



Color Management Software

ColorNavigator 7



Dedicated Color Management Software for ColorEdge

ColorNavigator 7

Advanced Photo Printing Instructions

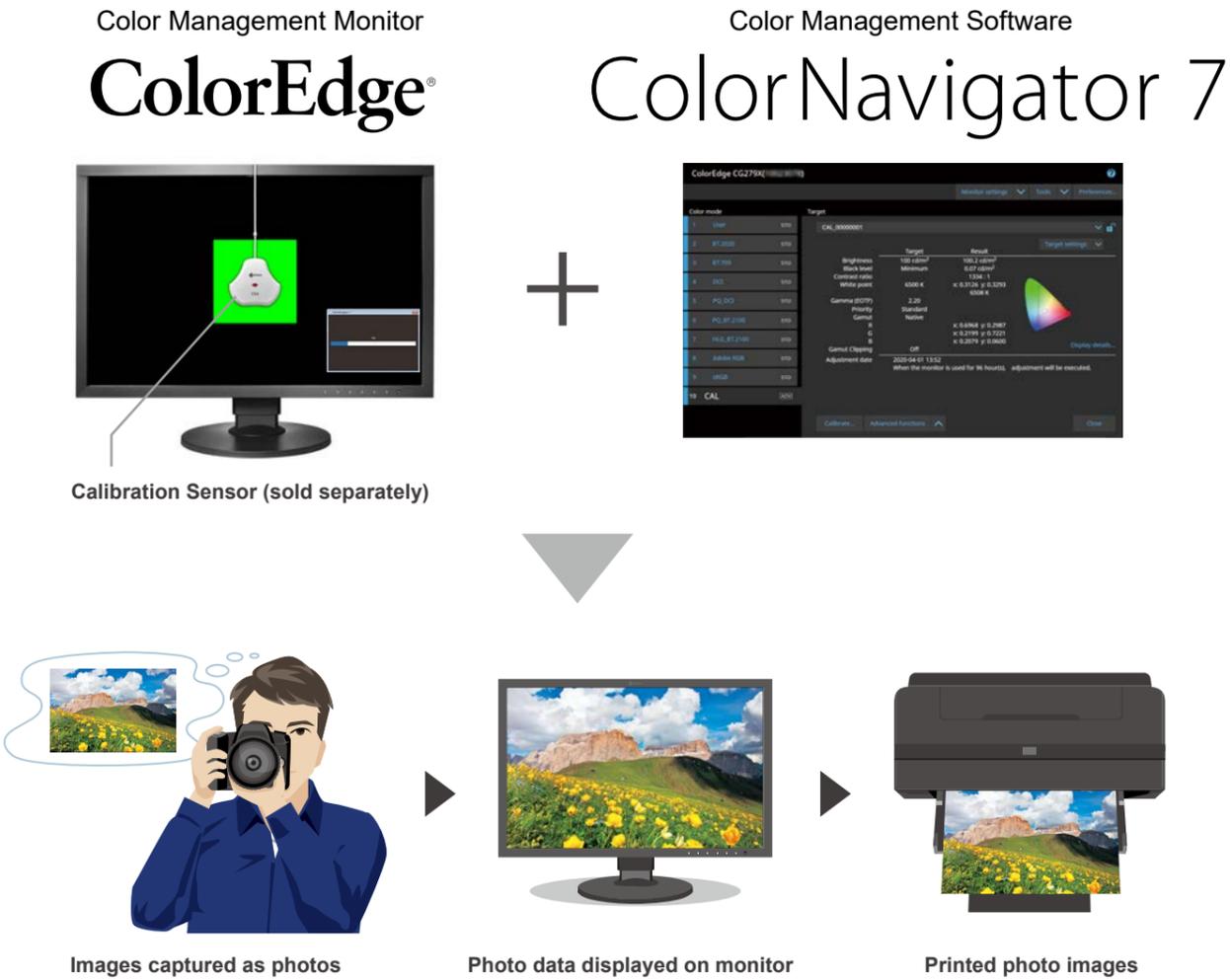
This booklet introduces the procedure on how to enjoy printing photo data at home.

If any of the following applies, please see the user's manual available on the ColorNavigator 7 download site:

- Using ColorNavigator 7 for businesses
- Using ColorNavigator 7 for creating web content, etc.
- Using ColorNavigator 6

www.eizoglobal.com/products/coloredge/cn7/index.html

Calibrating ColorEdge monitor display with ColorNavigator 7 produces accurate colors.



By calibrating the monitor and configuring the retouching software and the printer correctly, colors are adjusted between data displayed on the monitor and photo images to be printed. (Color Matching)

With correct color matching, captured photos can be displayed exactly as you imagined. Precise retouching using spot-on colors is also possible. Enjoy making creative content exactly the way you want it to be!

What is Calibration?

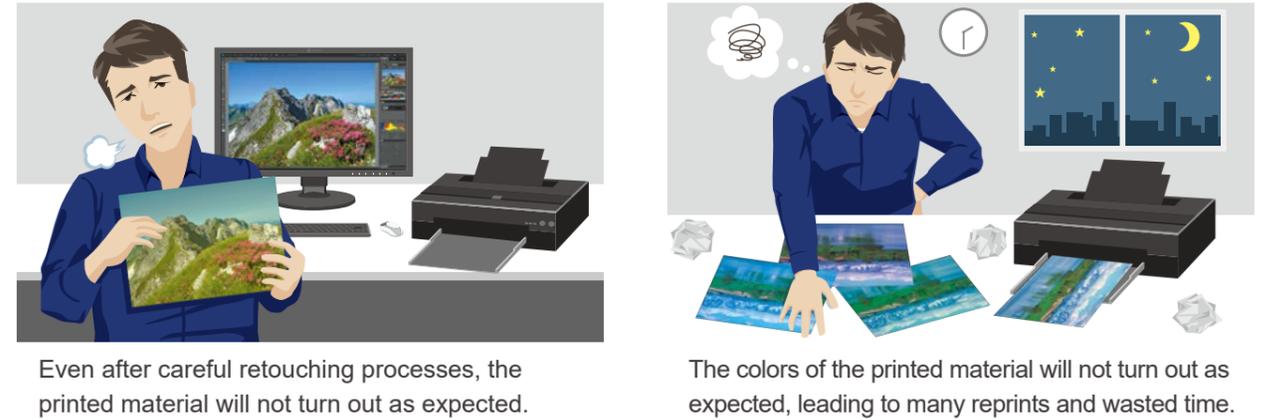
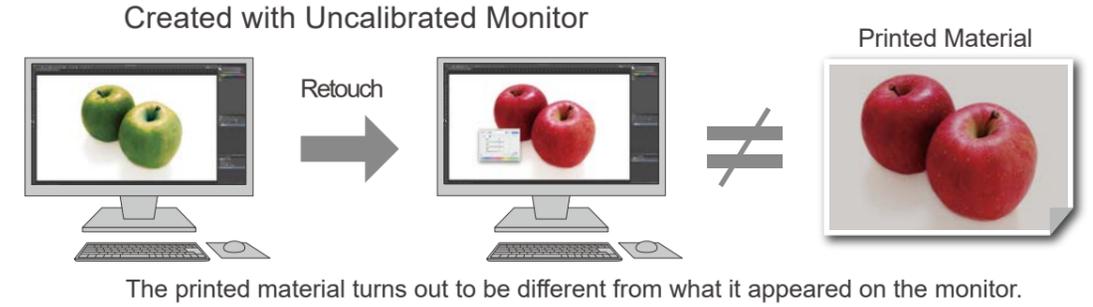
Calibration is a process of adjusting the display by referencing values measured by the sensor so that the device is configured to produce the target display results.

What is a Calibration Sensor?

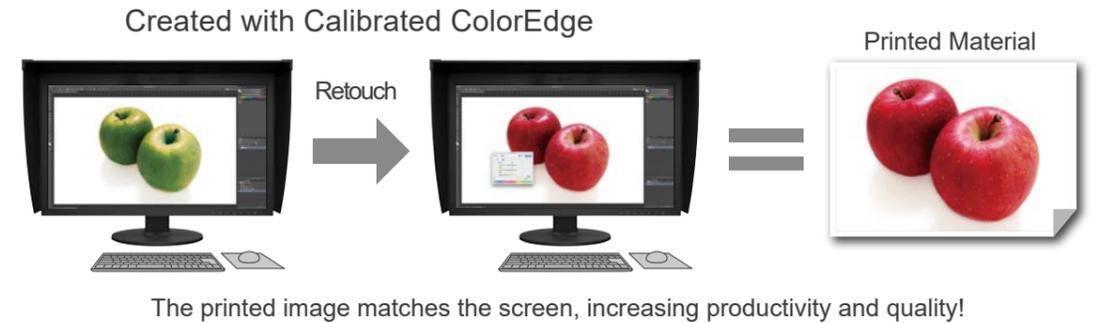
It is a measurement device used for measuring the current display status so that the monitor display can be adjusted in reference to the target values.



