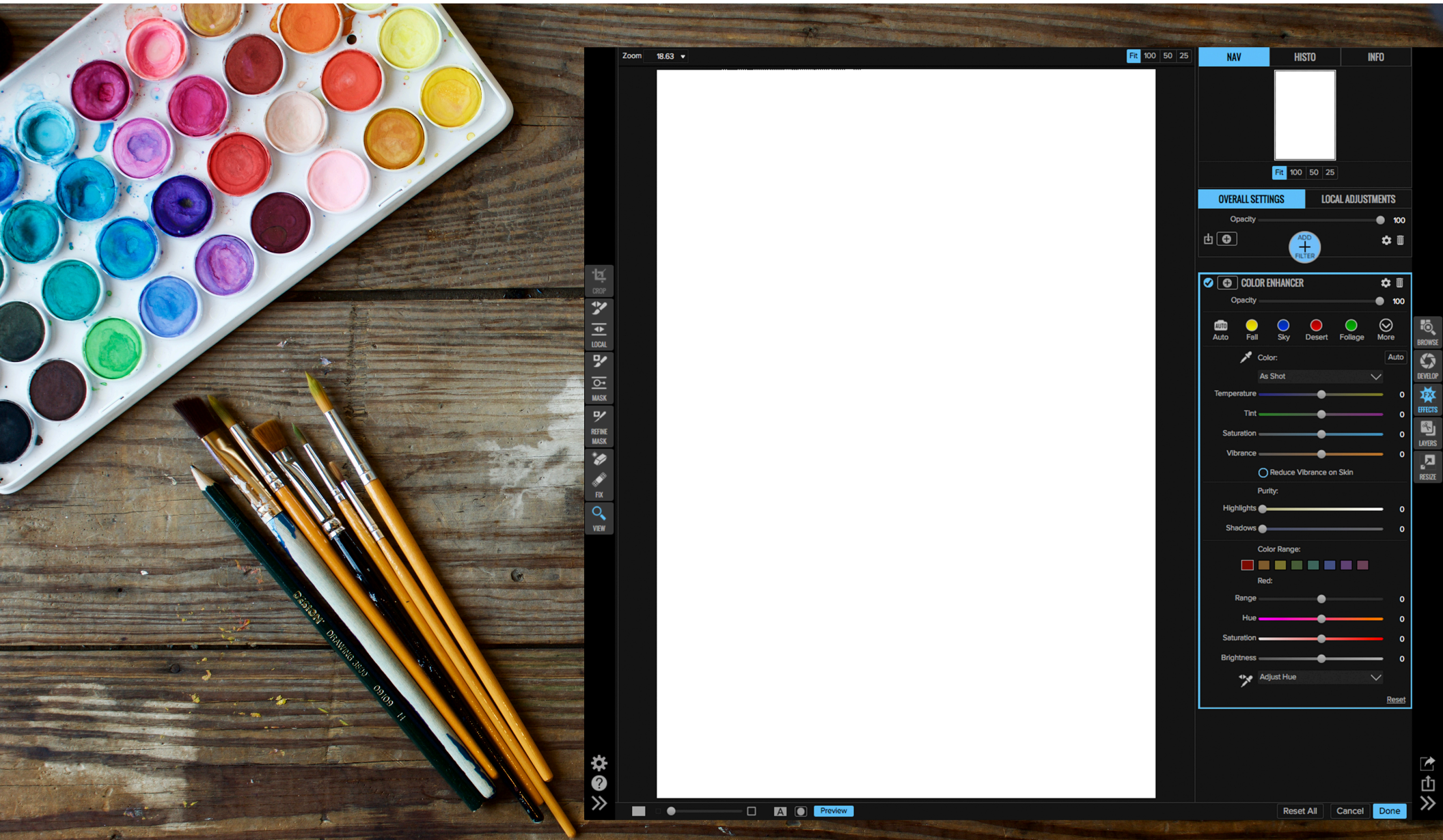


# Color Management & ON1 Photo



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# Overview of Color Management

Getting color out of your printer that matches what you see on screen is the job of your color management system. Both macOS and Windows have built-in color management systems that enable this, along with the apps that you use for photography. In order for color management to work properly, you need a profile for each of your devices.

