PIXMA PRO
DIGITAL PHOTO PRINT
ESSENTIALS
A printed photograph is a critical tool for a photographer to demonstrate his or her skills and style. Amazingly rich colors and highly defined details—pursuing photographic textures that reveal different expressions depending on the paper is a real pressure in printing your work. The Canon PIXMA PRO series arrives with its own advanced print software, Print Studio Pro, and with the newly introduced color mode, the PRO mode. These have been specifically created to offer high quality photograph printing in an easy, quick, and controlled manner. Experience the digital photo printing solution created for professional photographers.
This tutorial mainly explains how to use Print Studio Pro, a software package dedicated to the PIXMA PRO series, along with its history, course of development, and its range of settings over three sections.

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A new workflow for digital photo printing

Upgrading of PIXMA PRO-1
Using the functions described in this instruction requires upgrading PIXMA PRO-1.
For detailed instructions on the upgrade procedure, please visit: canon.com/PRO-1_UPGRADE
The conventional printing workflow relying on the image shot by the camera and the printed result is now changing to color management on the monitor.

It is indispensable to process photographs using a monitor to refine the data captured on a digital camera to the final printed work. However, there are a number of interrelated factors, listed below, within the process—from the time when the data is confirmed on a monitor, to the point when the picture is actually printed.

As color management technology that provided photographers with effective control of color reproduction on a monitor and transfer the settings to other software and devices became widespread, adjusting color tones on the monitor and reflecting the resulting colors in the final print is becoming increasingly mainstream. The optimum mode used for this workflow is the Use ICC Profiles mode, which requires the photographer to have sufficient knowledge of color management, including color space management.

If the photographic information captured by a camera is to be regarded as the foundation of the final production of the printed photograph, a monitor is used merely for confirmation of the mid-process. In this workflow, data correction and retouching are carried out looking at the printed results “without relying on color management” on a monitor. The Linear Tone in the existing PIXMA PRO series is the color mode suitable for this workflow.
Canon’s recommended workflow to enable photographers to reproduce monitor colors in prints

**The PRO Mode—A new color mode that all photographers can utilize with straightforward operations**

Color management is not simple unless you possess sufficient knowledge about “color space.” The PIXMA PRO series is now equipped with a new color mode, the “PRO mode,” to produce color prints that are close to the display monitor color rendition and designed particularly for sRGB color. This mode delivers printing results that give an impression close to that displayed on the monitor by correctly reflecting the data characteristics of the image taken with sRGB. Data calibration can be carried out based on the monitor output and this eliminates the necessity to create multiple prints for color confirmation and adjustment.

**Print Studio Pro** provides efficient printing in a color-managed environment

A correct profile is indispensable for obtaining the intended printing results in a color-managed environment. However, how to handle the profile may differ depending on the OS and software package. For this reason, the resulting print may render unintended colors.

Print Studio Pro, the plug-in software dedicated to the PIXMA PRO series, supports Canon Digital Photo Professional (RAW image editing software), Adobe Photoshop, Photoshop Elements, and Photoshop Lightroom (image editing software), significantly improving printing efficiency by providing a unified interface that integrates the printing functions of each software package.

**Adobe Photoshop print settings**

This is the series of operations and settings to print out the color-managed data from Photoshop (see page 22 for details).

Settings must be specified over three windows, as shown in the figure, and this can lead to erroneous operations and other mistakes.
Print Studio Pro realizes smooth printing by working together with Canon Digital Photo Professional and other image editing software.

Seamless operation with image editing software makes printing much simpler.

A wide range of supported software can handle different photographic device combinations.

Adobe Photoshop CS/CC
Adobe Photoshop Elements

Adobe Photoshop Lightroom

Canon Digital Photo Professional

Choose a photograph to print, then select Automate > Canon Print Studio Pro...

Choose a photograph to print, and select Plug-in Printing... > Print Studio Pro

Starting Print Studio Pro

Batch printing of multiple photos available

Color management working together with image editing software

Printing can be completed without opening the printer driver*

*In case of Mac, hit "OK" twice after opening the printer driver.

*For supported software versions, see the table on page 26.