Without Calibration



Calibrated ColorEdge



More Advantages of Using ColorNavigator 7



ColorNavigator allows you to set target values for adjustments in each color mode. The target values configured on ColorNavigator are saved in respective color modes of the monitor. Using the mode switching button on the front side of the monitor, the display can be easily switched to the corresponding target level without starting the software on the computer.

How the Color Matching Works

The purchased monitor in the initial state is not configured to the display optimized for photo printing. Before you begin, the monitor needs to be calibrated to a state that is most suitable for photo printing. To make your work turn out the way you expect it to be, it is important to perform the optimum “Color Matching”, including the environment setup for test page printing, as well as the monitor, retouching software, and printer settings. The sections from here on will introduce the color matching procedure.

⚠ Prepare a Calibration Sensor.

The measurement device (calibration sensor) is required for calibration. Prepare a measurement device if you do not have one on hand. (For the CG Series products, calibration can be performed by the built-in calibration sensor.)



Calibration Sensor EX4

1 Connecting Monitor and Computer

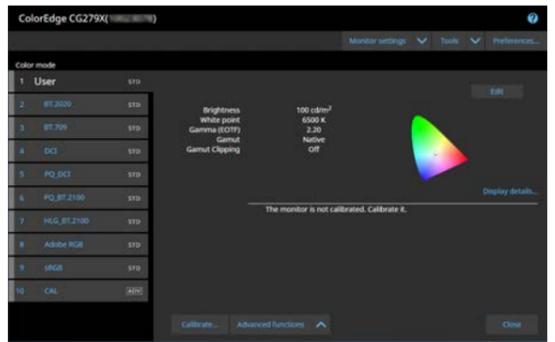
Check to see if they are connected properly.



▶ See page 5 for details.

2 Installing ColorNavigator

Download the software and install it.



▶ See page 6 to page 8 for details.

3 Monitor Adjustment (Calibration)

Optimize the display setting for the printed image so that the images are displayed in correct colors.



▶ See page 9 to page 14 for details.

4 Configuring Image Retouching Software

Import photo data into your computer, display it in the correct settings, and select a photo image to be printed.



▶ See page 15 to page 16 for details.

5 Configuring Printer

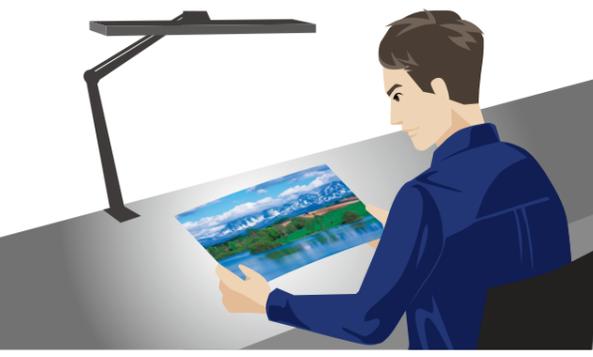
Print a test page in the correct setting.



▶ See page 17 to page 20 for details.

6 Environment Setup

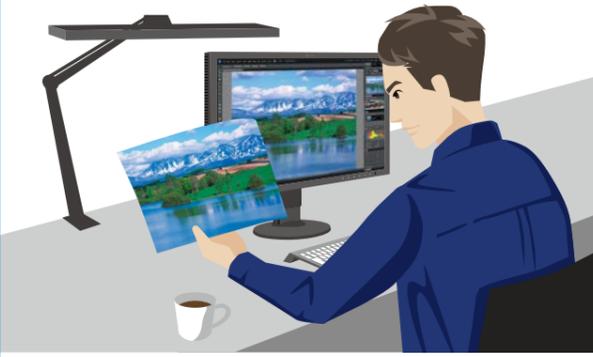
Check a test print page under adequate ambient light.



▶ See page 21 to page 22 for details.

7 Checking Photo Prints

Compare a test print against the monitor image to see if the colors match. Fine-tune the monitor as needed.



▶ See page 23 to page 24 for details.

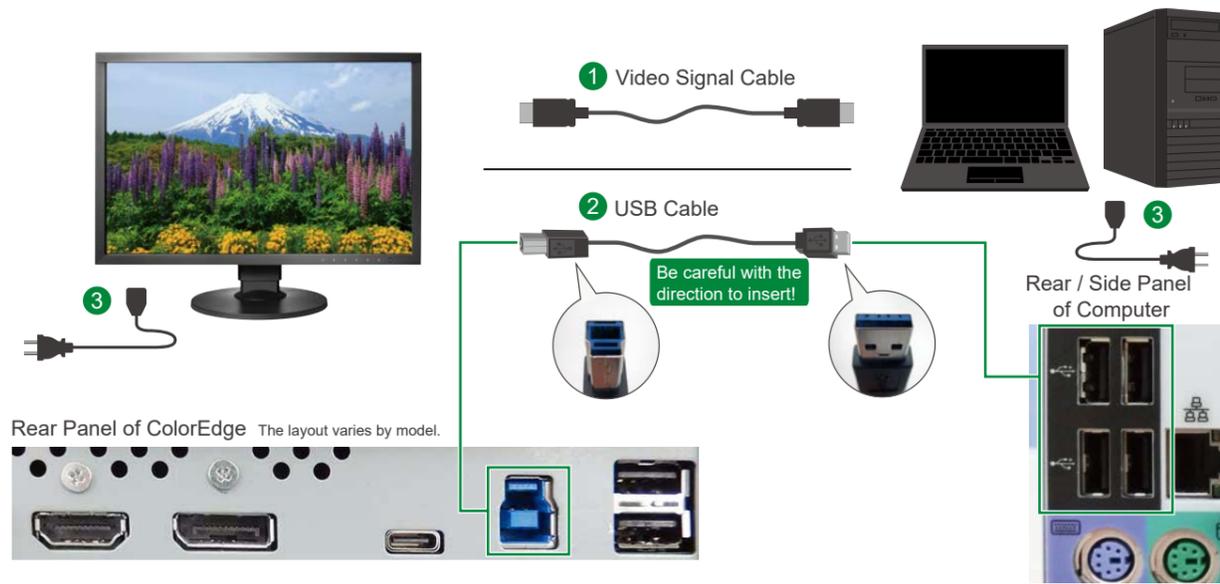
Color Matching Complete!

Trust the screen display. Retouch and print. Enjoy creating your own material!



1. Connect the Monitor to a Computer

To be able to perform the monitor calibration smoothly, make sure that the monitor is connected to your computer properly.



1 Connect a video signal cable

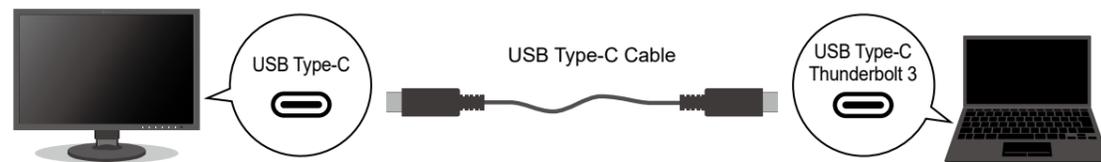
Connect the ColorEdge monitor to the video signal output terminal on your computer.

2 Connect a USB cable

Make sure that the shape of the USB terminal matches, and connect the ColorEdge monitor and your computer with a USB cable.

Monitor with a USB Type-C Connector

By connecting a USB Type-C cable to a computer equipped with the USB Type-C connector that can output video signals, both video and USB signals are transmitted through the single cable. For details on how to connect them, see the setup guide for the monitor.



3 Connect to the power source

Connect the power cable for your monitor and computer, respectively. Turn the power on and verify if the screen image appears.

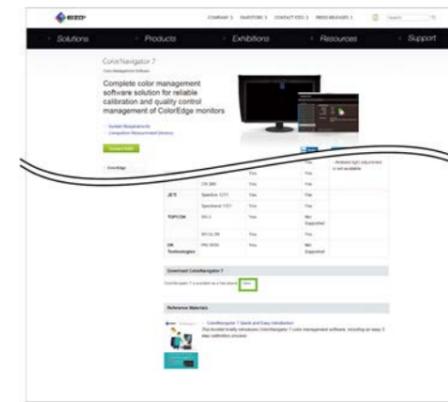
Turning Video Mirroring off

If you use the ColorEdge monitor with another monitor, such as when connecting a laptop computer, the video mirroring function needs to be turned off.



