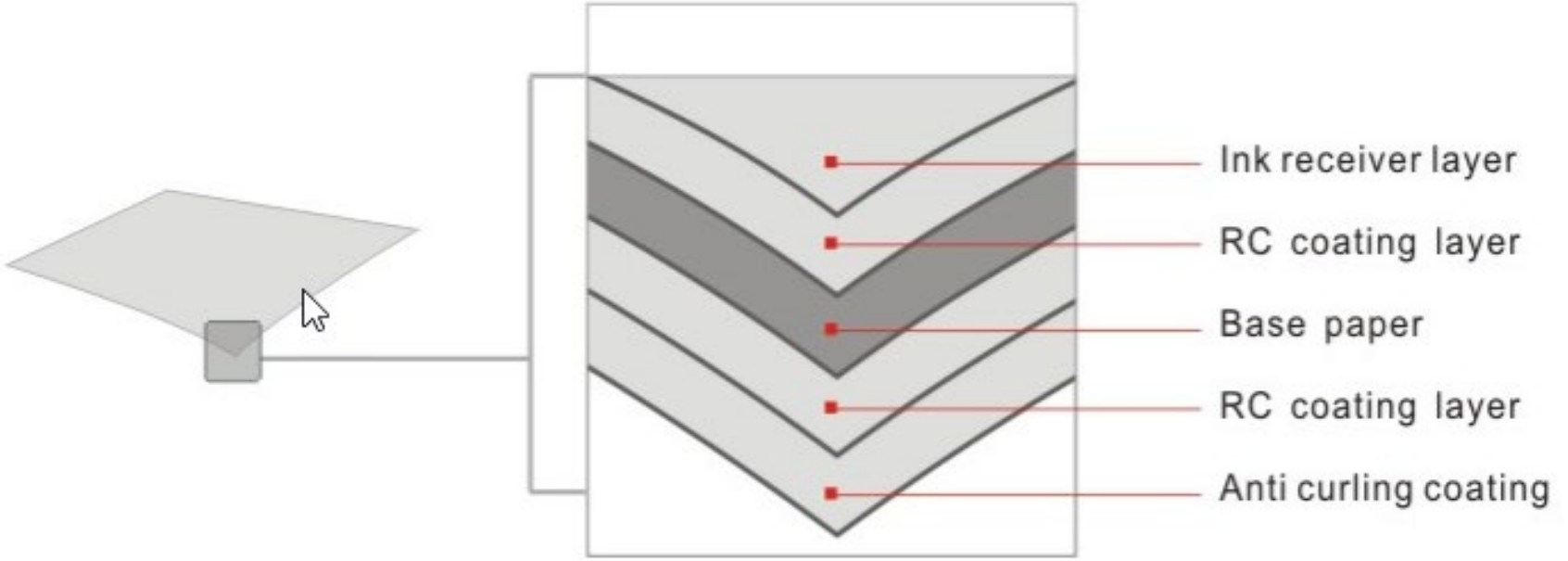
Fine Art

Baryta

Specialty

Photobase “RC” Paper

Resin **C**oated, Photobase, or PE (polyethylene) Base are the epitome of modern photo lab look and feel. They are a paper core coated on top and bottom with plastic and the inkjet coating.