A wide range of supported software can handle different photographic device combinations.
Easy and smooth fine printing with Print Studio Pro
Speedy, smooth, and accurate operations offered by Print Studio Pro’s advanced interface

Print Studio Pro, which is software dedicated to photo printing, reflects a variety of requests from professional photographers. This plug-in offers layout and a range of other functions for photographers to print their photographic data in an easy, quick, and controlled manner.

Evolved features to enable photographers to concentrate on creation

Large print preview area that retains the same color tone as in the corresponding image editing software and enables real-time correction

Operation panel can be flexibly switched to the enlarged Preview screen

Unobtrusive monotone window design enables users to concentrate on photographic adjustments

Evolved features for accurate and simple print settings

Simplify routine tasks from printing to layout by registering them with Add to My Settings

A single pane covers a range of print settings, from paper size to color management

Following the setting items from top to bottom completes the print adjustments easily and accurately

Evolved features for printing efficiency

Drag & drop to arrange the thumbnails in the order to print

Advanced options make batch printing efficient by creating a print job per page

Preview color tone consistent with image editing software

Print Studio Pro is preinstalled with the optimum Display Color Matching settings to ensure that the color tone displayed in Preview is consistent with the supported image editing software, including Digital Photo Professional and Adobe Photoshop.

These color matching settings enable color tone checking in Print Studio Pro, which functions far beyond a mere plug-in.
Smooth work flow leads from basic printing to contact sheet printing easily, quickly, and accurately

Following the setting items from top to bottom completes the print adjustments easily and accurately.

1. **Print Settings**
   - Basic settings, including printers, media type, paper size, and print quality, can be carried out here.
   - Detailed settings can be viewed by simply expanding each tab, enabling users to check all settings in one window.

2. **Layout**
   - By selecting the basic option, **Bordered x 1**, the border size can be changed as required using the slider or by inputting a value. It is also possible to resize or move the photo with direct mouse operations.

   Additional adjustments, such as trimming and rotation, can also be specified per photograph.

   **Customizable border depending on paper**
   - When using fine art paper with a rougher surface, a large border can nicely emphasize the paper texture.
   - Choosing the option, **Print the margin in black**, on a photographic paper suitable for borderless printing creates a photograph with a sharp impression.

3. **Print**

4. **My Settings**
   - Frequently used settings can be registered in the easy-to-access My Settings.
Index printing convenient for checking a set of photos

You can easily print a contact sheet with 20 photographs by selecting **Index 5x4** in **Registered Layouts**.

The number of photographs printed per sheet is variable to a maximum of 10 x 10, and the space between the photographs can also be specified based on your preference. By combining Text Settings, described below, you can create a contact sheet to your own original design.

Individual photographs can be accessed from the contact sheet and manually trimmed to fit the sheet. You can easily create a contact sheet with square-format thumbnails evenly spread across the sheet.

Various information can be added using text settings

Various information can be inserted within a print, including file name and shooting data, which can be convenient when filing photographs. It is also possible to output Print Settings along with the photograph on the print for the future reference.
Easy operations is the answer to demands for higher quality in color and black & white printing

If you want further adjustment, the printing results can be finely tuned by using the **Correction** function of Print Studio Pro—without altering the original data.

By using the **Pattern Print** function in Print Studio Pro, you can view multiple images with varying color tones on one sheet.

 Thumbnails with slightly varying brightness, color tone, and contrast values are printed side by side, and the setting values appear below the thumbnails; you can then perform precise color adjustments by entering the values of the selected thumbnail. As you can make adjustments while viewing the actual color tones to be printed, you can avoid ending up with color tones that differ from what you want.

Load the same paper as that for the final printing, and print the image with Pattern Print. To print the image with corrected colors, type the values shown under the thumbnail with the ideal color balance in the color fields before printing.
High quality Black and White Photo Print with easy operations

The PIXMA PRO series delivers a black and white print with little color shift by utilizing gray ink.

When the Print Black and White Photo checkbox is selected in Print Studio Pro, a stable balance is achieved by combining gray and black ink.

In Print Studio Pro, you can finely adjust color tones for black and white printing. Subtle color tones can be produced by combining with the color adjustment function in your image editing software. Also, specified settings can be stored so you can easily print with the same settings repeatedly.