The profile acts like a fingerprint for the color for a device. The color management system uses these profiles to translate the color interpretation of one device to another. In this guide I want to explain how color management works inside of ON1 Photo.





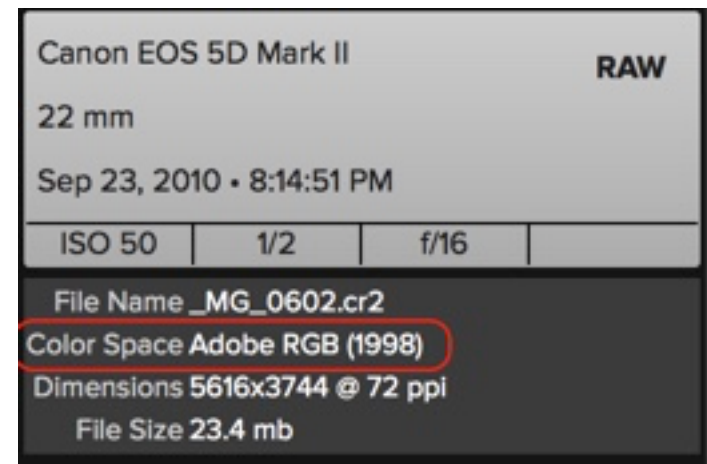
# Input

First let's start with the files you create. Most files these days are digital captures from your cameras or phones. Most of the time these use a very- common profile known as sRGB; However most advanced cameras can be set to photograph in Adobe RGB as well. Both of these profiles are also known as color spaces.

They are generic profiles that are large enough to contain a lot of color information vs actually describing the capabilities of a camera. When I have the choice, I always pick Adobe RGB instead of sRGB. It is a larger color space that preserves more vivid colors.

There are tools available that let you build custom profiles for your cameras so that they record colors more accurately to the scene. These tools are useful for commercial photographers you need to match the exact color of an item like apparel. At this time, ON1 Photo doesn't support assigning custom camera profiles.