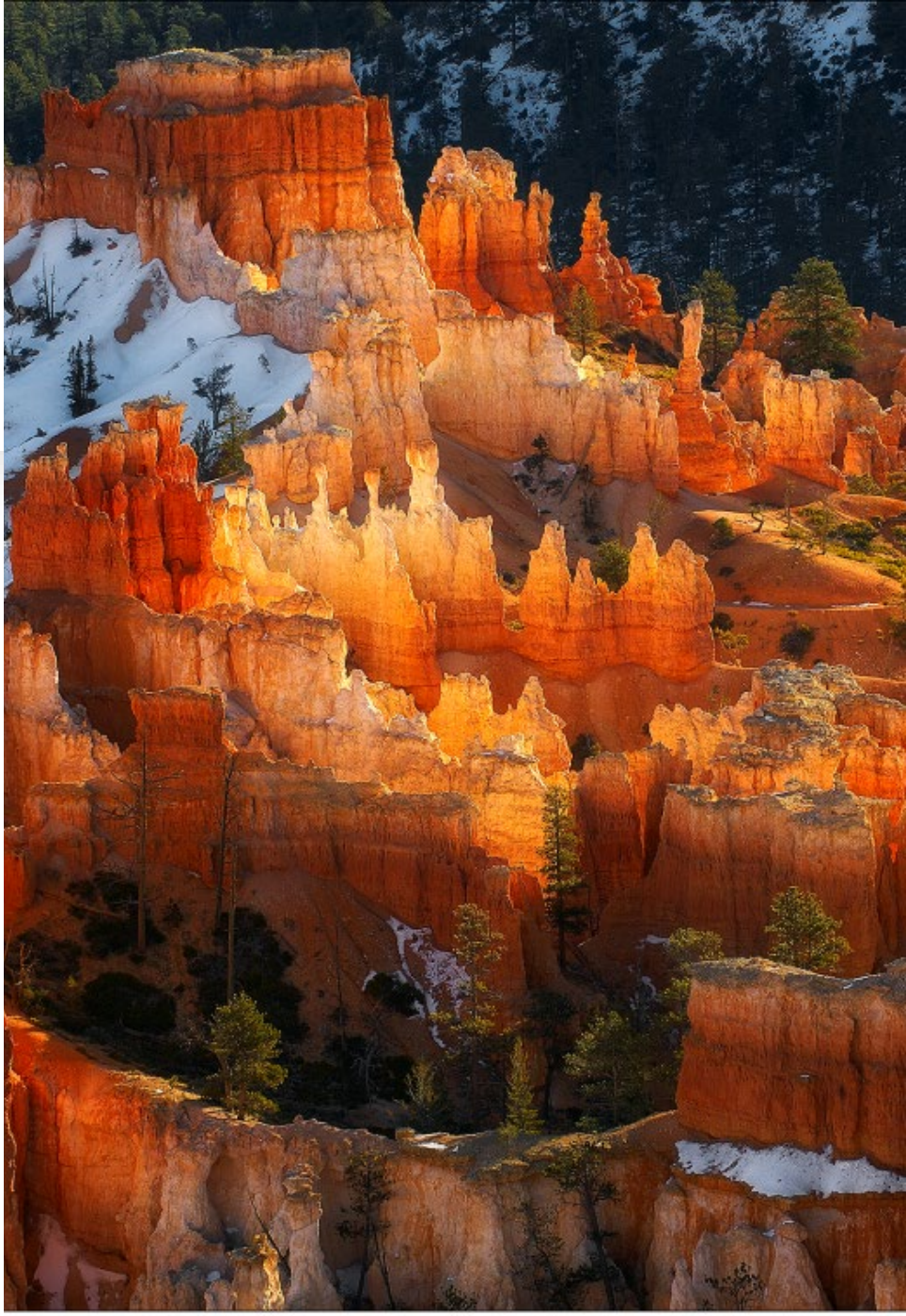
Photobase “RC” Paper

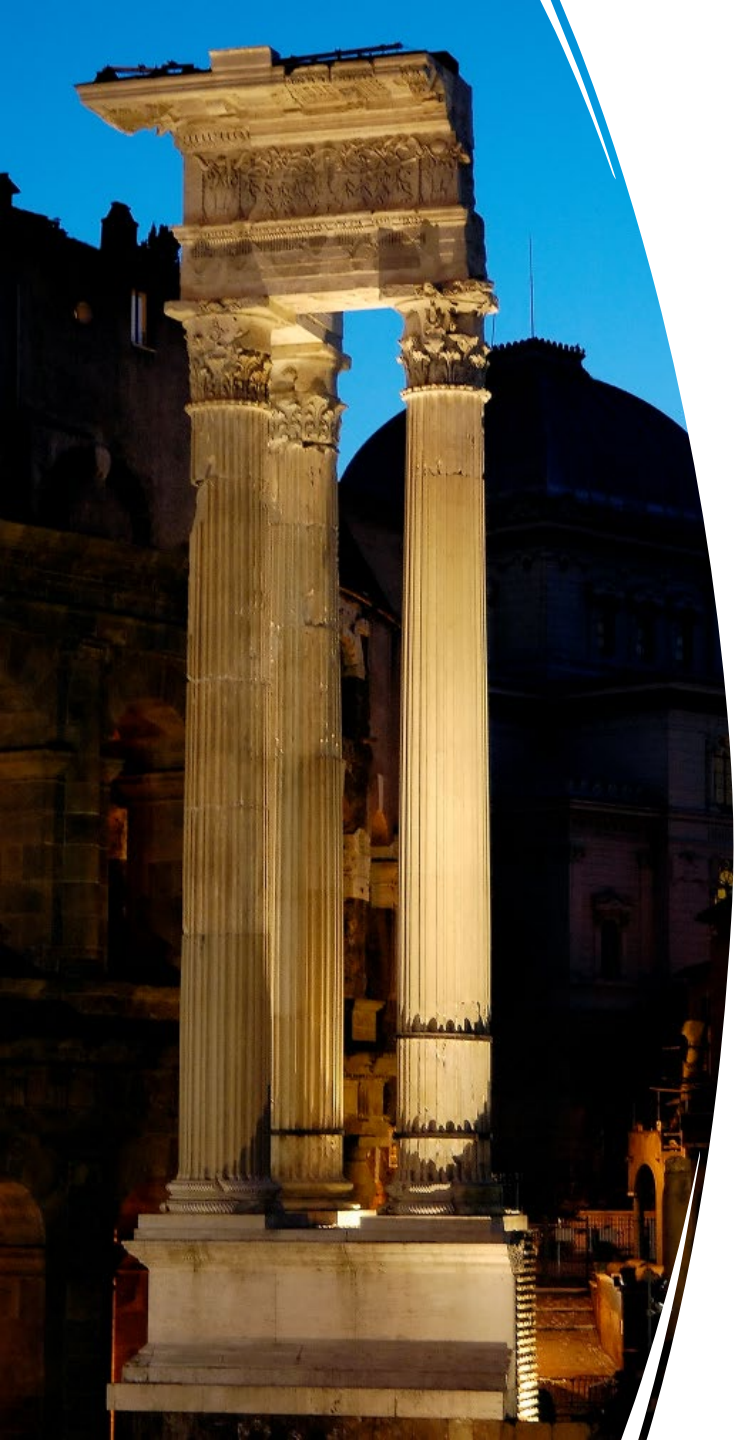
Sub-types

Glossy – Smooth reflective surface

Luster / Satin – Lightly textured (pebbled) surface

Photo Metallic – The inkjet equivalent of Kodak Endura





Matte Photo Papers

- Coated papers with non-reflective surface
- Capable of high-quality photo reproduction and deep saturated colors
- Excellent when you want viewer to concentrate on the detail of an image
- Many weights, smooth or textured, single- or double-sided
- Generally lowest cost inkjet media



Fine Photographic Art Papers

Usually 100% cotton rag paper coated with inkjet receptive chemicals

Pro look, feel - higher perceived value

Can be matte or reflective

Can be smooth or textured

Smooth surface - Hot Press, Vellum

Textured surface – Cold Press, Etching, Velvet

Baryta Papers

Designed to look like air-dried fiber papers

The look and feel of wet darkroom prints

Surface can be semi-smooth to luster texture

Base paper is typically tree-based but can be made from cotton

Coating technology that uses Barium Sulfate to add a lustrous white shade to the media





Specialty

A wide variety of products

- Canvas
- Metallic silver
- Transparency
- Vellum
- Tattoo kits
- Metals


X AIR Edit [XR18-25-61-D1, IP: 169.254.97.209]
Mixer
Channel
Input
Gate
EQ
Comp
Sends
Main
FX
Meter
MC 1
Ch03
Post
EQ
RESET
Low
LoMid
HiMid
High
Mode
Gain
Freq
Qual
Low Cut
RTA
Pre
Spec
Keys
Keys
MC 1
MC 2
MC 3
MC 4
MC 5
PC L
PC R
MC HF
Solo
Mute

Tech Specs



Weight

- Pounds or GSM (grams per square meter)
- GSM is easiest to use
- Multiple standards (basis) for pound weight
  - Bond, Cover, Text, More
- Most companies use the Bond basis



Weight References

GSM

90 gsm – Copy paper

170 gsm – Brochure paper

260 gsm – RC photo paper

300+ gsm – Watercolor and card stocks



Weight References

Pounds – Bond Basis

26lb. – Copy paper

45lb. – Brochure paper

66lb. – RC photo paper

80lb.+ – Watercolor and card stocks



Thickness

- Referred to terms of MIL
- A MIL is a thousandth of an inch
- Copy paper = 5 mil
- Typical photo paper = 10.4 mil
- Typical cotton art paper = 15+ mil

Brightness vs. Whiteness



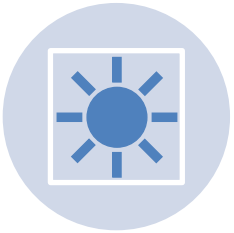
Brightness – A paper's ability to reflect light



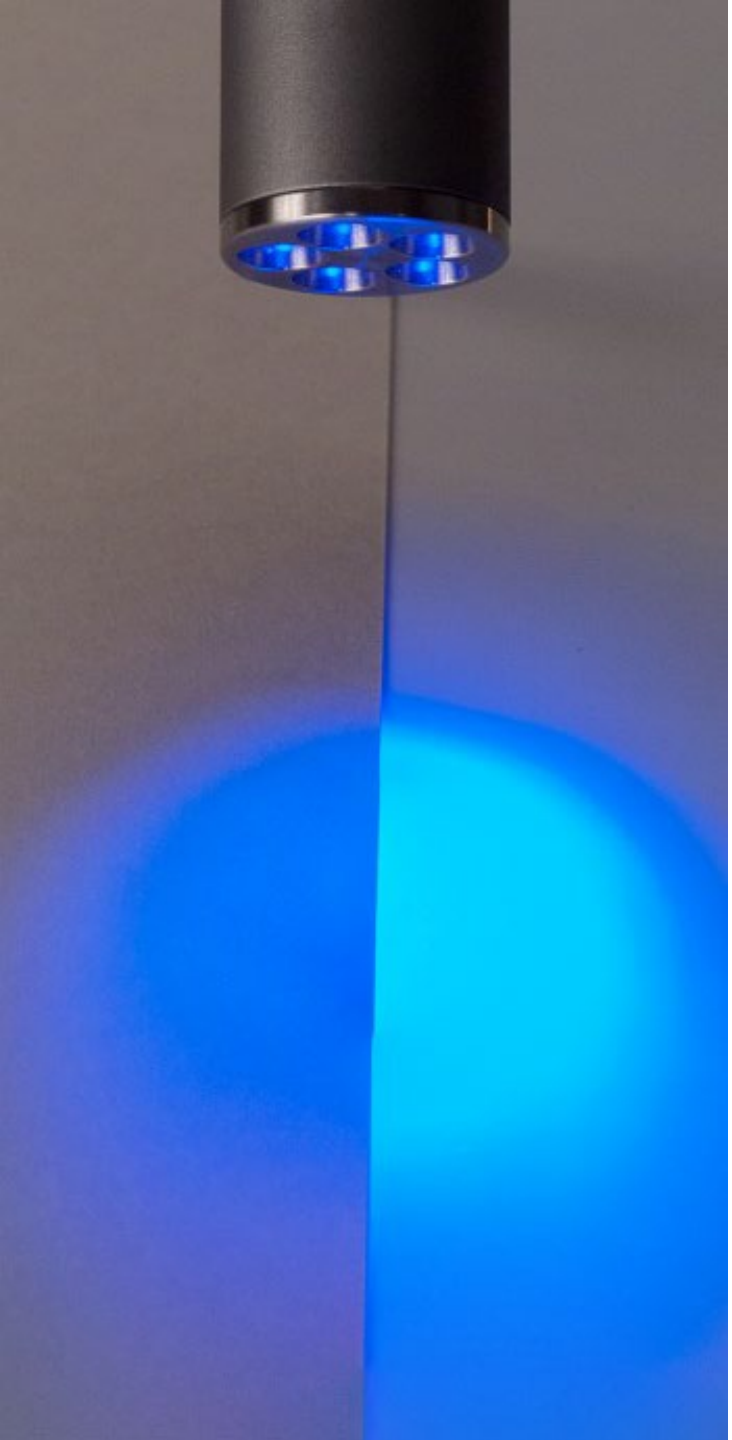
Whiteness – The quality of reflected light. Refers to the shade of the paper



Photographers should be more concerned with WHITENESS.



The shade of the paper (warm, neutral, cool) makes a much bigger impact on the final image than brightness.



Optical Brighteners & Whiteners

Optical brighteners are added to paper to help the paper look “whiter”. Also called OBAs

Pros – OBAs make the paper look clean, bright, and bluer white.