2. Download ColorNavigator 7

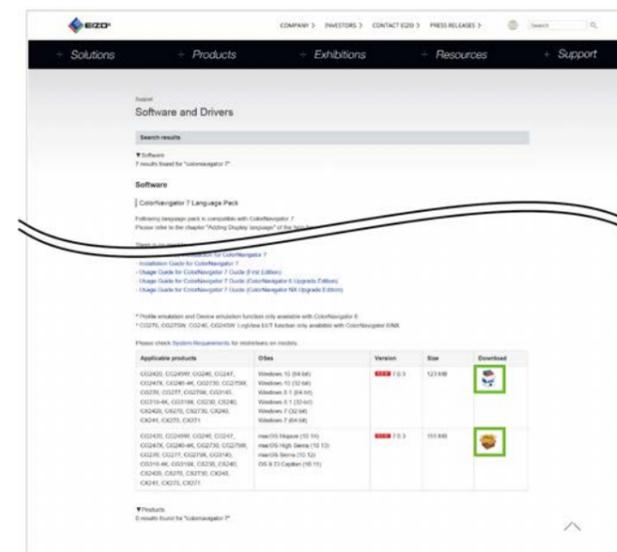
1 Access the download site



You will be redirected to the download site from the ColorNavigator 7 dedicated website.

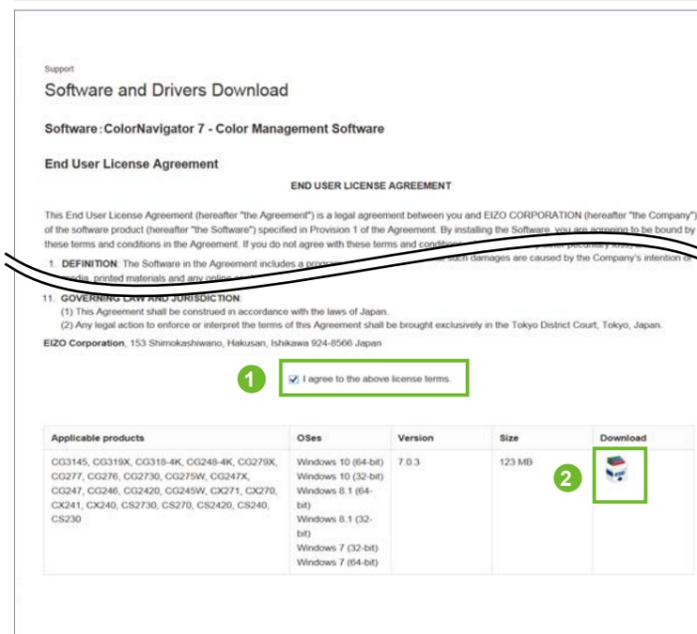
www.eizoglobal.com/products/coloredge/cn7/index.html

2 Select software



Choose (Windows) or (macOS) according to your computer platform.

3 Download software

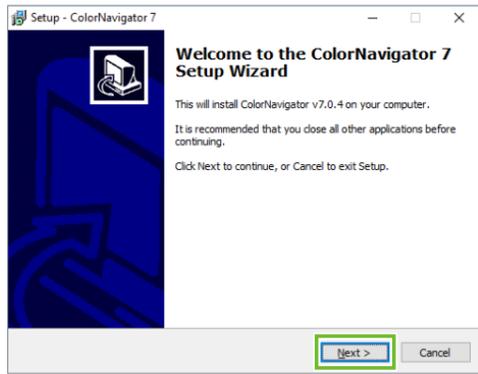


Read the terms and conditions of the End User License Agreement, and select the 1 check box for "I agree to the above license terms." located at the bottom of the screen. Then, select (Windows) or (macOS).

For Windows, click "Run" to start the installation. For macOS, the download of the installer launch file (.pkg) starts.

2. Install ColorNavigator 7 (for Windows)

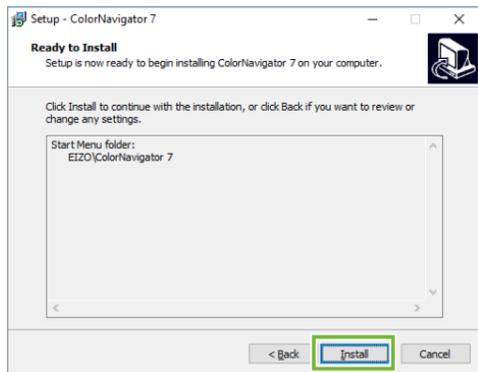
4 Run the installation



Follow the instructions on the wizard screen. Click “Next” to proceed with the installation.



On the license agreement screen, read the terms and conditions. Then, select the check box for “I accept the agreement” and click “Next”.



On the “Ready to Install” screen, click “Install”.

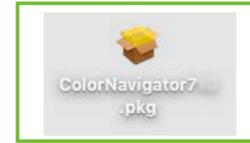
Window Displayed during Installation

During the installation of ColorNavigator 7, the driver for the measurement device is automatically installed. A confirmation window may appear several times during installation. In that case, click “Install” until the window disappears.

When installing ColorNavigator 7 on macOS, the confirmation window may appear. Click “OK”.

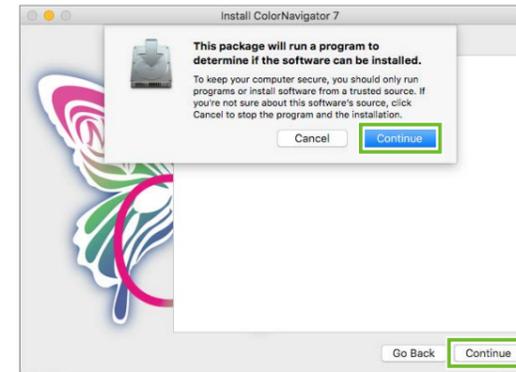
2. Install ColorNavigator 7 (for macOS)

4 Start the installer

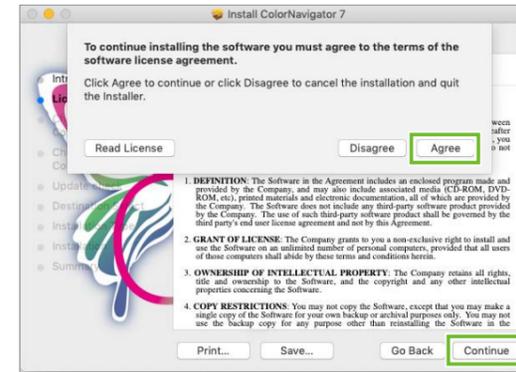


Double-click the installer launch file (.pkg) you have saved.

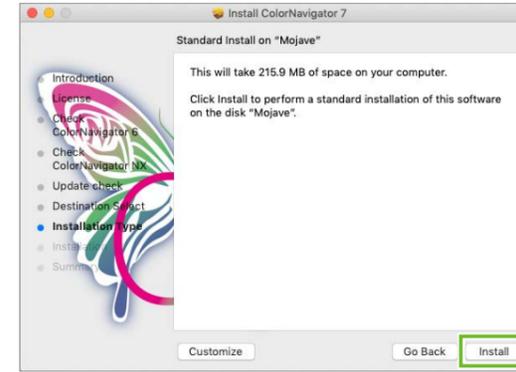
5 Run the installation



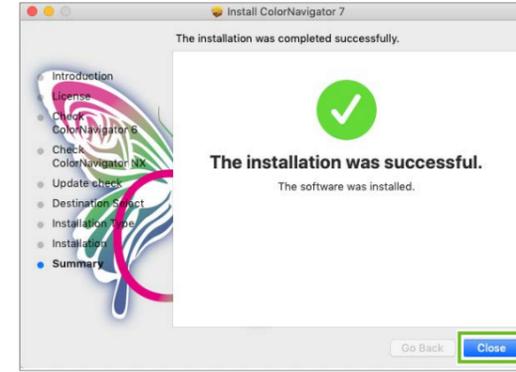
Follow the instructions on the installer window. Click “Continue” to proceed with the installation.



On the acknowledgment screen for the license agreement, read the terms and conditions. Then, click “Agree”.



Confirm the location to install, and click “Install”.



Confirm the message of installation completed, and click “Close”.

3. Calibrate the Monitor

To match colors between the monitor display and the printed photo images, use a measurement device to perform calibration.

1 Connect the measurement device

The measurement device is required for performing calibration.

For CS Series, connect the measurement device to the USB port of your computer or monitor. The USB port is located on the side or rear panel of the monitor.

This connection is not necessary for the CG Series monitors since they have the built-in measurement device (calibration sensor).



! Warming up the Monitor

Before you perform calibration on the CS Series monitors, you should wait for at least 30 minutes after turning on the monitor display so that the on-screen image will be stabilized.

