User's Manual

ColorNavigator 7

Color Management Software

Version 7.2

Important

Please read this "User's Manual" carefully to familiarize yourself with safe and effective usage.

- **For the latest product information including the "User's Manual", refer to our web site:**
  www.eizoglobal.com

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Chapter 1 Introduction

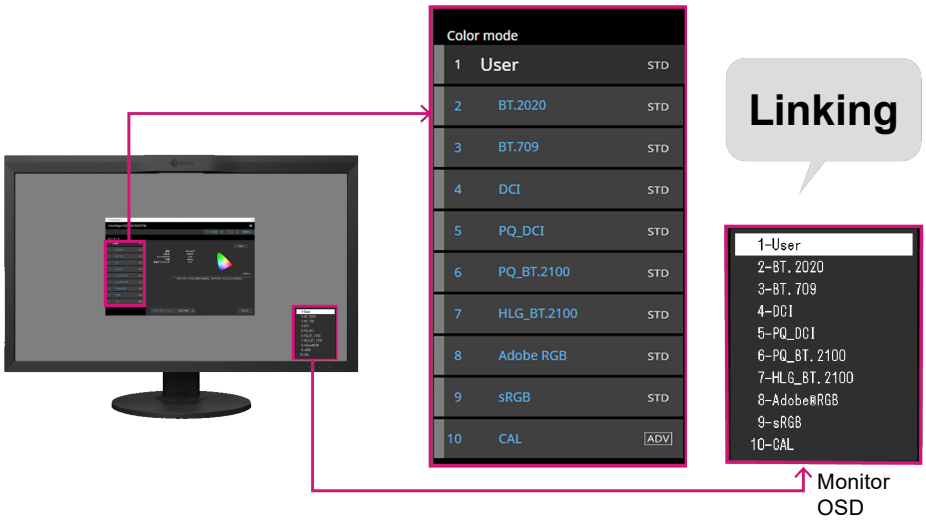
1-1. About ColorNavigator 7

ColorNavigator 7 is the dedicated software for EIZO's “ColorEdge” color management monitors that feature an excellent color display.
Using ColorEdge together with ColorNavigator 7 allows you to calibrate your monitor, create and edit targets, and manage multiple monitors easily yet accurately.

1-2. Features

- The software links up to the monitor's color modes to let you configure the targets for each of them.
  After calibrating the monitor with ColorNavigator 7, you can easily switch display states by changing the color mode using the control buttons on the monitor.

Color Modes in ColorNavigator 7



- A variety of targets are available for your applications, including photography, design, printing, web content and video creation, and more.

- Color mode types that best suit your needs are selectable.
  ColorNavigator 7 offers the following color mode types: “Advanced (ADV)”, “Standard (STD)”, and “Sync Signal (SYNC)”.
  Depending on the color mode type you choose, calibration levels and content that you can manually adjust will be different.
  ColorNavigator 7 allows you to select color mode types that can optimize your display to best suit your purpose.
  See “3-11. Management of Color Mode” (page 53) for details.

- Periodic calibration can be scheduled.
  For monitors with a built-in sensor, calibration is automatically performed at the configured intervals. (SelfCalibration/SelfCorrection)

1-3. Requirements for ColorNavigator 7

● Computer

Common

- Resolution: recommended resolution of the monitor*1
- USB port: at least two free ports required (at least one free port for monitors with a built-in calibration sensor)*2

*1 For details on the recommended monitor resolution, see the User's Manual of your monitor.
*2 An EIZO USB cable is required to connect the monitor to the computer.

Mac

- OS:
  - macOS Golden Gate (27)
  - macOS Tahoe (26)
  - macOS Sequoia (15)
  - macOS Sonoma (14)
- Mac that satisfies the OS requirements
- Colors: 16.7 million or more colors

Windows

- OS:
  - Windows 11
- Memory: the same requirement for your OS
- Colors: 24-bit or more

Attention

- Not compatible with Windows on ARM.