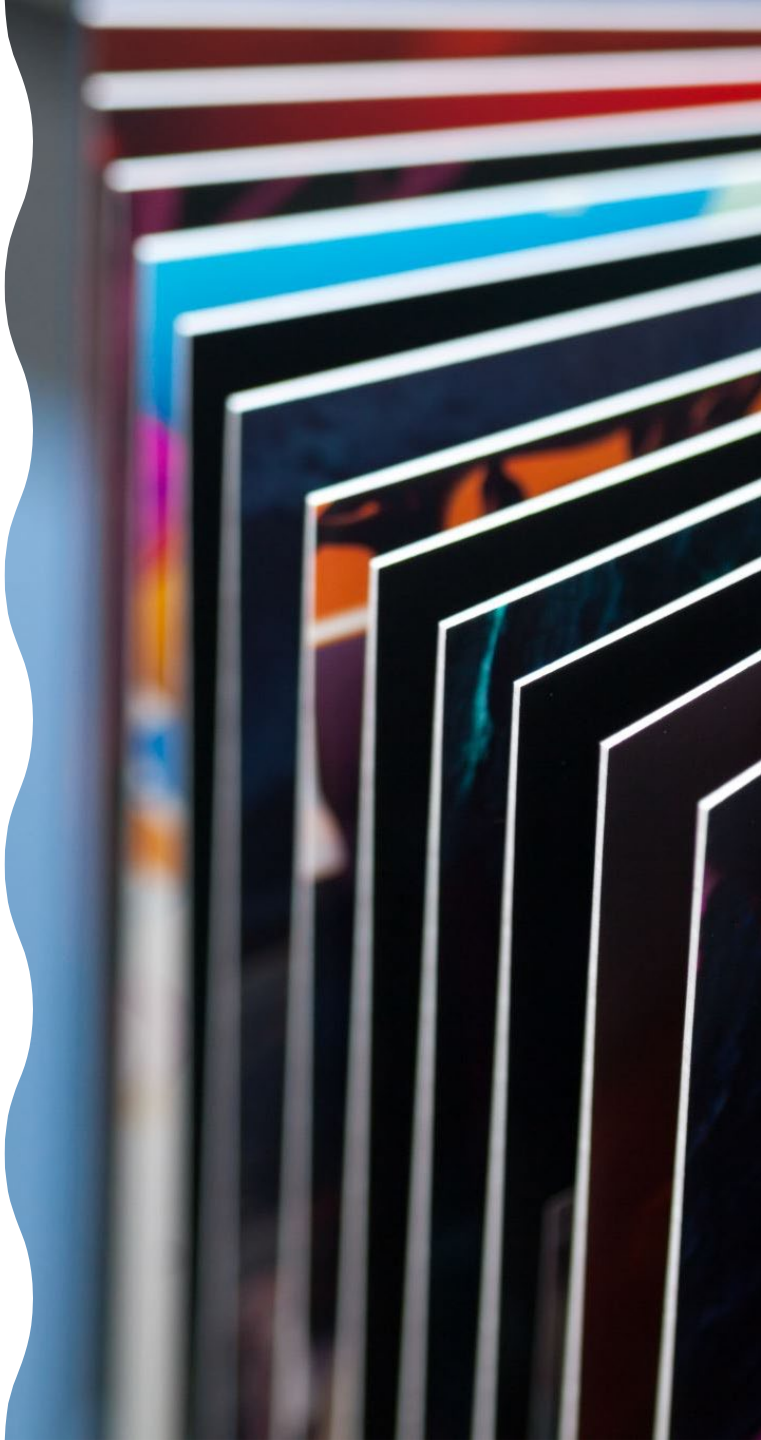
Cons – OBAs “burn out” over time when exposed to UV light. This causes the paper to return to its natural warmer shade

Optical Brighteners & Whiteners

OBAs are in most photo inkjet papers. These papers will yellow slightly over time, like most photo lab prints.

NO OBA Papers – Most Fine Photo & Art papers have no OBAs for maximum archival rating.

OBA content is NOT RELATED TO INK FADE! Only changes in the shade of the paper





Cost of Inkjet Printing



Cost of Inkjet Printing

Red River conducted tests to determine the cost per print of a typical photo

Focus on the cost per print – not cost for a certain amount of ink

In general, inkjet printers are more cost effective than a photo lab for 5x7 and larger

Cost of Inkjet Printing

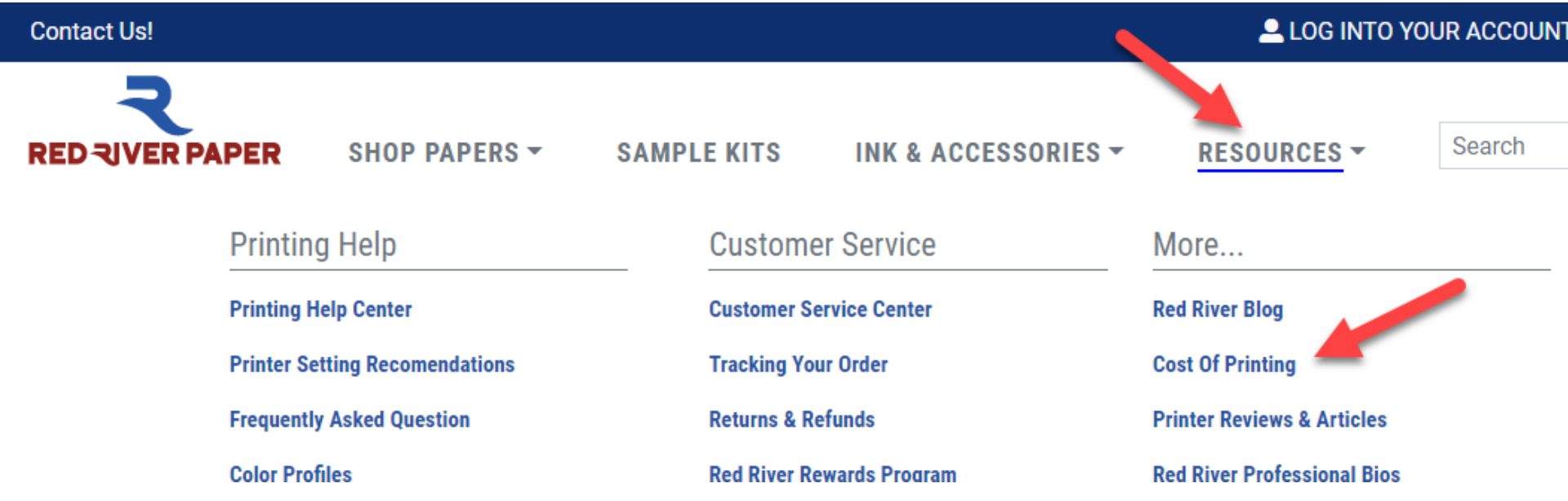
Inkjets also offer an intangible savings of time and flexibility. You choose when you print and how many you need.



Cost of Inkjet Printing

Examples from our reports page

Printer	4x6	5x7	8x10	11x14	13x19
Pro-300 Luster	$0.24	$0.35	$0.81	$1.57	$2.52
Pro-300 Matte	$0.21	$0.29	$0.69	$1.29	$2.08
P700 PK	$0.39	$0.57	$1.30	$2.51	$4.03
P700 MK	$0.36	$0.53	$1.22	$2.34	$3.76





Inkjet Printer Choices

Inkjet Printer Choices

- Most printers, from $99 to $5999 offer similar print quality and media compatibility.
- Yes, there are differences, but most people would be hard pressed pick the “expensive” print.



The more you pay for a printer, the more you’re paying for **fade resistance, size, and expanded color gamut, specialty media feed options.**

Pigment or Dye Ink?

- **Pigment inks** designed to resist fade for the long term – 50+ years when displayed or stored properly
- **Dye inks** typically provide the largest color gamut, maximum media compatibility, and to some degree lowest expense.
- **Today** – pigment and dye inks cost about the same so pigment has become an “upsell” feature