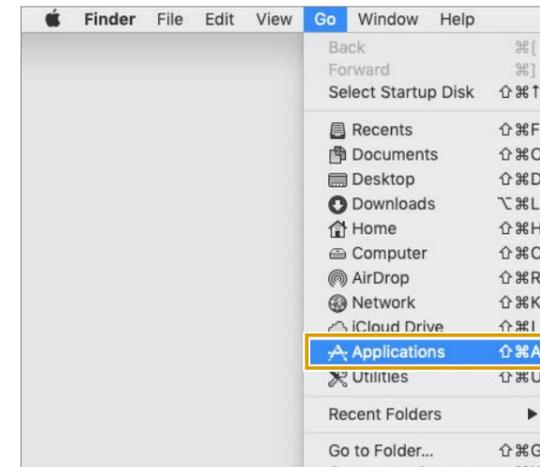
2 Start ColorNavigator 7

For Windows



Double-click the ColorNavigator icon on Desktop.

For macOS



Use the Finder toolbar and select “Go” > “Applications” to display the Applications folder.

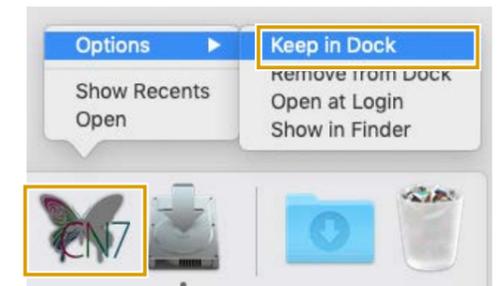


Double-click “ColorNavigator 7.app” in the Applications folder.

How to Add an Icon to the Dock

To start ColorNavigator 7 from the Dock after the second time, you need to add ColorNavigator to the Dock.

While the main window is open, the icon appears on the Dock. With the main window displayed, right-click the icon shown on the Dock, and then select “Options” > “Keep in Dock” from the menu.



Welcome Screen at Initial Startup

During the initial startup, the introduction screen is displayed and you are prompted to answer simple questions for setup. Click “Welcome!” in the center of the screen.

Then the main window opens.

After the second time, the main window appears first when you start the application.



3 Select target values

From the menu displayed on the main window, select a color mode and an adjustment target that are optimized for printing photo images.



As the optimum target values for printing photo images, set
 ① Color mode to “CAL” and select ② “Print Proofing” from the target combo box.

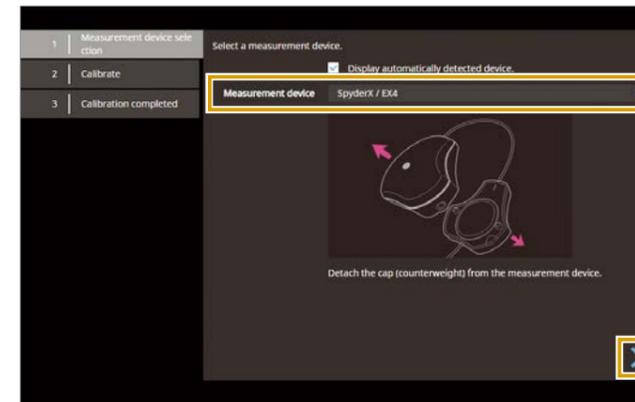
Click ③ “Calibrate”.

4 Select a measurement device and perform calibration

By selecting “Calibrate”, the measurement patterns are displayed. Adjustments will be made automatically.

► If you use the built-in calibration sensor, see page 13.

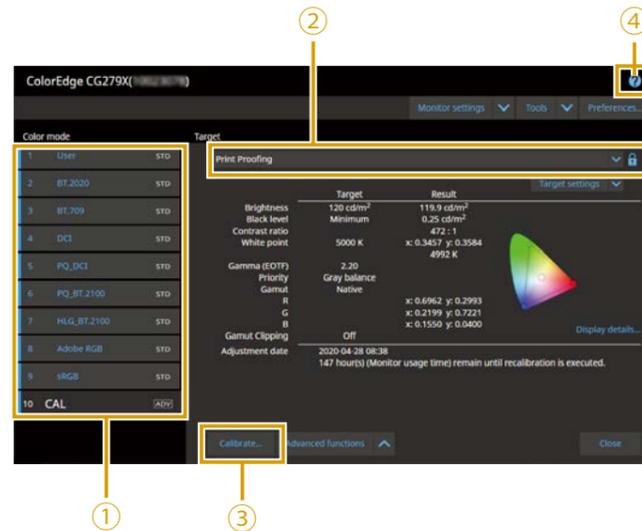
CS Series (Using Measurement Device)



In the list of measurement devices, select a name of the measurement device you have connected. Then, click >

→ The “Measurement Device Attachment” dialog appears.

Main Window



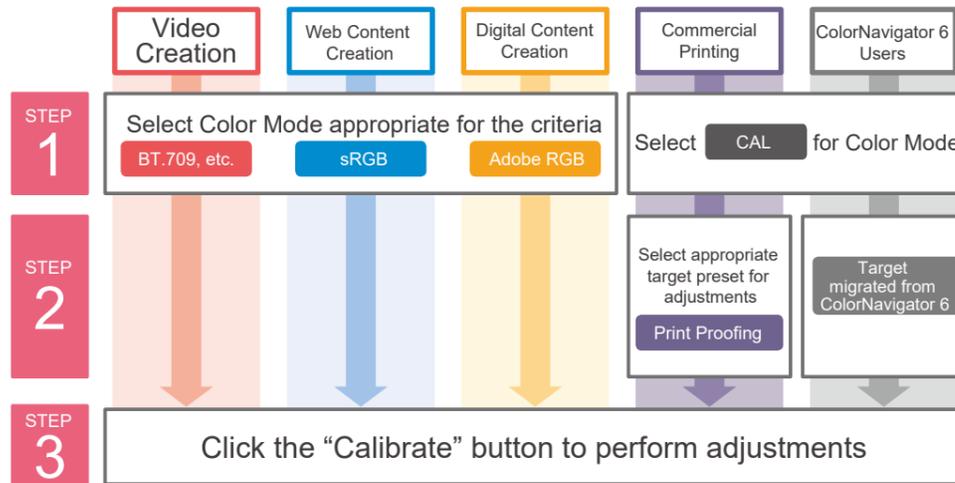
- (1) Color mode List
- (2) Target list
- (3) Calibrate button
- (4) Help

Follow the screen instructions and attach the measurement device. Then, click “Proceed”.



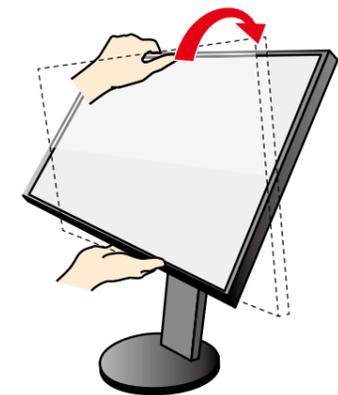
Target Values for Adjustments

ColorNavigator offers a variety of adjustment target values that are optimized for the purposes.

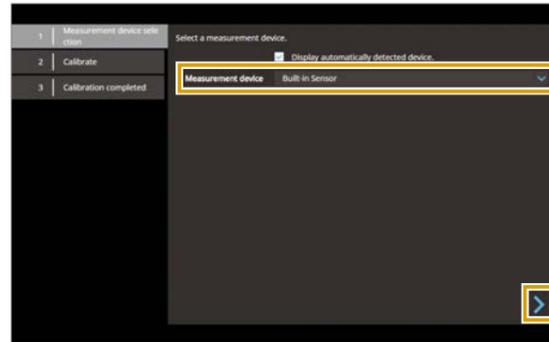


Attaching the Measurement Device on the Screen

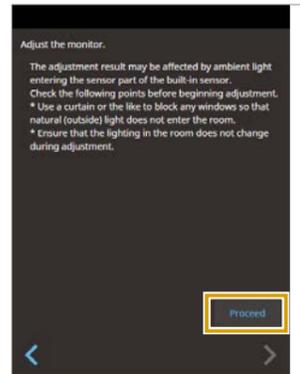
To prevent the sensor from sliding and make calibration easier, tilt the monitor unit until it faces upward.



CG Series (Using Built-in Calibration Sensor)



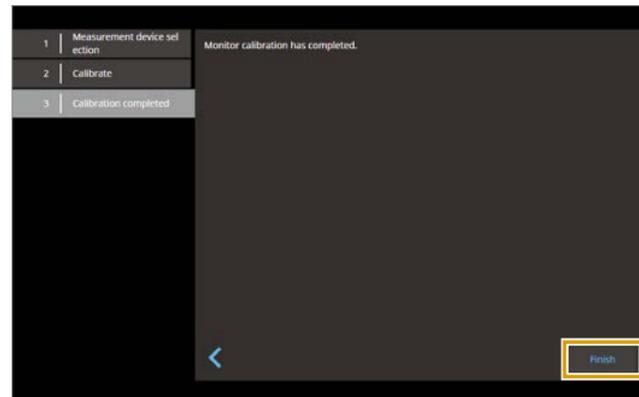
In the list of measurement devices, select “Built-in Sensor”. Then, click .