Linux

- OS:
  - Red Hat Enterprise Linux 8 (64-bit editions)
  - Red Hat Enterprise Linux 9 (64-bit editions)

● Monitor

- EIZO ColorEdge PROMINENCE series monitor
- EIZO ColorEdge CG series monitor
- EIZO ColorEdge CS series monitor

For more information, refer to our web site (www.eizoglobal.com).

● Measurement Device

Attention

- This product does not come with a measurement device. Please purchase a measurement device separately at a dealer as needed.
- For details of the system requirements and usage of measurement devices, see the User's Manual of each product.
- Do not connect and use multiple measurement devices that are the same model.
- For CG3145 / CG3146 / CG1 / CG3200X, the following measurement devices are not supported:
  - X-Rite i1Display 3, i1Display Pro, i1Display Pro Plus, i1Studio
  - Calibrite ColorChecker Display Pro, Display Plus, Studio
  - Calibrite Display Pro HL / Display Plus HL
  - EIZO EX3, EX4, EX5
  - Datacolor Spyder5, SpyderX, SpyderX2, SpyderPro, Spyder
  - Konica Minolta CA-310, CA-310M
  - DK-Technologies PM5639/94

Measurement device	Type	Win	Mac	Linux
Built-in calibration sensor of the monitor *1	Filter	✓	✓	✓
Built-in correction sensor of the monitor *2	Filter	✓	✓	✓
X-Rite i1Pro 2 / i1Pro 3	Spectral	✓	✓	-
X-Rite i1Studio Calibrite ColorChecker Studio	Spectral	✓	✓	-
X-Rite i1Display 3 / i1Display Pro / i1Display Pro Plus *3 Calibrite ColorChecker Display Pro / Display Plus *4 Calibrite Display Pro HL / Display Plus HL	Filter	✓	✓	✓
Datacolor Spyder5 / EIZO EX3 Datacolor SpyderX / EIZO EX4 Datacolor SpyderX2 Datacolor SpyderPro Datacolor Spyder EIZO EX5	Filter	✓	✓	-
Konica Minolta CA-310 / CA-310M / CA-410 *5	Filter	✓	-	-
Konica Minolta CS-2000 / CS-2000A *5	Spectral			
Konica Minolta CS-3000 / CS-3000HDR / CS-2000Plus *5		✓	✓	-
Konica Minolta CS-200 *5	Spectral fitting	✓	-	-
Konica Minolta MYIRO-1 *5	Spectral	✓	✓	-
Klein K-10 / K-10A *6	Filter	✓	✓	✓
Photo Research PR-655 / PR-680 *6	Spectral	✓	✓	✓
Colorimetry Research CR-100 *6	Filter	✓	✓	✓
Colorimetry Research CR-250 / CR-300 *6	Spectral			
JETI specbos 1211 *6 JETI spectraval 1501 / 1511 *6 JETI specbos 2501 *6	Spectral	✓	✓	✓
TOPCON SR-UL1R / SR-5	Spectral	✓	-	-
DK Technologies PM-5639 / 94	Filter	✓	-	-

*1 CG2420's and CG2730's built-in calibration sensors do not support monitor validation.
*2 Only SelfCorrection is supported.
*3 i1 Display Studio cannot be used.
*4 ColorChecker Display cannot be used.
*5 The driver is not provided. Please contact the manufacturer.
*6 It will be displayed in the list when you uncheck "Display only automatically detected device" on the measurement device selection window.

1-4. Model Limitations

Some functions are limited for the models listed below.

Applicable Models

CS230

Limitations

- The color mode type cannot be changed. For more information about the color mode types, see “3-11. Management of Color Mode” (page 53).
  - “CAL” mode: Fixed to Advanced (ADV)
  - Other than “CAL” mode: Fixed to Standard (STD)
- When the color mode is other than “Custom” / “User 1” / “User 2” / “User 3”, manual adjustment is not available.