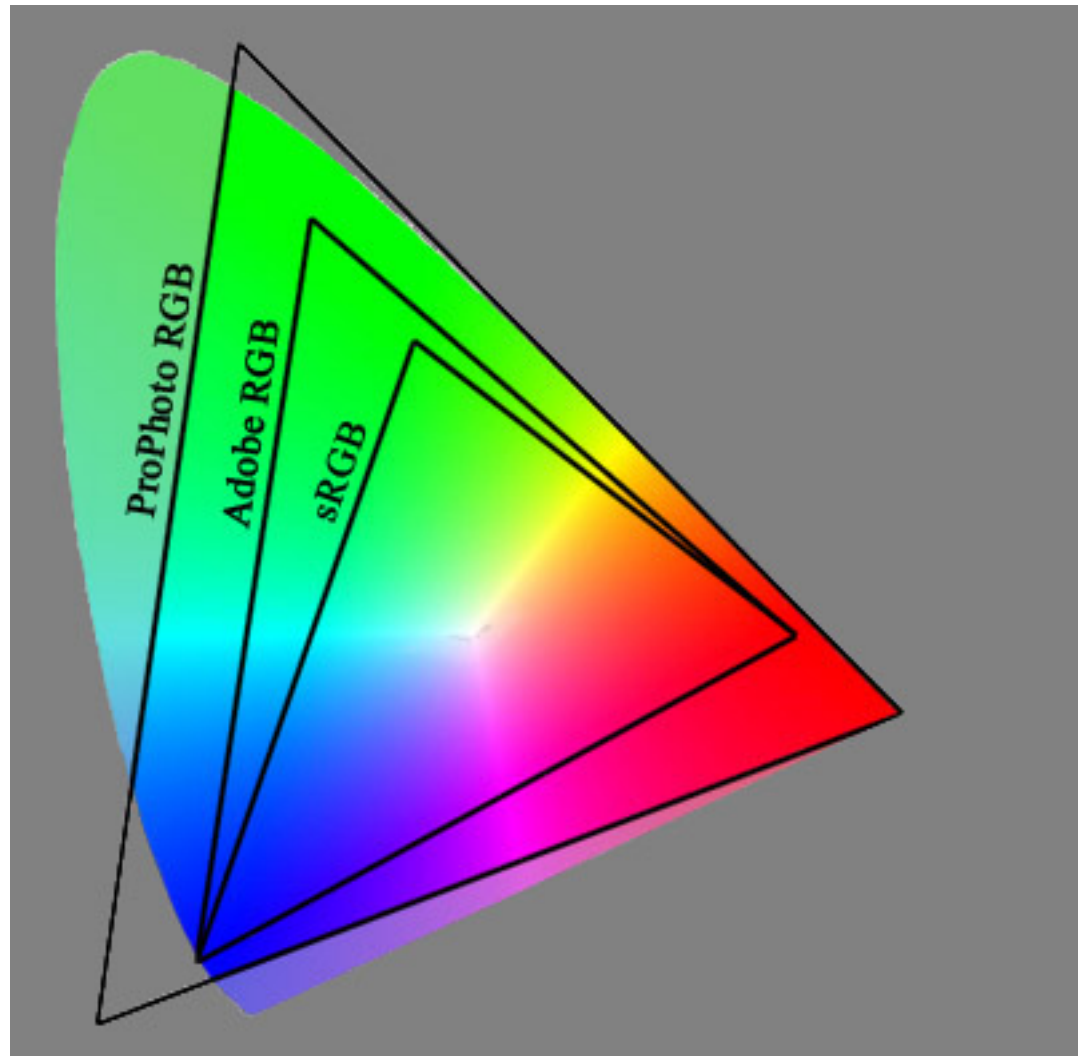
If you create a new document in Layers, the color space used is set in the preferences dialog. Again, for most users Adobe RGB is an excellent choice





# Working with Color

When you view or edit a photo in ON1 Photo, they are placed into ProPhoto RGB (aka ROMM RGB). This a giant color space that can contain all the colors of sRGB, Adobe RGB, and just about any other colors. Working in ProPhoto allows you to maintain all the original color and to make changes in the the most vivid colors and maintain the color details. RAW photos are opened directly into Pro Photo so you maintain every bit of color.



# Display

Getting your displays to accurately show the color in your photos is probably the most important part of color management. It's your window into the photo. It's what you use to make judgements about tone and color. If it isn't showing the photo

accurately, then you are making false judgements.



Getting your display to be accurate is easy, but it does require a special tool called a colorimeter or spectrophotometer. These are combined with software that comes with them to build a custom profile for your display. X-rite and Datacolor make affordable tools for this.