You can finely adjust colors by selecting the Cool Tone, Black and White, Warm Tone, and manual methods. Pattern Print is also useful to find the optimum color tone by viewing images with slightly varying color tones at one time.

Printing on textured paper may result in a significantly different image from that on the monitor. Making substantial changes to the contrast and brightness of the image and outputting it with Pattern Printing can accelerate the process of identifying the optimum result.
Use ICC Profile mode for experts who utilize Adobe RGB’s wide color range

Use ICC Profile mode can print an image utilizing the printer’s functions to maximum

While the newly introduced PRO mode offers easy-to-use color-management functions for all photographers, the Use ICC Profile color mode is designed for photographers who are accustomed to working with color management and understand the differences between Adobe RGB and sRGB and their impact on printing.

The color conversion used in the Perceptual rendering intent under the Use ICC Profile mode was improved in PIXMA PRO series to create a print that is closer to its appearance in the monitor.

Taking a photograph in RAW format

Photo data can be checked in easy, quick, and controlled operations in Print Studio Pro, the printer plug-in software

In Adobe RGB, improved perceptual rendering intent provides a print closer to the monitor color

The Use ICC Profile mode—For photographers who utilize the wider gamut available in Adobe RGB

Confiming the data on a monitor that supports Adobe RGB

Confirmed the data on a monitor that supports Adobe RGB

Printing colors beyond the sRGB color gamut

Printing colors beyond the sRGB color gamut

Same Color Conversion Result as with Adobe Photoshop

Print Studio Pro uses the Color Management Module (CMM) standard to the OS when colors are converted in the Use ICC Profile mode.

However, Adobe Photoshop uses the company’s own Adobe CMM as the software’s standard CMM, and therefore the color conversion results are slightly different in the strict sense.

Only when Print Studio Pro is running on a 32-bit OS and Adobe CMM is installed, the Color Matching Method setting under the Use ICC Profile mode can be altered to the Adobe CMM setting to deliver the same color conversion as specified in Adobe Photoshop.
Choose the optimum color space—either Adobe RGB or sRGB

The color space that sRGB offers is reproducible on many devices, while Adobe RGB’s color space is richer and more vivid, drawing the maximum performance of the PIXMA PRO series printers.

However, using sRGB as the standard is recommended among the devices used within your working environment if you aim to achieve a unified color appearance and output throughout your work environment.

Visible region

Adobe RGB

sRGB

Different print results depending on the Rendering Intent method

When the color gamut on a monitor and that of the combination of printer and paper are significantly different, colors beyond the monitor gamut are reproduced on a printer through rendering intent. Among the different methods to achieve this rendering intent, you can choose Relative Colorimetric in addition to Perceptual in Print Studio Pro.

It is more likely that choice of different rendering intent methods on a paper with a smaller reproducible color range, such as fine art paper or specialty paper, results in different color tones.

Perceptual (recommended): Prints by utilizing the color space that can be reproduced on the printer. Select this when you want to print with an impression close to that on the monitor, as the characteristics of the data displayed on the monitor will be reflected correctly.

Relative Colormetric: Converts the image to the printer’s color space in a way that the image’s colors that are within the color gamut of the printer are reproduced to the nearest level. Select this when you want to print in colors that are close to the original image.

Sample photo with tones suitable to work and print using Adobe RGB
Great paper versatility enables the delivery of quintessentially deep, artistic expressions from printed photographs

Variety of ICC profiles covering genuine Canon paper and other major third-party papers

Inkjet printers use many types of fine art paper, which are classified according to base paper and structure. Using a different type of paper will give printed photographs a totally different look. Find and select the paper you want to use from various types such as Canon genuine paper and paper from other manufacturers.

**Baryta paper**
Baryta refers to barium sulfate, a material used to coat a paper to make it whiter. With its characteristically beautiful texture, baryta paper is commonly used by professional photographers to print photographs for exhibitions or for framed displays.

**RC paper**
RC stands for “resin coated,” where the surface of the base paper is coated with resin. Since glossiness can be controlled by changing the resin layer processing, there is a wide variety of RC-based papers, from high gloss to subdued semi-gloss.