Click “Proceed”.

5 Finish the calibration

Once the calibration is complete, the “Finish” screen appears.

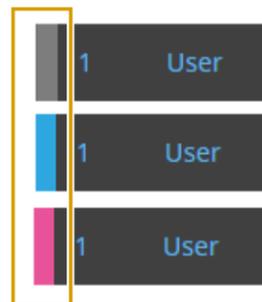


Click “Finish”.

Color Mode Status Display

When the main window opens again after the calibration is complete, the left band color for the calibrated color mode turns to blue. The band color varies by the color mode status.

- Gray: Not calibrated
- Blue: Calibration completed
- Pink: Long time has passed since the last calibration, and re-calibration is required



Why Periodic Calibration is Needed

With continued use, monitors lose the ability to display colors correctly, causing them to become darker (decreased brightness) or change in hue (white point deviation). To restore the monitor to its original state, it is necessary to readjust the monitor through regular calibration.



With ColorNavigator 7 and ColorEdge, you can easily recalibrate the monitor for reliable results.

To maintain the reliable display state, don't forget to calibrate the monitor periodically! For details, see “Calibrate the Monitor Periodically” on page 25.

4. Configure the Image Retouching Software

To match the colors between your monitor and photo prints, it is important for your image retouching software to have the appropriate settings in addition to the monitor having the most optimum adjustments.

Configure the color settings correctly for the image retouching software that supports color matching. By using the correctly configured retouching software and opening an image on it, the image can be displayed in the properly adjusted colors.

Types of Image Retouching Software

The image retouching software compatible with color matching is available in two types: software that automatically references the monitor profile configured on the computer's operating system and software that requires manual settings. The former can be used in the initial settings, but the latter needs adjustments so that images can be displayed correctly by referencing the monitor profile.

Keep the initial settings! No adjustment needed

Adobe® Photoshop®
 Adobe® Photoshop® Lightroom® Classic
 Canon Digital Photo Professional, etc.

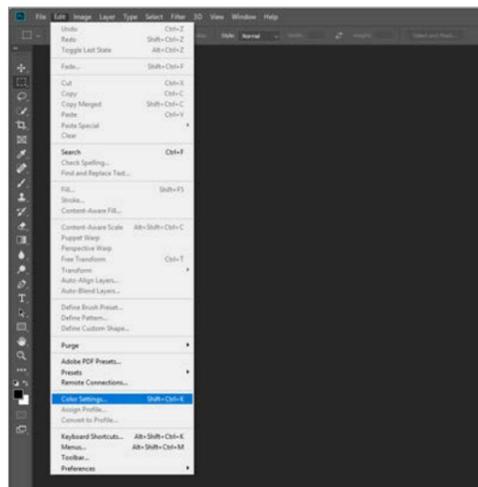
For details visit the EIZO website.

www.eizoglobal.com/library/management/matching/retouch_software/step3.html

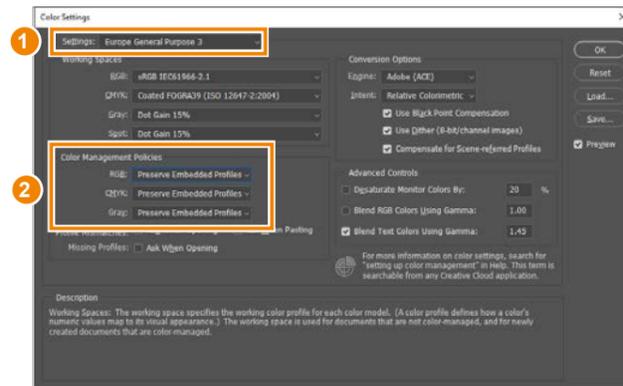
Image Retouching Software Used in the Initial Settings

This section introduces the major software that automatically references the monitor profile configured on the computer's operating system and does not require adjustment from the initial settings. The initial settings are also shown. Using this software, images can be displayed correctly without having to change the settings manually.

Adobe® Photoshop

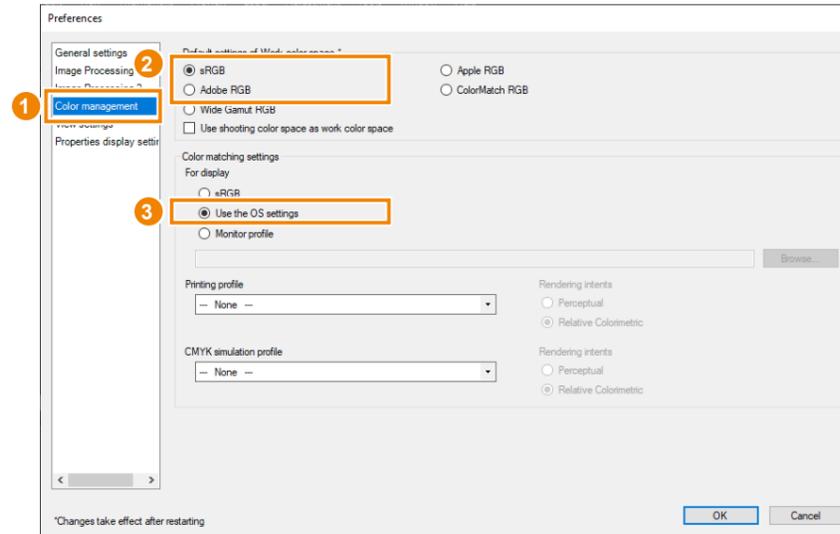


Click "Edit" - "Color Settings".



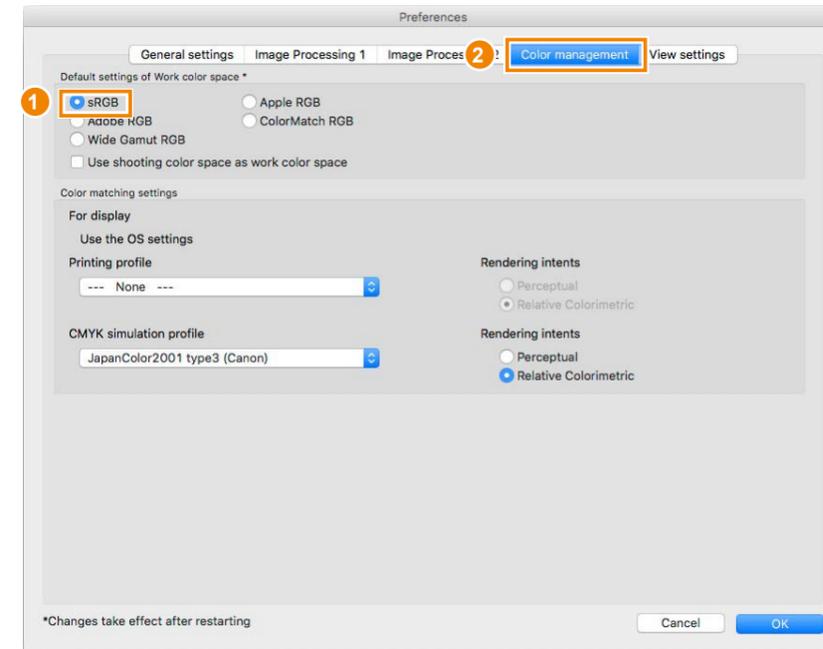
1 "Europe General Purpose 3" is selected in the Settings field and 2 "Preserve Embedded Profile" is selected in Color Management Policies.

Canon Digital Photo Professional (for Windows)



In the "Tools" pull-down menu, select "Preferences" and then 1 "Color management". For 2 "Default settings of Work color space", "sRGB" or "Adobe®RGB" is selected according to your color management method, and 3 "Use the OS settings" is selected at "For display" under "Color matching settings".

Canon Digital Photo Professional (for macOS)



In the pull-down menu of "Canon Digital PhotoProfessional", select "Preferences" and 1 "Color management". For 2 "Default settings of Work color space", "sRGB" is selected according to your color management method.

5. Configure the Printer

To be able to print retouched photo data accurately, it is important to configure the color matching settings on your printer. Open a photo image used for color matching on the retouching software and configure your printer.

Printer Settings

The configuration procedure described here uses the following setup as an example.