Chapter 2 Setup

2-1. Installing the Software

Attention

- Be sure to shut down all the running applications before executing the installation.
- ColorNavigator 7 cannot be installed with ColorNavigator 6 or ColorNavigator NX in the same environment. Please choose one of these to use.
- When ColorNavigator 7 is installed in the environment where ColorNavigator 6 or ColorNavigator NX is installed, the existing software will be uninstalled.
- When you upgrade from ColorNavigator 6, the targets used in ColorNavigator 6 will be carried over to ColorNavigator 7.

Reference

- ColorNavigator 7 is available for download from our web site (www.eizoglobal.com).

● Mac

1. Double-click the downloaded “ColorNavigator7xx.pkg” file.

The installer starts up.

2. Install the software.

Follow the instructions to install the software.

Attention

- A message indicating “Requesting access to control System Events” will appear depending on the environment. Since it is required for enabling the resident function (ColorNavigator Agent) of ColorNavigator 7, click “OK”.

● Windows

Attention

- A user account with “Administrator” privileges is required.
- Please consult your system administrator for the privilege setting of your account.

1. Double-click the downloaded “CN7xx_Setup.exe” file.

The installer starts up.

2. Install the software.

Follow the instructions to install the software.

Attention

- The “Windows Security” dialog box may appear several times when you install the software. If this dialog box is displayed, select “Install” and proceed with the installation until the dialog box is no longer displayed.

● Linux

Note

- Contact your local EIZO representative about downloading the Linux version of the installer.

1. After unzipping the downloaded file, run “install.sh”.

The installer starts up.

2. Install the software.

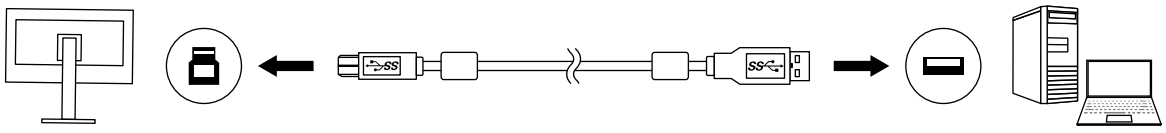
Follow the instructions to install the software.

Attention

- A user account with root privileges is required.
- It is not possible to boot as a root user.
- The ColorNavigator 7 icon in the task tray may not appear when starting up after the initial installation. In that case, log in to the computer again.
- When opening the main window, you must manually select the monitor on which the main window will be displayed.
- When system information is displayed, “Monitor name” and “S/N” of the display information are not displayed.
- The ICC profile is not created even if the color mode is switched while ColorNavigator is running as a resident program.

2-2. Connecting the USB Cable

1. Use the provided USB cable (MD-C93 or UU200SS) to connect the USB Type-B connector (upstream) of the monitor to the USB Type-A connector (downstream) of the computer.

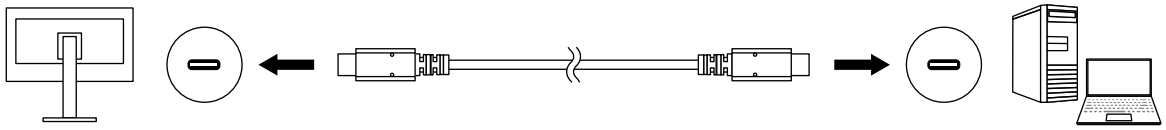


Attention

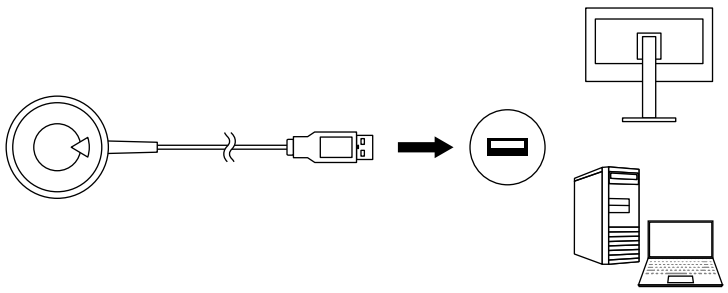
- If your computer does not have a Type-A connector but has a Thunderbolt™ 3 or USB Type-C connector, add a commercially available USB Type-C to Type-A conversion adapter.
- When using a monitor with two USB Type-B connectors (upstream) , connect the USB cable to the connector enabled by default.
  Default Settings:
  - Models other than CG1: Connector 1
  - CG1: Connector 2
- Do not remove the USB cable while ColorNavigator 7 is operating. Doing so may result in system freeze or software malfunction.