Enthusiast & Pro Models

Current Printers with Pigment Inks

Canon

- PRO-310
- PRO-1100
- PRO-2600
- PRO-4600

Epson

- All SureColor
- Most XP Series
- Any C series printer

HP

- Z series





Choosing an Inkjet Printer

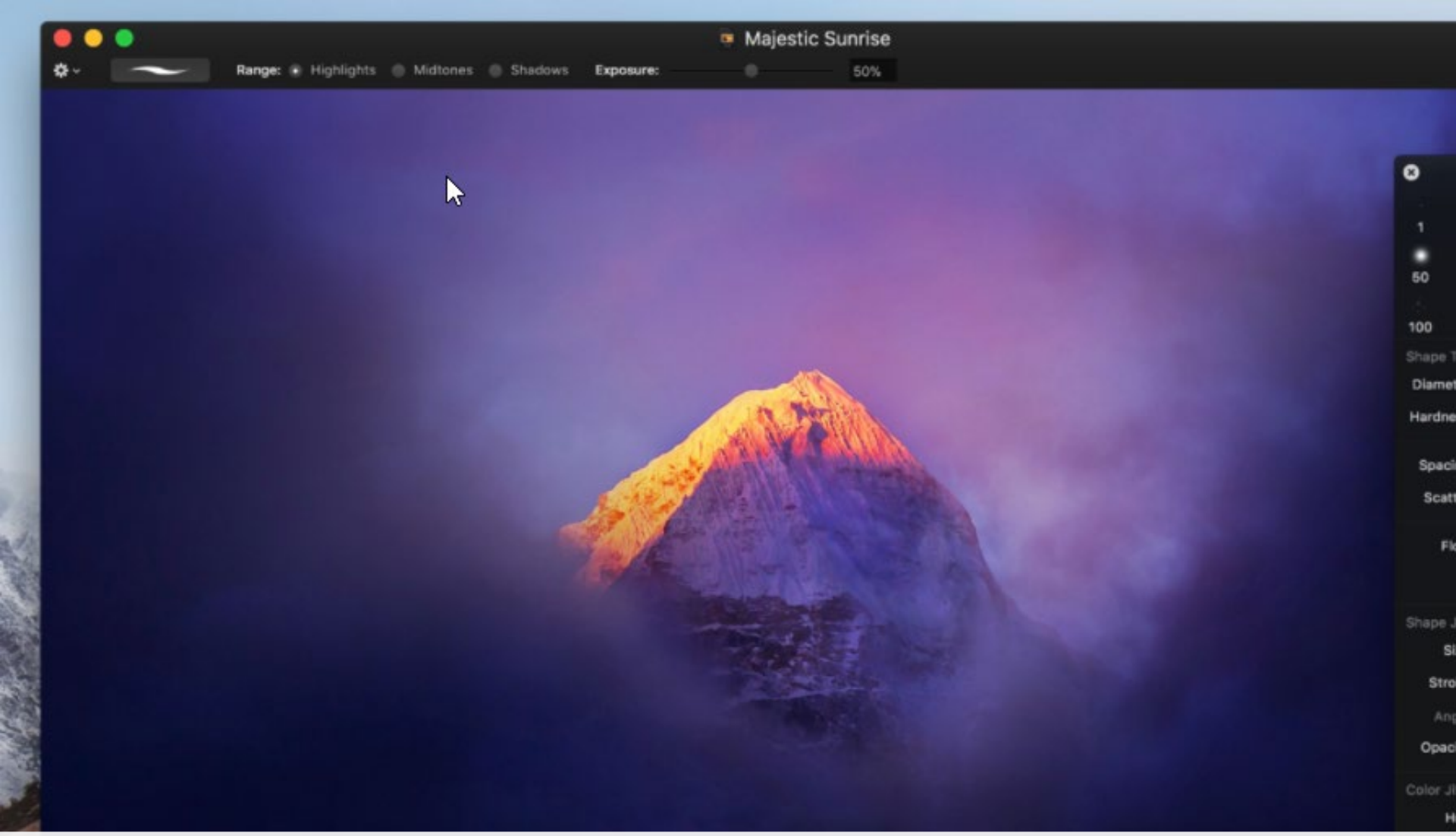
There is an inkjet printer for just about any need

Simplify your decision by asking 4 questions

- What is your budget?
- What is the max size you really need?
- Do prints need to resist fade 20+ years or 50+ years?
- Is Black & White output critical?

Choosing an Inkjet Printer

- We’re here to help
- Email or call us for a recommendation once you answer the questions.
- Have a printer? We’ll help you pick media that will work best.



Tips for Better Print Quality

Tips for Better Print Quality

- Monitor
- Printer Settings
- Printer Care and Feeding
- Editing for Print

The Monitor

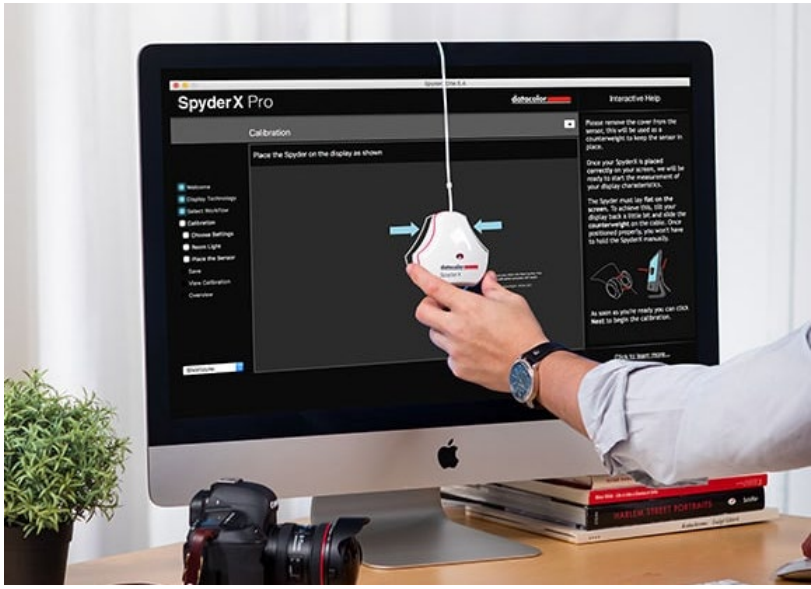


The Monitor

- Critical to your digital photography output and editing
- If the monitor is not displaying your image data properly, you will never get truly accurate images
- **Calibrate Your Monitor!**

What is Monitor Calibration?

- The process of creating a color profile specific to your monitor
- Sets brightness
- Sets contrast
- Can even take ambient light into account



How to Calibrate

Use a monitor calibration product

Datacolor

- Spyder

Calibrite – Formerly XRite

- Calibrite Display





Prints Too Dark – Monitor Too Bright?

- A monitor that is too bright results in prints that are “too dark”.
- Excess brightness gives you a false impression of the exposure and shadow details in an image.
- When you make a print, the problem becomes visible

Why Is This Important

- Monitor profile connects editing software with your display.
- The “color decoder ring” that shows you the real color values of your image on the screen
- Brightness and contrast settings - CRITICAL. The profiling hardware measures these variables and sets them properly.

Why Is This Important

- Correct the brightness the most common printing problem is solved!

- Tell the monitor HOW to display your colors and tones properly and you’ll get to view and then edit the real ones and zeros of your file.

Suggestions

- READ the instructions!
- Always run in ADVANCED MODE
- Calibrate quarterly

Printer Setup

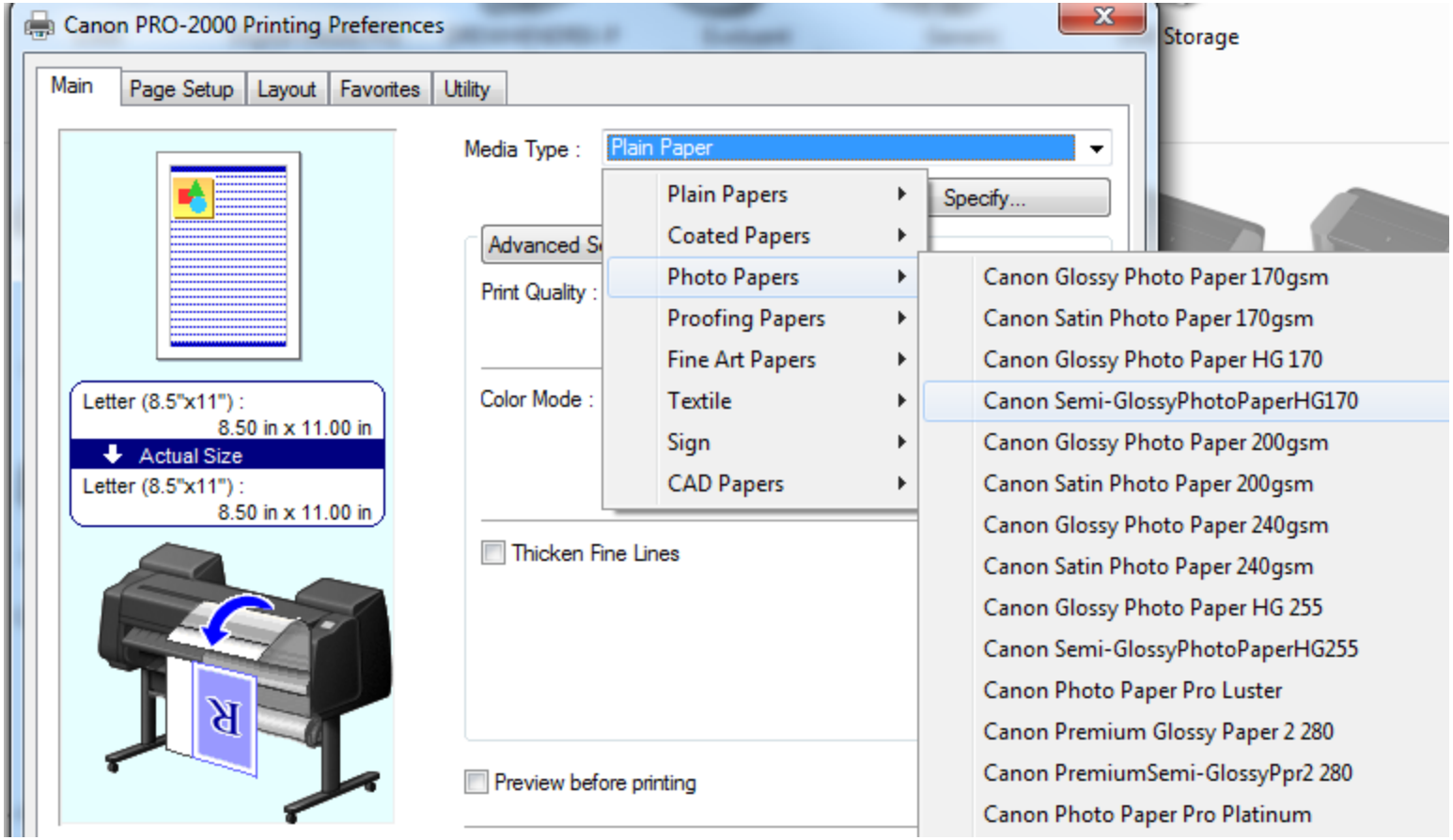
Get the settings correct and you will save time, money, paper, and frustration.