**Art material paper**
The base paper is paper used for printmaking, watercolor painting or other forms of fine art but its surface is processed for inkjet printers. It has a unique texture enabling you to enjoy the pursuit of expressions that take advantage of the rough surface or the paper base tint.

**Photo canvas paper**
Media made from flax or cotton cloth for oil painting or acrylic painting is called a “canvas.” Luxurious photo canvases are made of woven cotton coated with polyester using the same method as that for printing papers using photographic paper as base paper.

**Washi paper**
“Washi” (Japanese paper) refers to papers made of materials with methods that originated in Japan. Their unique characteristics set Washi papers apart from other “western” types of papers. Washi is made from the barks of kouzo, a certain member of the mulberry family, mitsumata (also known as the Oriental paperbush), and other Japanese trees. It contains longer fibers than western paper.
Canon genuine fine art paper that draws out the full potential of PIXMA PRO

**Canon Photo Paper Pro Platinum Glossy**
This glossy photo paper with unparalleled texture and performance is the ultimate choice for both professional and advanced amateur photographers.
- Weight (gsm): 300
- Thickness (µm): 300
- ISO whiteness (%): 98

**Canon Photo Paper Pro Luster**
This “microporous” glossy paper with subdued texture possesses instant drying properties and is a great choice for professional photographers who seek high productivity. Since it is relatively insensitive to lighting variations, this paper is suited to photographs for exhibitions or display.
- Weight (gsm): 260
- Thickness (µm): 260
- ISO whiteness (%): 92

**Canon Photo Paper Premium Matte PM-101**
This high-quality matte photo paper yields a smooth finish and possesses exceptionally rich colors.
- Weight (gsm): 210
- Thickness (µm): 310
- ISO whiteness (%): 92

**Canon Photo Paper Glossy Gold**
Using the same base paper as silver halide photographic paper, this photo paper with a thick texture and a high-glossy feel produces remarkable, high-quality photo prints.
- Weight (gsm): 275
- Thickness (µm): 270
- ISO whiteness (%): 92

**Canon Photo Paper Semi-Gloss**
The velvety texture of this semi-gloss paper gives your photos an amazingly rich quality.
- Weight (gsm): 260
- Thickness (µm): 260
- ISO whiteness (%): 91

For other major third-party papers, visit the Canon website for information and to download ICC Profiles

The PIXMA PRO series printers support a wide variety of paper types, including glossy paper, art paper and specialty paper. With regard to other major third-party papers, the printers come with two driver settings for glossy papers, and two settings for art papers. Additionally, ICC Profiles of many more types of third-party papers are available. These provide great assistance to professional photographers in their artwork creation.

The Canon website lists some of other third-party papers compatible with the Canon inkjet printer PIXMA and explains how to create an ICC profile and printer driver settings. Some papers can be used without ICC profile settings. Please download profiles as needed.

Please note that Canon Inc. does not guarantee that printing tasks will be accomplished normally when using the papers introduced here and on the Canon website.
Advanced color adjusted printing that even takes into account the light source in the exhibition space

If the color temperature of the light in the environment where printed photographs are exhibited is considerably different from the recommended ambient light, the colors adjusted in the working environment are likely to be seen differently in the exhibition.

The **Ambient Light Correction** mode can correct the color tone of the print to be seen as originally intended in the exhibition environment. Printing in this mode produces the colors perceived as incorrect in the working environment, but which will be perceived correctly in the exhibition environment.

*The Ambient Light Correction color mode is only available in Windows Vista, Windows 7, and Windows 8.*
Use the Digital Photo Professional to realize the fullest potential of the captured photo data

Use the Digital Lens Optimizer in the Digital Photo Professional to print sharper-looking photos

While applying a sharpness filter of image development software or image processing software increases the sharpness of a photograph, using the Digital Lens Optimizer of the Digital Photo Professional dramatically sharpens raw images that were shot with a compatible EF lens. With functions and filtering processes established for each EF lens it supports, the Digital Lens Optimizer corrects lens-related optical effects such as aberrations or diffractions. It achieves significant improvement of resolution and descriptive quality at the periphery of the image, resulting in far greater improvement of overall print quality.