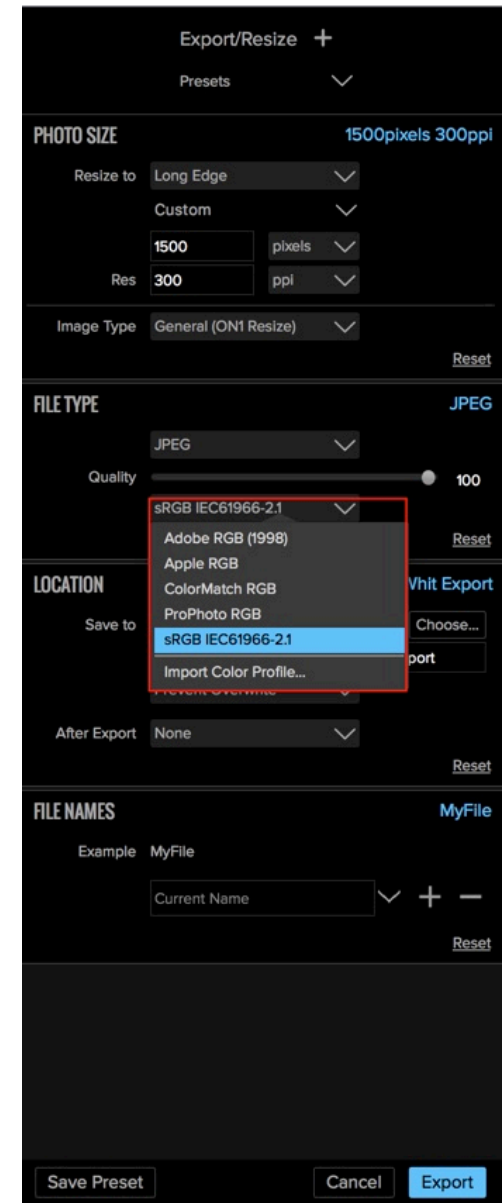
# Exporting

When you are done editing your photos you will often export copies for sharing or delivery to your lab or clients. When you export, you can select which profile you want your photos saved as. Generally this choice is dictated by where they are going. JPG photos you are exporting for websites or social media should be in sRGB.

If you are sending photos to a photo lab, it will depend on what their requirement uses. Most will use a common color space like sRGB or Adobe RGB, but some may use a custom profile for their printing equipment. You can import a custom profile in the export dialog.

When you export, it is the job of the color management system to translate or “squeeze” the color of the photo down to fit in the exported color space. This is done in a way that tries to maintain the relationship between the colors so that you don’t see any large changes in color in your exported photos.

Some applications offer what is known as soft proofing, which lets you simulate on your display what the exported or printed photo will look like. At this time, ON1 Photo doesn’t offer this, but it is a common request we are evaluating for the future.