Key Settings

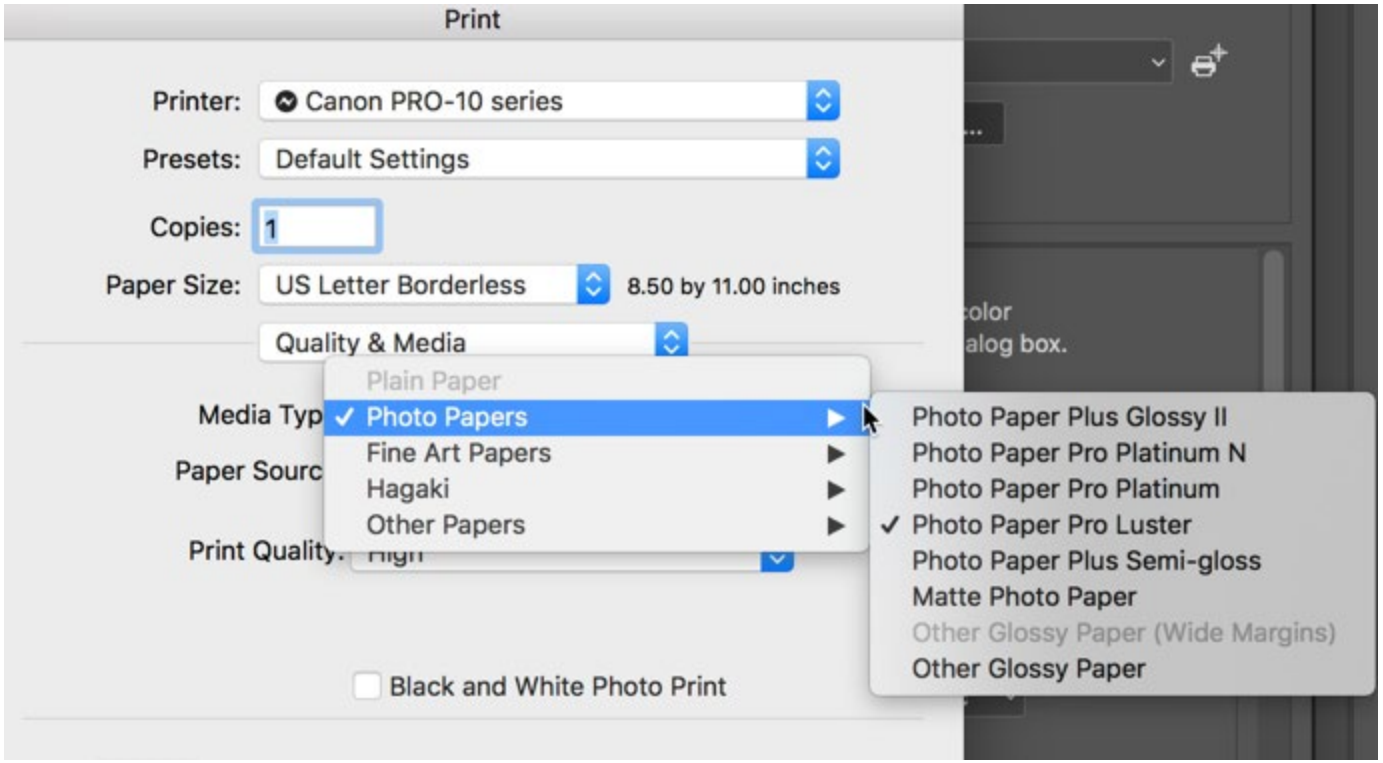
- Media (Paper) Type
- Print Quality
- Paper Size
- Color Management



Media (Paper) Type



Media (Paper) Type



Media (Paper) Type

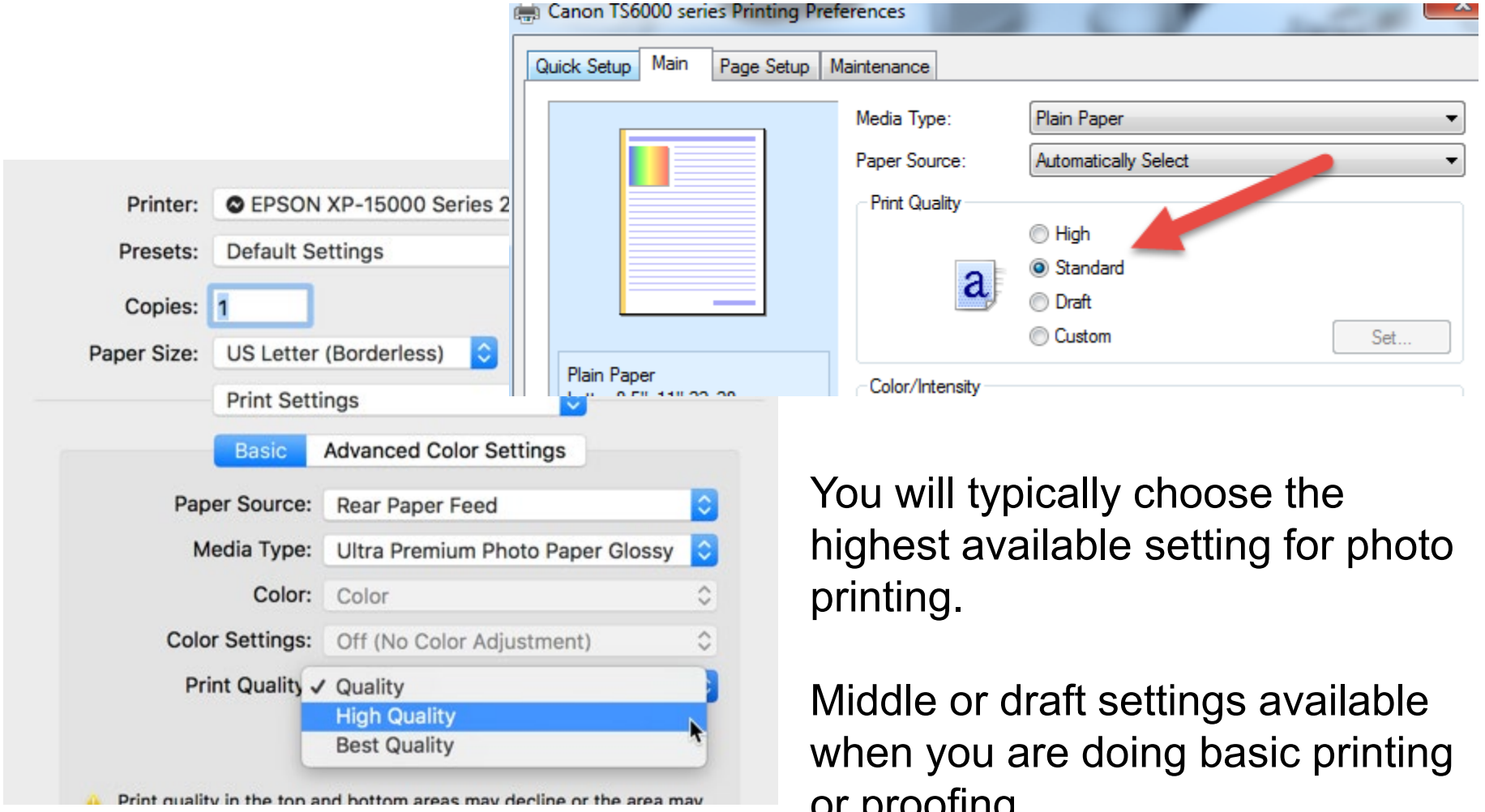
Usually a logical choice – choose glossy for a glossy paper, etc.