The Digital Lens Optimizer offers various correction data for a wide range of lens types. Download the data appropriate for your lens.

Reduce lens aberrations to produce sharp images from photos taken with a large aperture

Use of a wide-open aperture tends to produce noticeable aberrations. Applying the Digital Lens Optimizer reduces lens aberrations and gives images a very sharp finish. You will no longer need to think twice about using any aperture you want—whether a high-speed shutter to capture a quick moment or a large aperture to achieve a deliberate blur.

The Digital Lens Optimizer can sharpen images, including those taken with a wide-open aperture, as well as the periphery of images, which are often associated with lens aberrations. This means you have more leeway when selecting an appropriate framing and shutter speed.

Reduce diffraction to sharpen every corner of photos shot with a small aperture

While deep focus is an effective photographic technique, many photographers hesitate to use a small aperture because increasing the depth of field often cause diffraction, resulting in lack of sharpness in the photograph. The Digital Lens Optimizer eliminates these concerns. You can use a small aperture anytime to capture any scene.

Lack of image sharpness, a phenomenon that often occurs to photos taken with a small aperture to highlight depth of field, is eliminated to create a sharp, clear look over the entire image.
Tips on how to deliver optimum photo printing
More accurate color management through calibration between monitor and printer

Notes on monitor calibration

Ambient light significantly influences the perception of colors displayed both on a monitor and on a print. Therefore, it is important to select the appropriate ambient light (i.e., a fluorescent lamp) when working on color management.

<table>
<thead>
<tr>
<th>Notes on monitor calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ambient lighting</strong></td>
</tr>
<tr>
<td><strong>recommended by Canon</strong></td>
</tr>
<tr>
<td>D50 fluorescent lamps designed for color evaluation (color temperature: 5000 K, high color rendering properties)</td>
</tr>
<tr>
<td>Brightness when viewing printed materials: 500 lx ± 125 lx</td>
</tr>
<tr>
<td>*Can be replaced by a daylight fluorescent lamp</td>
</tr>
</tbody>
</table>

Notes on ambient light

- Avoid mixed light
- Use an achromatic color as a background when working on photos
- Avoid outside light
- Avoid reflections from wallpaper, posters, etc.

Using a desk lamp as a fill light

If changing the lighting of the whole room to fluorescent lamps designed for color evaluation is not a practical option, you can use a fluorescent desk lamp.

- An LED lamp is not suitable due to its low color rendering properties

Monitor Calibration

Changing colors in photographic data on an uncalibrated monitor often causes a variation in colors between the monitor and printer. This is why the monitor needs to be adjusted in advance. Using the monitor’s color calibration function, adjust the settings. For even higher adjustment accuracy, make adjustments using a measuring instrument. Monitor adjustment using a monitor calibration tool measures the monitor’s setting values automatically with a color sensor, and adjusts the color tone by creating an ICC profile for the monitor. In addition, by setting the created ICC profile on the computer, you can display accurate color tones.

<table>
<thead>
<tr>
<th>Monitor setting values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>recommended by Canon</strong></td>
</tr>
<tr>
<td>Gamma: 2.2</td>
</tr>
<tr>
<td>Color temperature: D50 (5000 K)</td>
</tr>
<tr>
<td>Luminance: 120 cd/m²</td>
</tr>
</tbody>
</table>

Monitor calibration tips

- After powering on, wait until the monitor warms up before measuring
- Calibrate regularly to maintain stable color reproduction

Accurate retouch

Enables subtle adjustments of color tones and brightness of the artwork.

Accurate color management

No printing for adjustment will be needed since you can print in the same color tones as seen on the monitor, thus saving ink, paper, print time, etc.

Reduces changes in the monitor’s color reproduction

- By periodically creating and using an ICC profile with a calibration tool, changes in the monitor’s color reproduction can be reduced.
Color Management Tool Pro is Canon’s own application software equipped with functions to calibrate a printer and create an ICC profile.

An ICC profile can be created with the application software provided with the monitor calibration tool; however, Color Management Tool Pro creates an ICC profile optimized for Canon printers.