# Printing

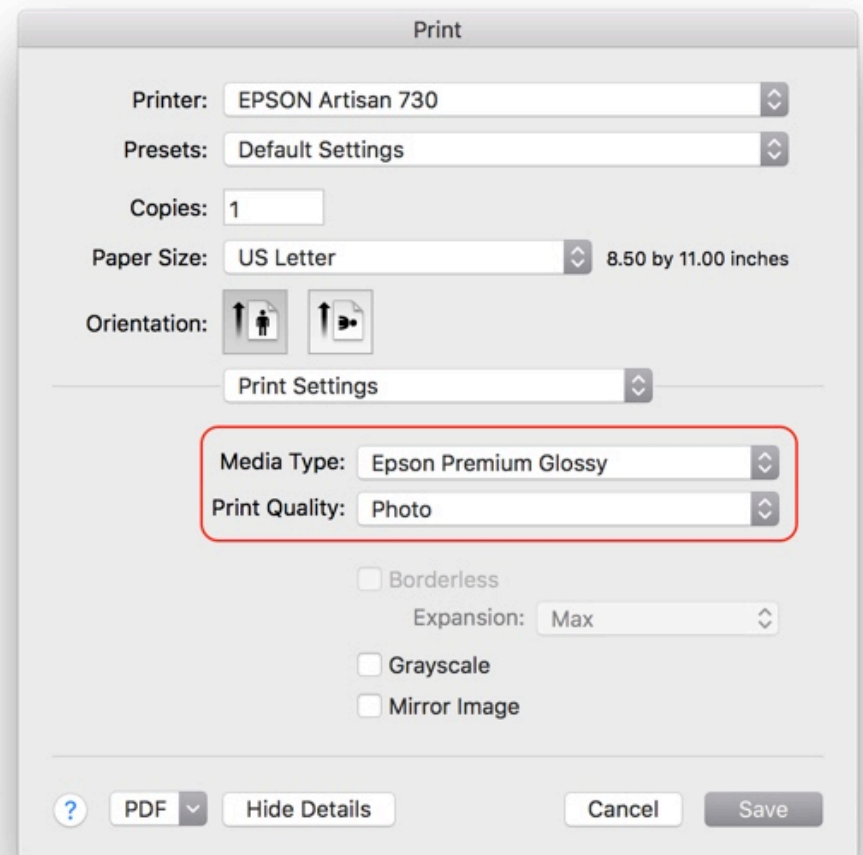
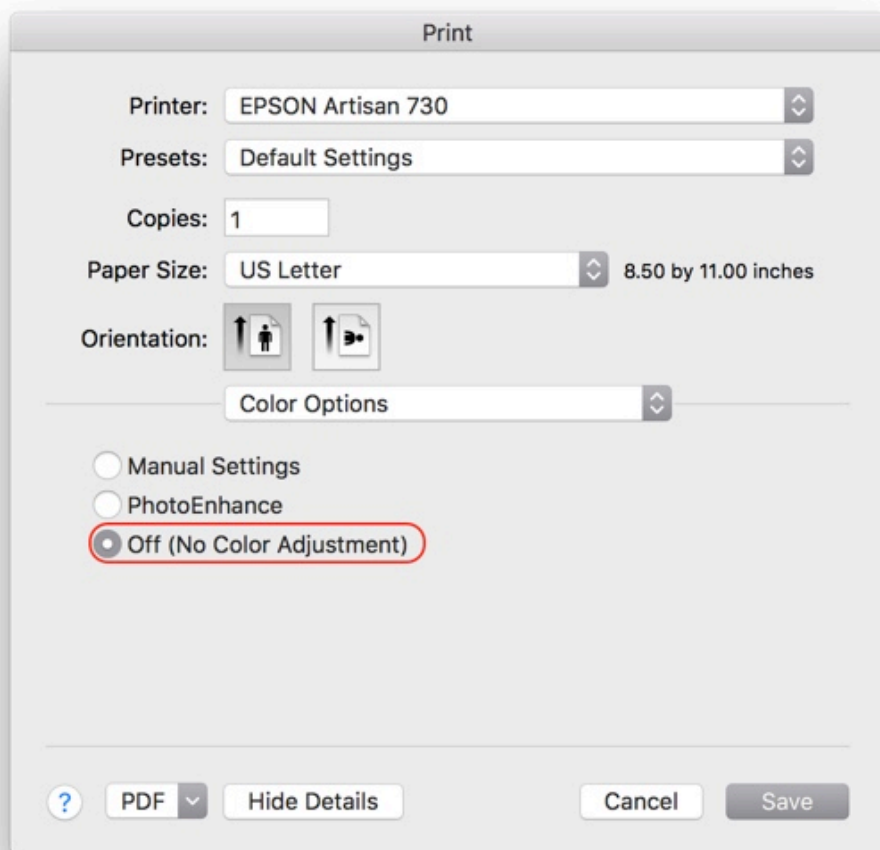
Printing is the place where color management is really important. Each printer and paper combination needs a profile that describes how it reproduces color. Today, most printers come with good profiles for stock papers. However if you use different papers or are looking for a perfect match to your monitor you will need a custom profile. Similar to the tools used to build a profile for your display, there are tools for building profiles for your printer. Again both X-Rite and Datacolor make tools for this. You print out a series of color swatches that you then measure with a tool called a spectrophotometer to build a custom profile. These custom profiles can be imported into the print dialog.

It is really important that you have the correct printer driver installed on your computer as well. Often times the operating system will install a generic driver, like AirPrint, so you don't have to download and install one. However these generic profiles don't include all the options or profiles needed for high-quality photo printing. Configuring the printer driver and the print dialog to work together is often a confusing point of failure when it comes to printing.