If you use the printer maker's paper, just choose that paper from the menu

If you use another paper type, follow the recommendation from the maker

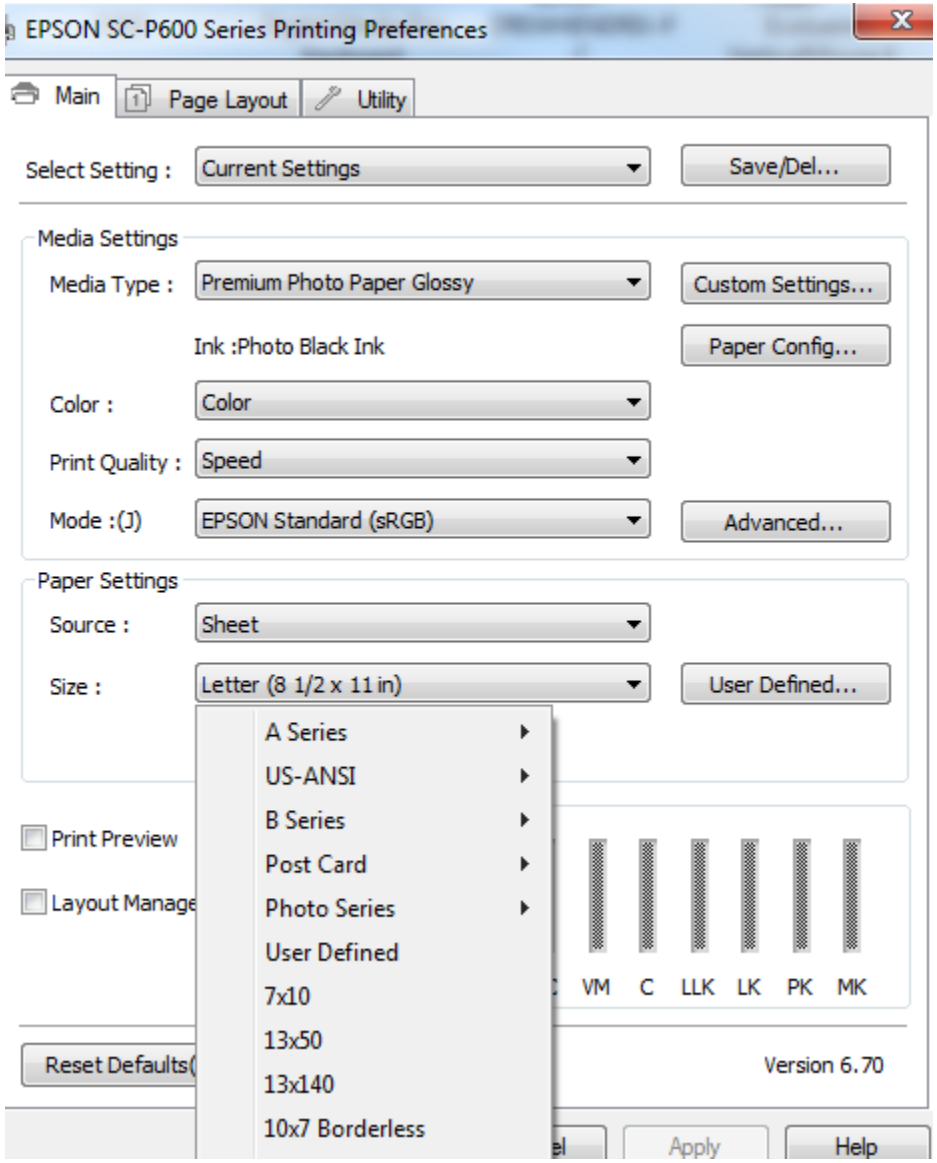
Wrong Setting? Results can be poor colors, inconsistent results, too much or too little ink.

Print Quality



You will typically choose the highest available setting for photo printing.

Middle or draft settings available when you are doing basic printing or proofing.



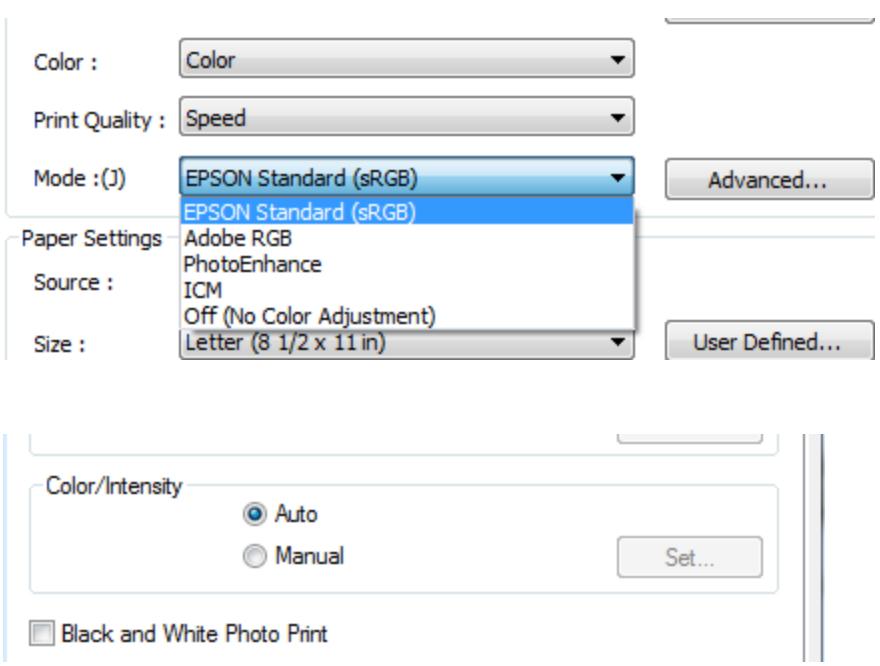
Paper Size

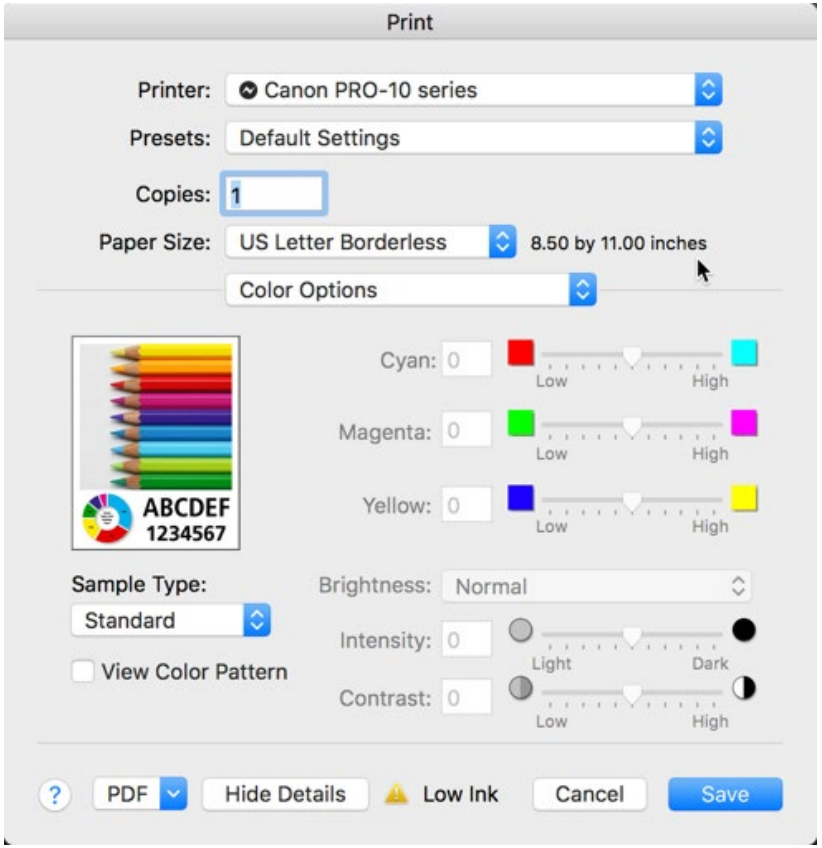
Paper size option is important to avoid wasting paper and ink. Double check it before you print.

Other controls found alongside paper size:

Borderless option
Custom paper size setup

Color Controls





Color Controls

Printer drivers come with color management software that you can partially control.

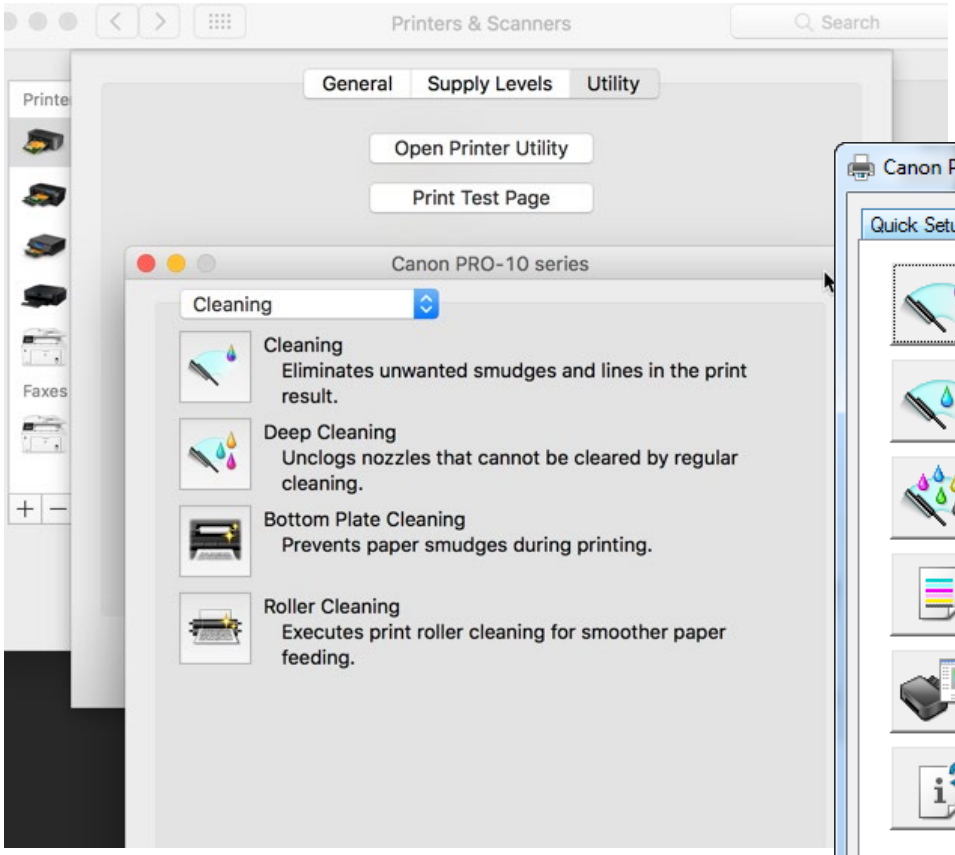
You can use them or turn them off for advanced color management – use of a paper profile.