To minimize color differences among prints of the same data output from different printers

To obtain long-term stable output minimizing output variations caused by device combinations and device aging

Print the charts

Measure the charts

Create an ICC profile

Calibrate the printer

*PIXMA PRO-100 does not support the printer calibration function.
Create a workflow with settings optimized for different purposes

Securing optimum image resolution for prints

For photo prints for general viewing, an image resolution of 300 ppi (pixels per inch, 1 inch = 2.54 cm) is generally thought to be sufficient, which covers A3 Plus for a photo taken by the EOS 5D Mark III camera with 22.3 M pixels (5760 x 3840).

The PIXMA PRO series printers support a maximum of 1200 ppi input depending on the combination of media type and Print Studio Pro (or other software). This capability enables high definition images greater than 600 ppi created by stitching to be printed without loss of information.

<table>
<thead>
<tr>
<th>Size</th>
<th>No. of pixels in 300 ppi print</th>
<th>No. of pixels in 600 ppi print</th>
</tr>
</thead>
<tbody>
<tr>
<td>A3+</td>
<td>3886 x 5705</td>
<td>7772 x 11410</td>
</tr>
<tr>
<td>14&quot; x 17&quot;</td>
<td>4205 x 5102</td>
<td>8409 x 10205</td>
</tr>
<tr>
<td>A3</td>
<td>3508 x 4961</td>
<td>7016 x 9922</td>
</tr>
<tr>
<td>10&quot; x 12&quot;</td>
<td>3000 x 3602</td>
<td>6000 x 7204</td>
</tr>
<tr>
<td>A4</td>
<td>2480 x 3508</td>
<td>4960 x 7016</td>
</tr>
<tr>
<td>8&quot; x 10&quot;</td>
<td>2398 x 3000</td>
<td>4796 x 6000</td>
</tr>
<tr>
<td>2L</td>
<td>1500 x 2102</td>
<td>3000 x 4204</td>
</tr>
<tr>
<td>4&quot; x 6&quot;</td>
<td>1205 x 1795</td>
<td>2410 x 3590</td>
</tr>
<tr>
<td>Hagaki</td>
<td>1181 x 1748</td>
<td>2362 x 3496</td>
</tr>
<tr>
<td>L</td>
<td>1051 x 1500</td>
<td>2102 x 3000</td>
</tr>
</tbody>
</table>

Full 16-Bit workflow prevents image quality degradation caused by banding

Since Print Studio Pro supports 16-bits-per-channel image data, you can receive the data as is from image editing software without degrading it, and print High Dynamic Range images (full 16-bit workflow).

Color adjusting in 16 bits per channel reduces degradation of image quality caused by banding (gradient stepping), as 16-bit processing can offer 65,536 levels of gradation compared to 256 levels in 8-bit. Printing High Dynamic Range images (full 16-bit workflow) also produces smoother gradations compared to printing 8-bits-per-channel images.

Recommended full 16-bit workflow

* In Windows, an XPS printer driver must be selected for 16-bits-per-channel printing.
A pigment is a particulate, water-insoluble coloring material; ink particles remain on the paper surface. Because of the water insolubility, blurring can be reduced, even when wet.

Dye is a water-soluble coloring material; ink seeps into the paper together with the water contained in the ink. The ink leaves no roughness on the paper, and the print result will be more vivid than that using pigment ink.

Printing on gloss paper using pigment ink sometimes results in uneven glossiness due to the light dispersion caused by the varying height of the adhering ink. Chroma Optimizer, Canon’s own transparent ink, comes with PIXMA PRO-1 and PRO-10 and solves this problem. The ink helps provide uniform glossiness by evenly coating the surface of the print.