- OS: Windows 10 ■ Printer: EPSON SC-PX5V II/Canon PIXUS PRO-10S
- Paper: EPSON EPSON Photo Paper <Glossy>/Canon Glossy Pro Platinum Grade
- Image retouching software: Adobe Photoshop CC

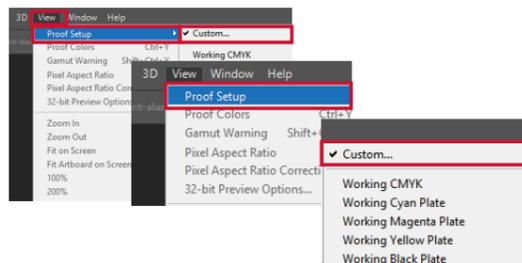
For details on the printer settings using the other image retouching software or using it on a macOS, visit the EIZO website.

www.eizoglobal.com/library/management/matching/printer/step4.html

EIZO also offers print samples you can use for test printing. For details, please visit the EIZO website.

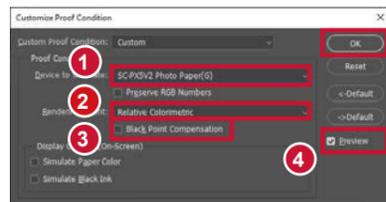
www.eizoglobal.com/library/management/matching/result/ColorNavigatorElements_sample_chart2_sRGB.jpg

1 Customize proof setup on retouching software (1/3)



In the "View" pull-down menu of Adobe Photoshop, select "Proof Setup" - "Custom...".

2 Customize proof setup on retouching software (2/3)

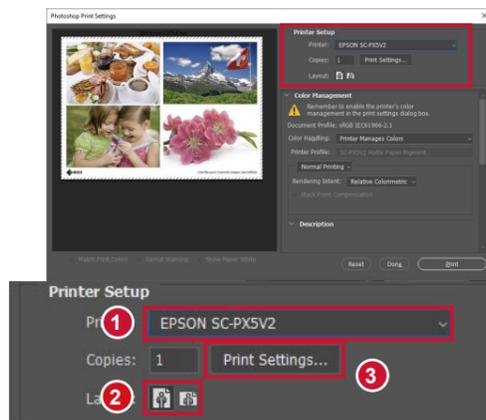


Once the "Customize Proof Condition" window for Print Setup appears, go to 1 "Device to Simulate" and select a profile for paper* you will use. For 2 "Rendering Intent", select "Relative Colorimetric". Uncheck 3 "Black Point Compensation" and check 4 "Preview". Then, click the "OK" button.

* Profile used for printing Glossy Pro Platinum Grade paper on PRO-10S "Canon PRO-10S <PT> 1/2/3 Photo Paper Pro Platinum"

* Profile used for printing EPSON Photo Paper <Glossy> on SC-PX5VII "SC-PX5V2 Photo Paper(G)"

3 Customize proof setup on retouching software (3/3)

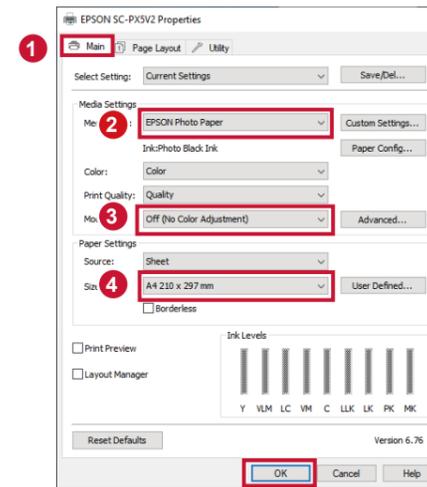


In the "File" pull-down menu, select "Print". When the Printer Setup window opens, configure the "Printer Setup" on the right. For the 1 "Printer:" field, select "EPSON SC-PX5V2" or "Canon PIXUS PRO-10 Series". After selecting the 2 Vertical or Horizontal icon in the "Layout:" field, click 3 "Print Settings".

EPSON Printers

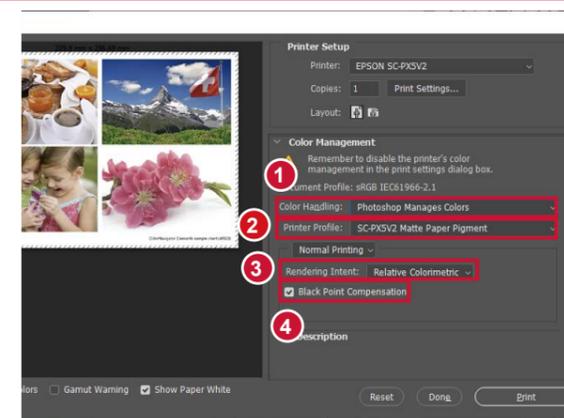
This section introduces how to set up the printer driver for EPSON SC-PX5V II. For Canon PIXUS PRO-10S, see "Canon Printers" on page 19.

4 Configure the EPSON printer driver (1/3)



The Properties window for the printer opens. Select the 1 "Main" tab and go to 2 "Media Type" and select paper type you will use. Since the images are printed according to the color management settings on Photoshop, set 3 "Mode:" on the printer to "Off (No Color Adjustment)" and select a paper size to print in the 4 "Size" field. Then, click "OK".

5 Configure the EPSON printer driver (2/3)

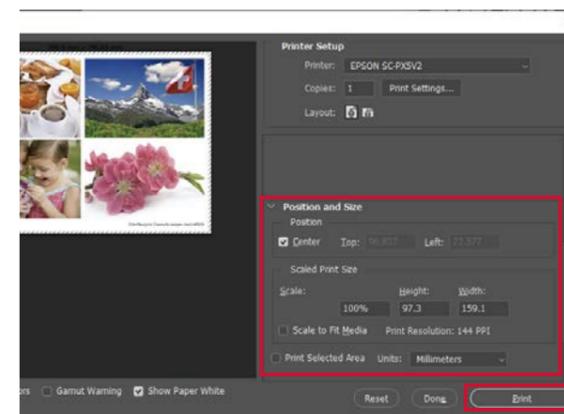


Open the Printer Setup window again, and configure the "Color Management" setting.

For 1 "Color Handling", select "Photoshop Manages Colors". For 2 "Printer Profile", select a profile for paper* you will use in the pull-down list. Finally, go to 3 "Rendering Intent" and select "Relative Colorimetric", which is the recommended settings for EIZO products. Then, check 4 "Black Point Compensation".

* Profile used for printing EPSON Photo Paper <Glossy> on SC-PX5VII "SC-PX5V2 Photo Paper(G)"

6 Configure the EPSON printer driver (3/3)

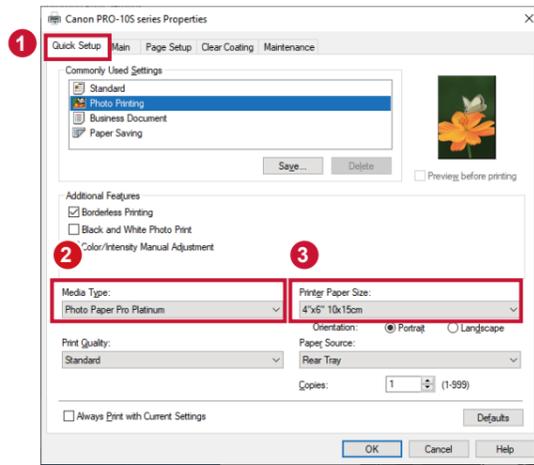


In the "Positions and Size" field, select an area to print and specify the size, then click the "Print" button.

Canon Printers

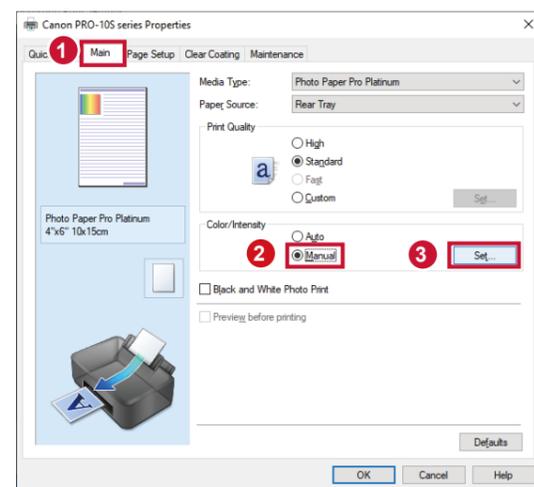
This section introduces how to set up the printer driver for Canon PIXUS PRO-10S.
For EPSON SC-PX5V II, see “EPSON Printers” on page 18.