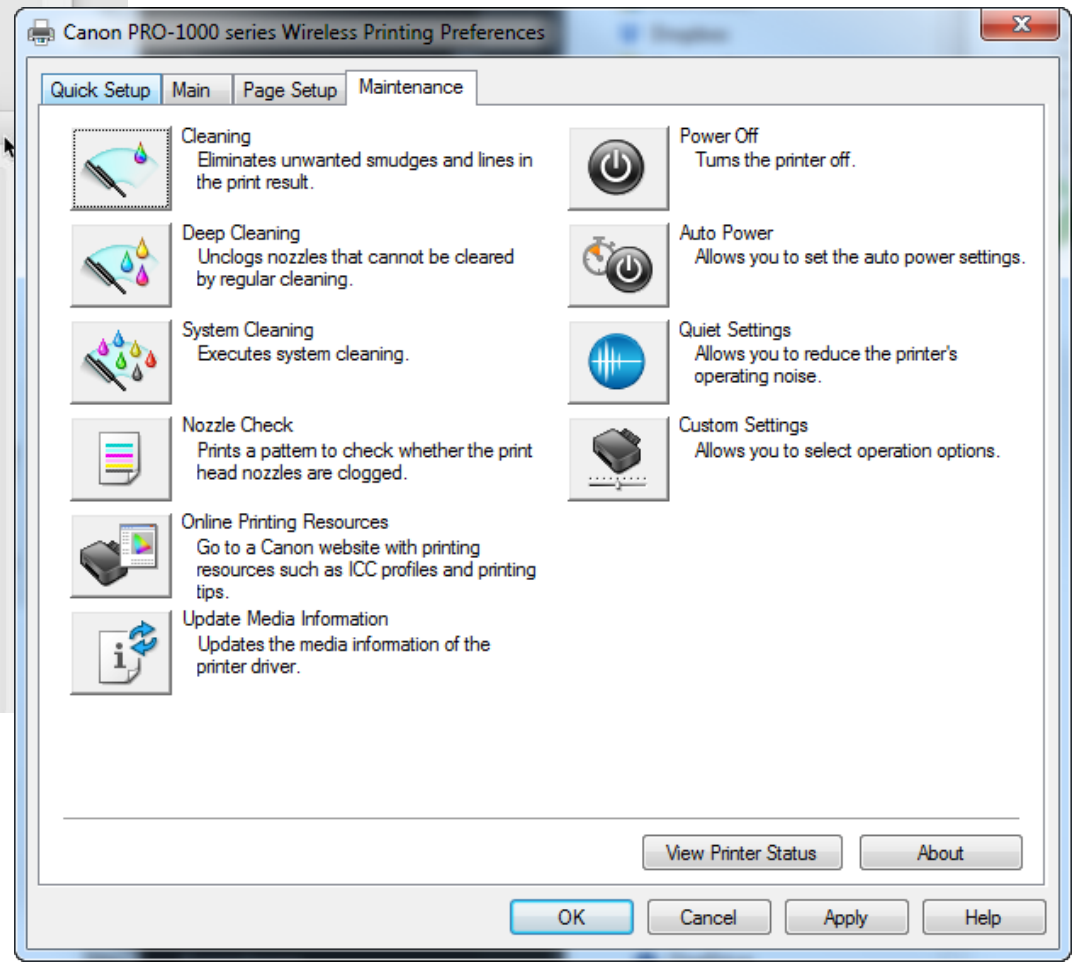
Leaving them on is good for beginning and intermediate printing needs.

If you see shifts in color, or prints that are too dark/bright, you can make small corrections using these controls.

Large changes need to be done in the editing software.

Printer Maintenance





Printer Maintenance

Many print quality issues can be corrected with maintenance.

Most printers have a nozzle check, nozzle clean, and alignment function.

If you see white lines or jagged edges in your prints, start with a nozzle check. It will tell you if you need to clean the heads.

Alignment is there if you see jagged lines in your print. These days printers typically have self-alignment functions.

Paper Feed

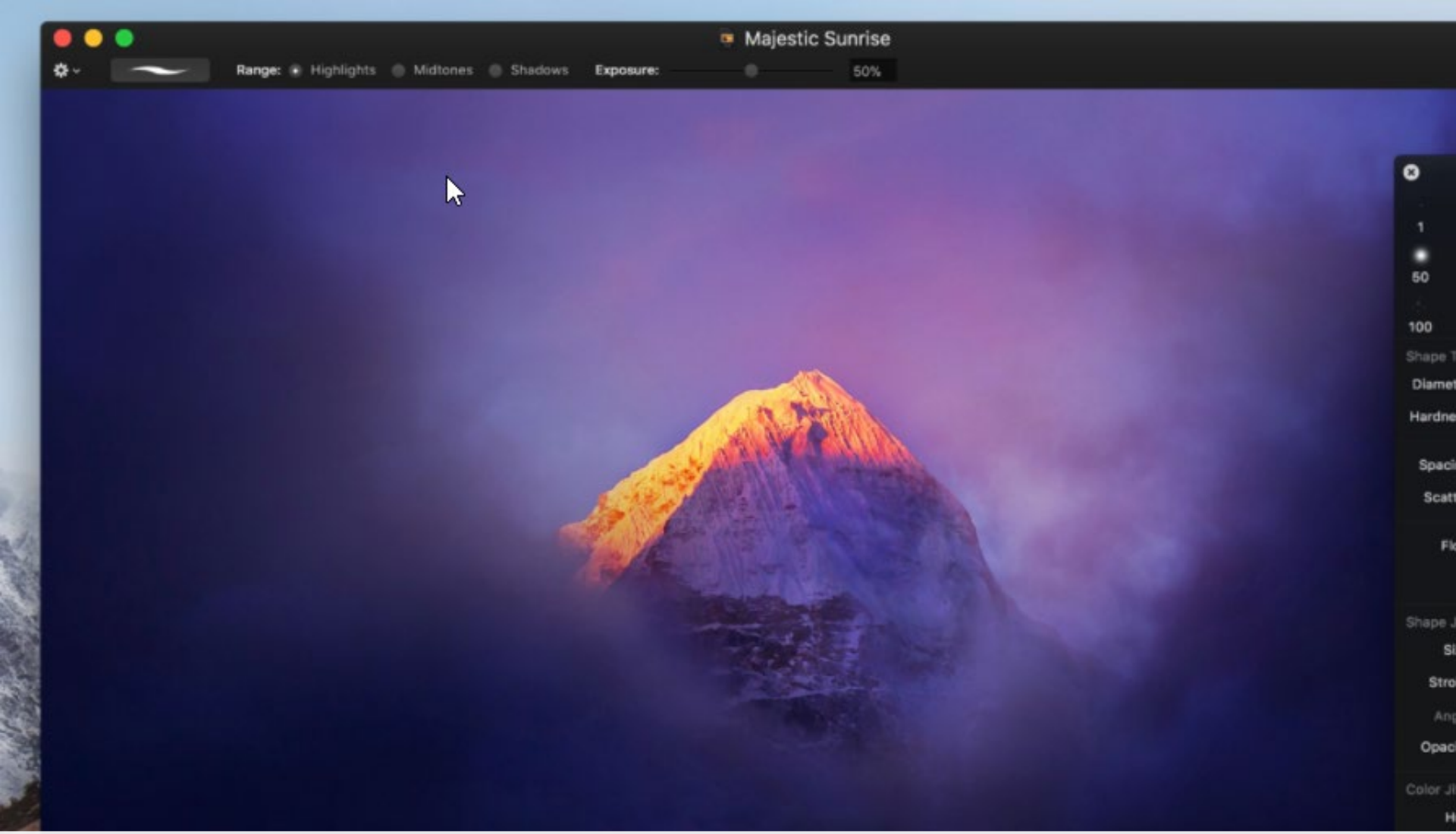
Getting a consistent paper feed experience is essential to happy printing.