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Pigment ink</th>
<th>Dye ink</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Water resistant and less blurring</td>
<td>– Excellent color saturation on gloss paper</td>
<td>– Water resistant and less blurring</td>
</tr>
<tr>
<td>– Prints have excellent stability and longevity</td>
<td>– Prints have excellent stability and longevity</td>
<td>– Prints have excellent stability and longevity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disadvantages</th>
<th>Pigment ink</th>
<th>Dye ink</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Print on gloss paper may produce uneven appearance due to reflections</td>
<td>– Weak against water and easily blurs</td>
<td>– Print on gloss paper may produce uneven appearance due to reflections</td>
</tr>
<tr>
<td>– Weak against rubbing and pealing</td>
<td>– Some types of dye ink show less print stability and longevity compared with pigment ink</td>
<td>– Weak against rubbing and pealing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tips</th>
<th>Pigment ink</th>
<th>Dye ink</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Use Chroma Optimizer to eliminate the uneven ink surface</td>
<td>– Dry prints thoroughly until the ink becomes stable (leave 24 hours or longer before framing the picture)</td>
<td>– Avoid contact with glass and other flat surfaces in storage</td>
</tr>
<tr>
<td>– Avoid contact with glass and other flat surfaces in storage</td>
<td>– Store in relatively air-tight conditions, such as framing with a glass cover</td>
<td>– Avoid contact with glass and other flat surfaces in storage</td>
</tr>
</tbody>
</table>

Selecting the Clear coat the entire page checkbox in Print Studio Pro specifies Chroma Optimizer to be printed to make the entire paper surface even, including non-colored paper areas.

How to protect printed photographs from fading

Over time, the colors of printed photographs will fade to some degree. The degree of color fading largely depends on the conditions of the environment where a photograph is stored, such as air and lighting exposure. The less exposure to air, the less photograph color degradation/fading takes place.

To minimize color degradation and fading and maximize the life of your printed photos, you may wish to keep your photos framed, in an album or in plastic sleeves. In particular, framing is recommended, as it makes your work look even more attractive while protecting it from fingerprints, water spillage, and other external factors.

Guide to framing to ensure the maximum life of your print

- Dry fully before framing.*
- Do not dry with a hair dryer or in direct sunlight.
- Do not use acid or adhesive laminates.
- If framed behind glass, ensure that some space is left between the image and the glass.
- Avoid using a UV protection spray or other chemical product that may cause yellowing over time.
- Avoid storing or displaying in areas exposed to direct sunlight or intense light.
- Avoid high temperature and high humidity. Store or display in an area at normal room temperature and under normal conditions.

* To learn how to handle photo paper, please read the instructions printed on the packaging of your paper products.
Print settings to directly print with the PIXMA PRO from image editing software

Print settings to directly specify an ICC profile from Adobe Photoshop

An ICC profile can be specified directly from Adobe Photoshop when printing photo data without using Print Studio Pro.

Note that the Adobe CMM (Color Management Module) color conversion engine is used when using Adobe Photoshop’s printing function. As this engine uses a different color conversion method from that of Print Studio Pro’s color engine, your printer may not produce the same color tones as printed from Print Studio Pro, even when the printing conditions—including the paper—are the same.

Photoshop print settings (for both Windows and Mac OS X)

In the Color Management pane of the Photoshop Print Settings window, select Photoshop manages colors in the Color Handling pull-down menu. Specify the appropriate profile in the Printer Profile menu to suit the loaded paper.

Deselect the Black Point Compensation checkbox. The Canon printer profile assumes that this Black Point Compensation checkbox is turned off. If it is selected, the shadows may be printed lighter than expected.

Printer driver settings

Windows:
Open the Manual Color Adjustment dialog box from the Printer Properties window. In the Matching tab, select None under the Color Correction pull-down menu.

Mac OS X:
Selecting Photoshop Manages Colors overrides printer driver settings. No additional setting is required.

Photoshop print settings (Adobe Photoshop CS6)

*Although the screen interface may vary depending on the OS or software versions, the setting items remain the same.
### PIXMA PRO-1/PXMA PRO-10/PXMA PRO-100 Minimum system requirements for PC

<table>
<thead>
<tr>
<th></th>
<th>PIXMA PRO-1</th>
<th>PXMA PRO-10/PXMA PRO-100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Windows</strong></td>
<td>Windows 8, Windows 7, Windows 7 SP1, Windows Vista SP1, Windows Vista SP2,</td>
<td>Windows 8, Windows 7, Windows 7 SP1, Windows Vista SP1, Windows Vista SP2, Windows XP</td>
</tr>
<tr>
<td></td>
<td>Windows XP SP3 (32-bit only)</td>
<td>XP SP3 (32-bit only)</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Operation can only be guaranteed on a PC with Windows 8, Windows 7, Windows</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vista or Windows XP pre-installed.</td>
<td></td>
</tr>
<tr>
<td><strong>Mac</strong></td>
<td>OS X 10.8, Mac OS X v10.7, Mac OS X v10.6, Mac OS X v10.5.1</td>
<td>OS X 10.8, Mac OS X v10.7, Mac OS X v10.6, Mac OS X v10.5.8</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Hard Disk must be formatted as Mac OS Extended (Journaled) or Mac OS Extended.</td>
<td></td>
</tr>
</tbody>
</table>