4 Configure the Canon printer driver (1/6)



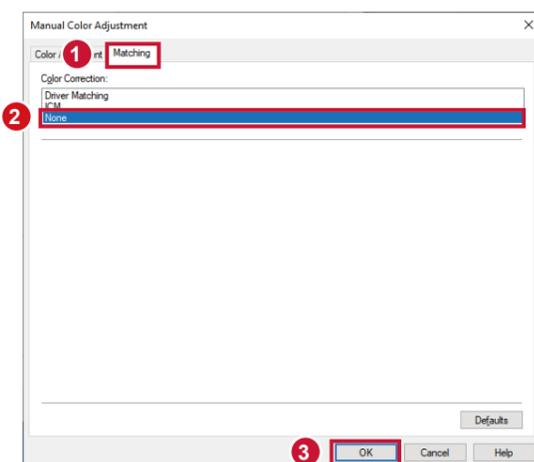
The Properties window for the printer opens. Select the 1 “Quick Setup” tab. For 2 “Media Type:”, select a paper type to use (e.g. Glossy Pro Platinum Grade). For 3 “Printer Paper Size:”, select a size of paper used for printing.

5 Configure the Canon printer driver (2/6)



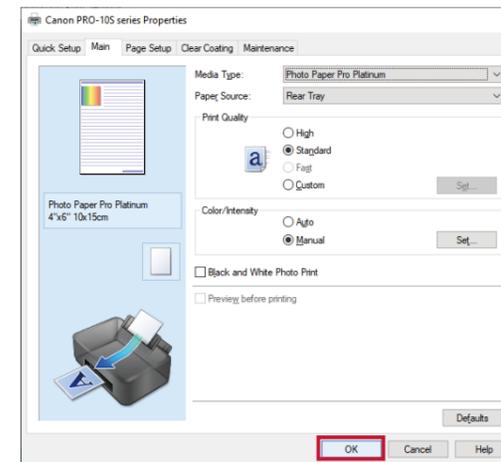
Next, select the 1 “Main” tab. Select 2 “Manual” for “Color/Intensity”, and then click the 3 “Set” button.

6 Configure the Canon printer driver (3/6)



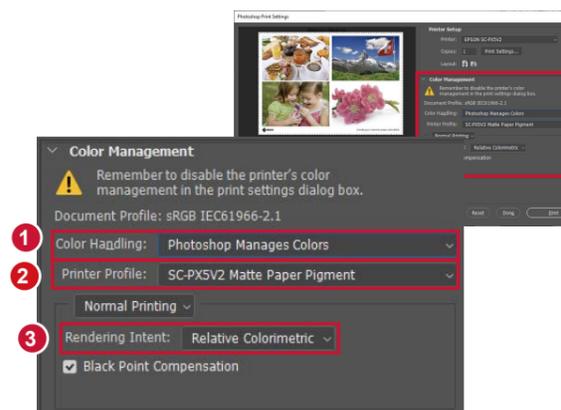
When the Manual Color Adjustment window appears, select the 1 “Matching” tab. Since the images are printed according to the color management settings on Photoshop, set 2 “None” for color correction on the printer side. Then, click the 3 “OK” button.

7 Configure the Canon printer driver (4/6)



When the Properties window for the printer opens again, click the “OK” button.

8 Configure the Canon printer driver (5/6)

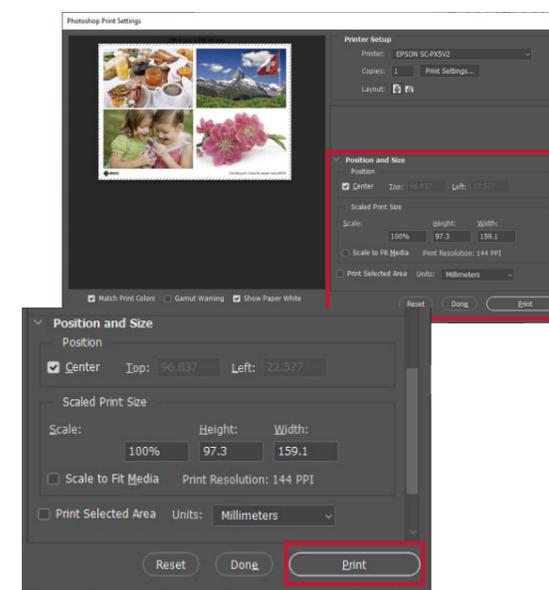


Open the Printer Setup window again, and configure the “Color Management” setting.

For 1 “Color Handling”, select “Photoshop Manages Colors”. For 2 “Printer Profile”, select a profile for paper* you will use in the pull-down list. Finally, go to 3 “Rendering Intent” and select “Relative Colorimetric”, which is the recommended settings for EIZO products.

* Profile used for printing Glossy Pro Platinum Grade paper on PRO-10S “Canon PRO-10S <PT> 1/2/3 Photo Paper Pro Platinum”

9 Configure the Canon printer driver (6/6)



In the “Positions and Size” field, select an area to print and specify the size, then click the “Print” button.

6. Check the Printed Images in Adequate Environment

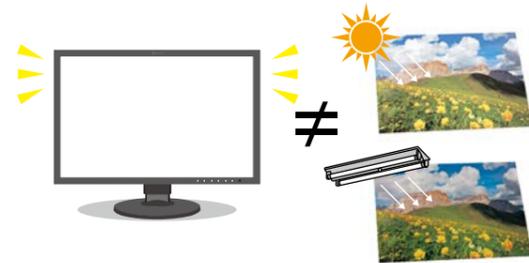
The printed photos appear differently depending on the ambient light. To be able to check the colors appropriately, it is necessary to control the ambient light by preparing the lighting that is appropriate for evaluating images under the consistent conditions.

Ambient Light

If color matching has been successfully performed between on-screen and printed photos under indoor lighting conditions in the evening, why do they look different under the outside daylight?

Printed photos reflect the light around them (ambient light), and the reflected light enters human eyes where they are recognized as images. On the other hand, the monitors themselves emit the light, instead of reflecting the ambient light.

Therefore, even if the ambient lighting changes, colors on the monitors themselves barely change. The printout colors (reflected light) do not appear in the same way because the ambient light colors are different under the outside daylight and the nighttime indoor lighting.



Preparing the Ideal Environment

To match the colors between the on-screen image and the photo prints, it is extremely important to prepare an ideal room environment where the printouts are evaluated. See the hints below and let's begin setting up the ideal environment for evaluating the images under the consistent conditions.



Ideal Indoor Lighting

5000K High-Color Rendering Room Lighting Recommended

EIZO-Recommended Accessories for Preparing Ideal Environment

Easy-to-Install Light-Shielding Hood with No Assembly Required

This is an EIZO-original light-shielding hood designed to block sunlight and screen reflections effectively. Non-reflective finish inside the hood prevents glare from the screen as well.

For details on the supported models, please visit the EIZO website.



7. Checking Photo Prints

Lastly, check the photo print colors. You have now completed the steps up to printing a test page after calibrating the monitor and configuring the settings for image retouching software and the printer. Let's compare colors between the printed photo and the monitor image.



Photo data displayed on monitor

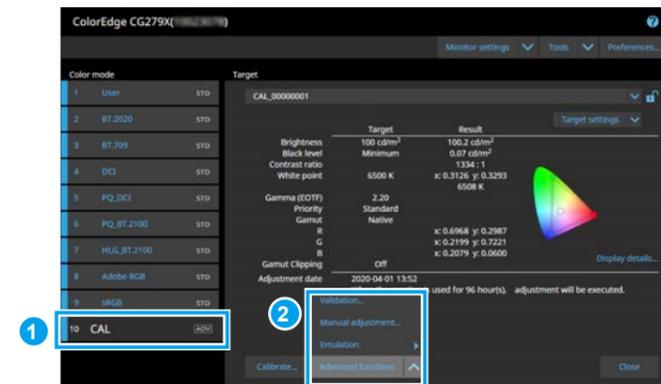


Printed photo images

If colors match perfectly, the color matching procedure is complete. If colors are slightly off between the monitor screen and the photo prints due to environment factors and other causes, you should perform manual adjustments as described below. The accuracy of color matching can be improved by manually fine-tuning adjusted target values.

1 Adjust the monitor manually

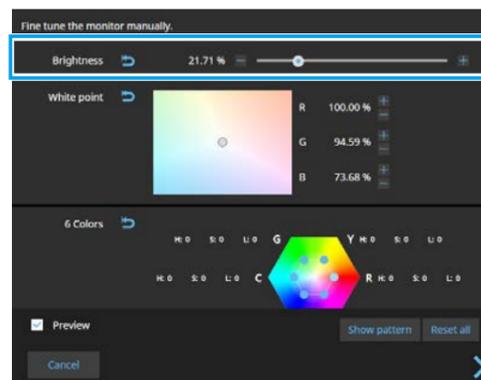
The sections from here on will introduce the procedure to improve the color matching accuracy.