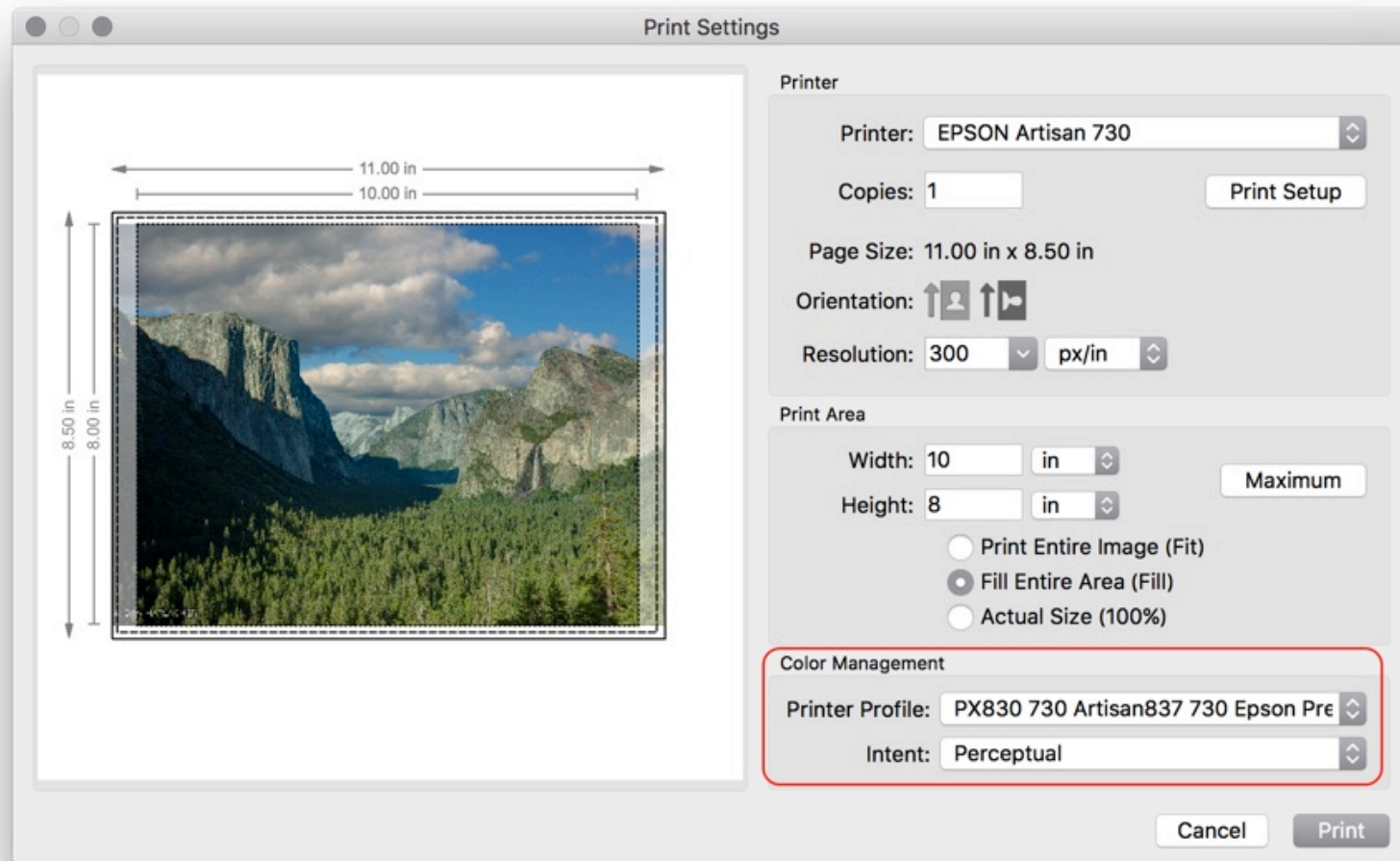
Below are the steps for my printer which you can use as a starting point for yours:

1. Open the Print Dialog
2. Configure the printer driver by clicking the Print Setup button — You need to select the correct paper type, print quality and most importantly, turn off the printer color management.



1. Press the Save button in the print driver to return back to the Print dialog.

2. Set the Printer Profile — Built-in profiles for your printer will be displayed here. Can can select one of these, or import your own. If you don't see the built-in profiles here, either your printer doesn't come with any, or you don't have the correct driver installed.





Last set the Rendering Intent. This controls how the colors will be squeezed down to fit in the relatively small range of colors your printer can print. As a general rule, if you are printing a landscape photo, use Relative Color metric. If you are printing a portrait, use Perceptual. If you can't decide, go with Perceptual.