**Browser**<for viewing on-screen manual>:

**Windows**: Internet Explorer 6 –

**Macintosh**: Safari 3 –

**CD-ROM Drive**: ✓

**Display**: XGA 1024 x 768

### Print Studio Pro System requirements

**Print Studio Pro is plug-in software.**

<table>
<thead>
<tr>
<th></th>
<th>Windows</th>
<th>Mac</th>
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</thead>
<tbody>
<tr>
<td><strong>Supported OS</strong></td>
<td>- Windows XP (32bit) SP3 or later&lt;br&gt;- Windows Vista (32bit/64bit) SP1 or later&lt;br&gt;- Windows 7 (32bit/64bit)&lt;br&gt;- Windows 7 (32bit/64bit) SP1&lt;br&gt;- Windows 8 (32bit/64bit)&lt;br&gt;*.NET Framework 4.0 has to be installed beforehand.</td>
<td>- Mac OS X 10.5.8 or later&lt;br&gt;- Mac OS X 10.6.x&lt;br&gt;- Mac OS X 10.7.x&lt;br&gt;- OS X 10.8.x</td>
</tr>
<tr>
<td><strong>Supported CPU</strong></td>
<td>Windows&lt;br&gt;- Intel x86-compatible CPUs (32- or 64-bit) excluding IA-64</td>
<td>Mac&lt;br&gt;- Intel CPUs (32- or 64-bit)&lt;br&gt;*PowerPC is not supported nor installable.</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>XPS Essentials Pack is required to print with Print Studio Pro on Windows XP.</td>
<td></td>
</tr>
<tr>
<td><strong>Supported applications</strong></td>
<td>- Canon Digital Photo Professional Ver. 3.12 or later&lt;br&gt;- Adobe Photoshop CS4, CS5, CS5.1, CS6, CC&lt;br&gt;- Adobe Photoshop Elements 8, 9, 10, 11&lt;br&gt;- Adobe Photoshop Lightroom 2.7, 3.x, 4.x or later</td>
<td></td>
</tr>
</tbody>
</table>

### Digital Photo Professional Ver. 3.13 System requirements

<table>
<thead>
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<tbody>
<tr>
<td><strong>Supported OS</strong></td>
<td>- Windows XP (32bit) SP3 or later&lt;br&gt;- Windows Vista (32bit/64bit) SP1 or later&lt;br&gt;- Windows 7 (32bit/64bit)&lt;br&gt;- Windows 7 (32bit/64bit) SP1&lt;br&gt;- Windows 8 (32bit/64bit)</td>
<td>- Mac OS X 10.6&lt;br&gt;- Mac OS X 10.7&lt;br&gt;- OS X 10.8</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Pentium 1.3GHz</td>
<td>Intel processor</td>
</tr>
<tr>
<td><strong>Computer Model</strong></td>
<td>Above OS pre-installed models with built-in USB ports</td>
<td></td>
</tr>
<tr>
<td><strong>CD-ROM Drive</strong></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
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Macintosh, Mac and Safari are trademarks of Apple Inc., registered in the U.S. and other countries.
Adobe, Photoshop, Photoshop Elements and Photoshop Lightroom are either registered trademarks or trademarks of Adobe Systems Incorporated in the U.S. and/or other counties.
X-Rite and ColorMunki are either registered trademarks or trademarks of X-Rite, Incorporated.
All other product and brand names are trademarks of their respective owners.

Print samples are inset image.
Part of images and animations appear in this Flash movie is conceptual.
User interface varies depending on the model.
Actual product logo, and user interface such as button symbols and on-screen messages vary by model or region.

Specifications are subject to change without notice.
Canon