Select **1** "CAL" and click **2** to select "Manual adjustment".

2 Adjust the brightness

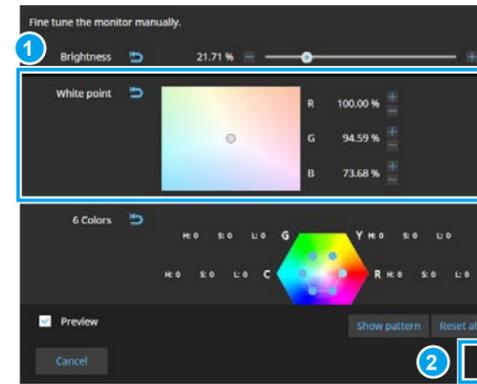
Adjust the brightness by comparing the print image against the monitor display.



Move the control slider horizontally and adjust the brightness until the image displayed on the monitor looks the closest to the print image.

3 Adjust the white point

Adjust the white point by comparing the print image against the monitor display.

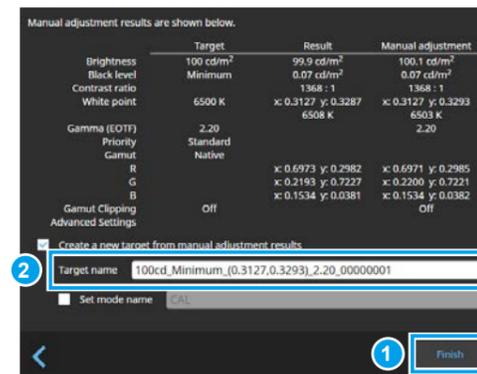


Move the **1** adjustment pointer () and change the RGB value by pressing **+** / **-** to adjust the hue until the image displayed on the monitor looks the closest to the print image.

Once you complete the color matching, click **2** .

4 Measure the adjustment status

Follow the screen instructions and select the measurement device. Then, measure the adjustment status. The measurement result window will be displayed once the measurement is complete.



Click **1** "Finish". The list now contains this new adjustment target having the name displayed at **2** "Target name".

If the Color Matching Is Not Working Well

If the color matching with a photo image does not work as expected, you can also try comparing the print paper against the white color.

If the white color matches but the colored parts do not, it is possible that differences are caused by the printer settings or attributable to performance issues. Check the display performance of each printer color.



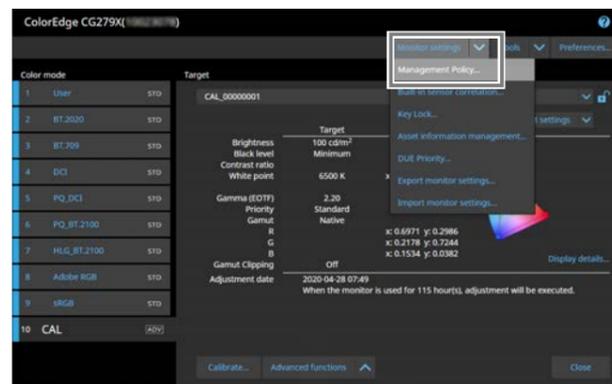
Calibrate the Monitor Periodically

ColorNavigator 7 makes periodic calibration easy and ensures that it will never be skipped. A set of management functions helps you remember the timing of readjustment by showing an alert window or changing the color mode band to pink. For monitors with a built-in sensor, automatic calibration (Self Calibration) can be performed on a periodic basis.



Setting Management Policy for Monitor

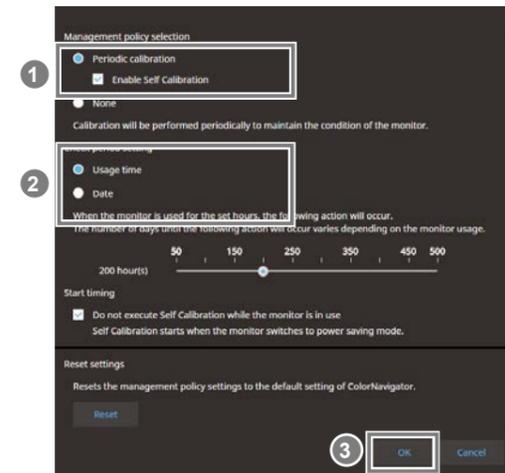
Using the monitor's management function, let's schedule the periodic calibration.



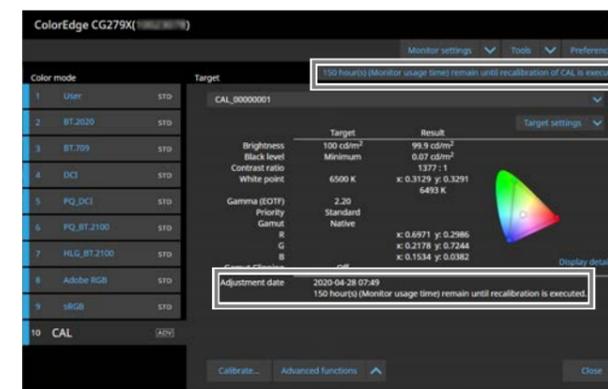
Click the "Monitor settings" menu and select "Management Policy".

CG Series (Using Built-in Calibration Sensor)

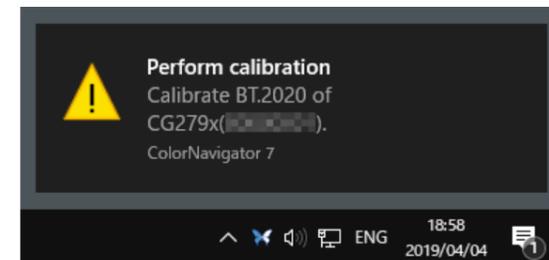
Based on the information configured, automatic re-adjustment (Self Calibration) can be executed on a periodic basis.



- 1 For "Management policy selection", select "Periodic calibration" and check "Enable Self Calibration".
- 2 For "Check period setting", specify a condition for the period. In addition to the usage hours, the period can be specified as a certain number of days using months or weeks.
- 3 Click "OK" to complete the settings.



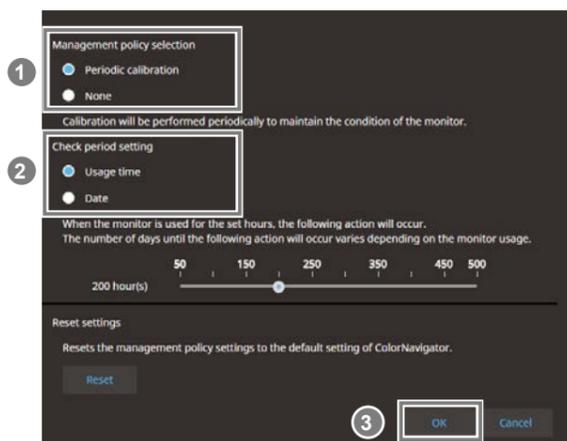
A reminder for the next periodic calibration is displayed in the notification field on the main window.



After the configured time period has elapsed, a message pops up.

CS Series (Using Measurement Device)

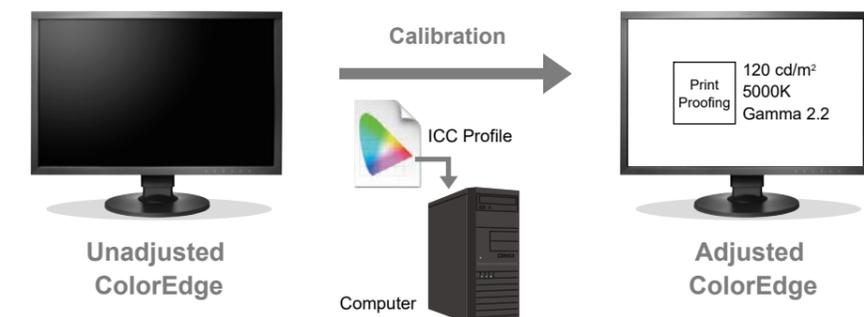
Based on the information configured, ColorNavigator can notify you of the timing of adjustment.



- 1 For "Management policy selection", select "Periodic calibration".
- 2 For "Check period setting", specify a condition for the period. In addition to the usage hours, the period can be specified as a certain number of days using months or weeks.
- 3 Click "OK" to complete the settings.

What is the ICC Profile?

The ICC profile is a data file that notifies the system of what colors are displayed on the monitor. Upon completion of the calibration by ColorNavigator 7, an ICC profile is generated, which will be automatically configured to the computer's operating system. This profile is extremely important when performing color matching using image retouching software, a printer and a monitor. To update the ICC profile data periodically, calibration by ColorNavigator should be performed at least once a year.



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To find out more about our products, visit the EIZO website.

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