RC Papers – Easiest to use

Matte Papers – Leave coating behind. Clean rollers after every few boxes.

Fine Photo Art Papers – Heavier and thicker. Will require setting your printer's thick paper options.
Some printers have specialty feed path just for this type of media.

www.redriverpaper.com/feed for more tips and tricks



Editing for Print

Editing for Print

In terms of data and fidelity, the process of image capture to print is downhill.

The nature of printing constrains your color gamut, reflectivity, luminance, and sharpness.

HOWEVER….

Editing for Print

This is really nothing new.

Blame the high def, ultra-bright monitor on your desktop

We see stunning detail, luminance, depth, and saturation now more than ever.

Editing for Print

The print has not changed but maybe our expectations have.

The KEY to getting the best possible print…EDIT your file for the purpose.

CONTRAST | SATURATION | SHARPNESS
EXPOSURE

Editing for Print

ADD MID-TONE CONTRAST

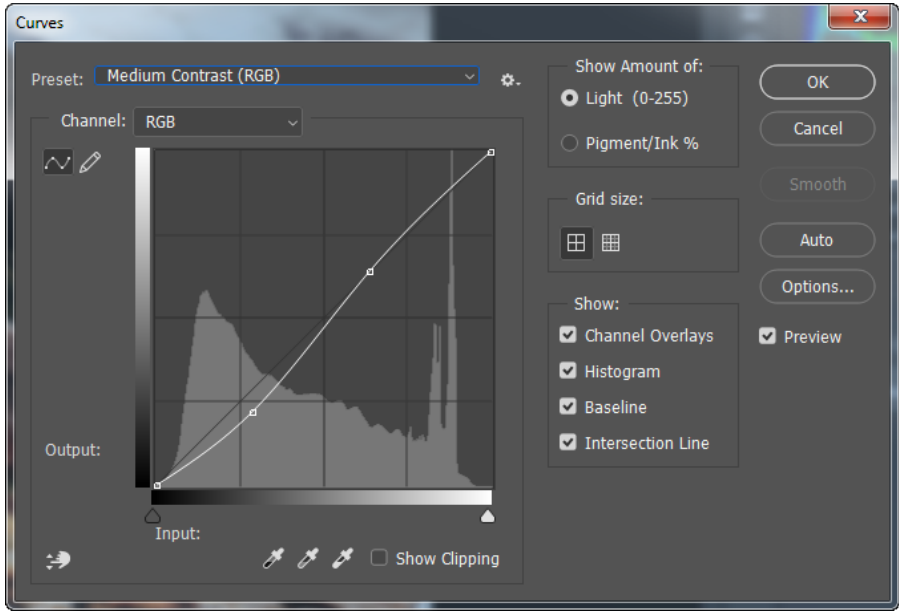


Lightroom

Quickly add “Medium Contrast” in the Point Curve dialog - creates a gentle S-curve in the levels, representing more contrast around the mid-point. You can adjust the contrast by moving the curve – put your mouse on the line and drag.

Editing for Print

ADD MID-TONE CONTRAST



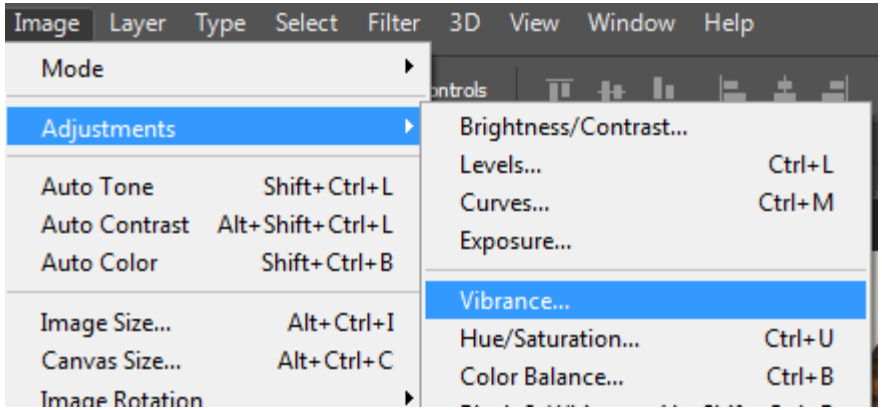
Photoshop

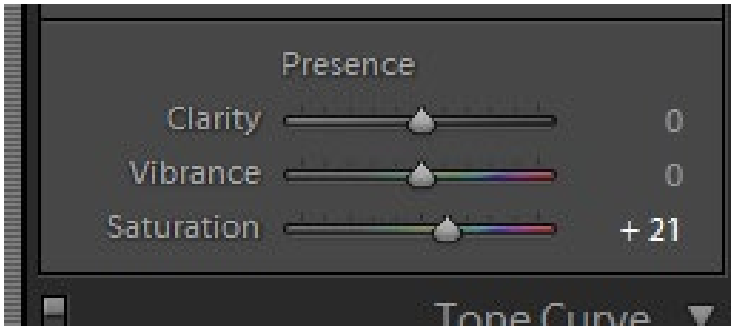
Use the Curves dialog. Choose the “Medium Contrast” option that creates a gentle S-curve in the levels, representing more contrast around the mid-point. You can adjust the contrast by moving the curve – put your mouse on the line and drag.

Editing for Print

ADD A TOUCH OF SATURATION

Add 5-10% more saturation or vibrance using your editing app's sliders. You will soon determine the right number for your typical photo.

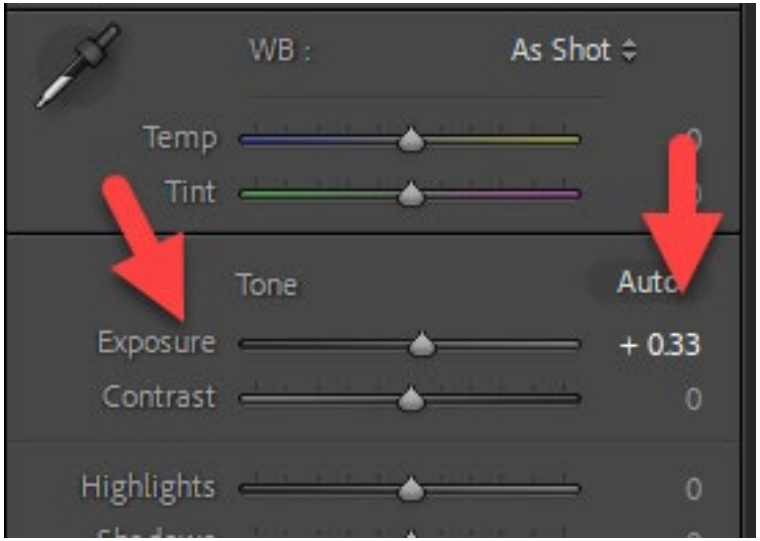


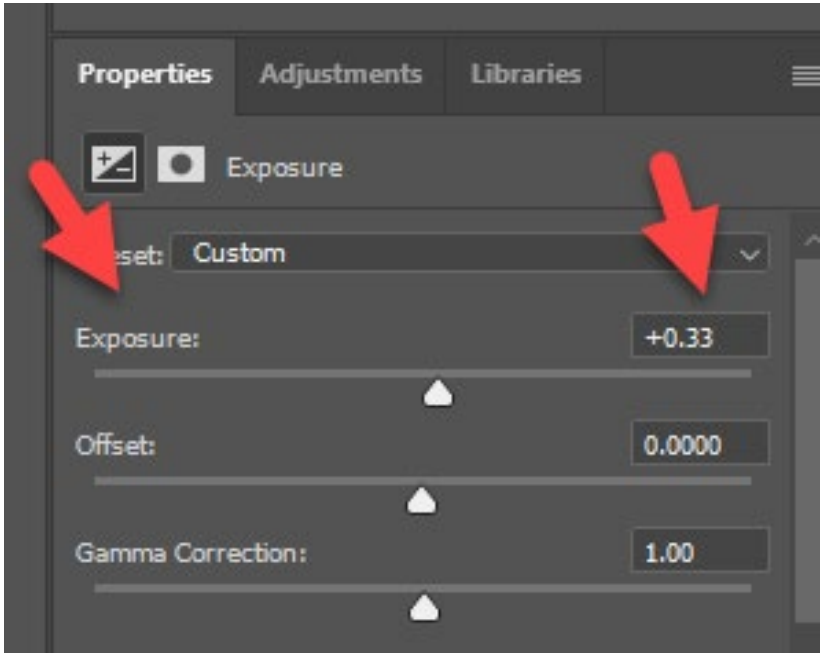


Editing for Print

ADD A TOUCH OF EXPOSURE

Most images can benefit from a small bump in exposure to open up shadow details. We normally add +0.3 on the exposure slider in Photoshop or Lightroom.





Editing for Print

MAKE IT SHARP

This is more esoteric so here's the idea.

Add sharpness until you say "Ouch, that's crunchy and gross".

Now, back up 10% and stop. Print. You will be surprised by the improvement.

THANK YOU!

Contact Me with Questions

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