Note

- If you use a USB Type-C cable to connect your monitor with the computer, this step is not necessary.



2. If you use an external measurement device, make sure that the measurement device is connected to the USB Type-A connector (downstream) of your computer or monitor.



Attention

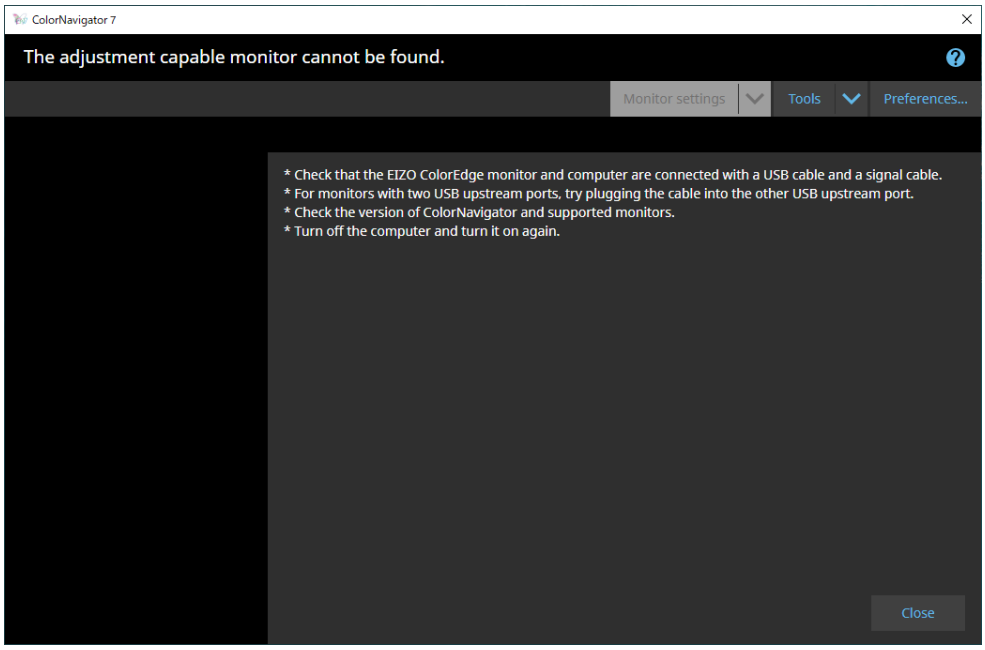
- Depending on the measurement device, limitations may apply to the connected USB port. For more information about connecting measurement devices, refer to the user's manual of the measurement device.
- Do not remove the measurement device from the USB port while ColorNavigator 7 is operating. Doing so may result in system freeze or software malfunction.

Note

- If you use the built-in calibration sensor, there is no need to connect an external measurement device.
- By installing ColorNavigator 7, the drivers for the corresponding measurement devices are also installed at the same time. There is no need to install the driver provided with the measurement device (for Windows only).

2-3. If the Monitor is not Detected

If the monitor is not detected, the following messages will be displayed when ColorNavigator 7 starts up.



If the monitor is not detected, check the following.

- Check that the monitor and the computer are correctly connected with a USB cable. (Refer to “2-2. Connecting the USB Cable” (page 11).)
- If your computer has more than one USB Type-A connector (downstream), try connecting it to another connector.
- Check that your environment meets the operating conditions of ColorNavigator 7. (Refer to “1-3. Requirements for ColorNavigator 7” (page 6).)
- If you are using a ColorEdge-series monitor that does not meet the operating conditions of ColorNavigator 7, use a previous version of ColorNavigator.
- Turn off the computer and turn it back on.

2-4. Warming up the Monitor

The monitor cannot display images accurately right after the monitor is turned on because the brightness and chromaticity are not stabilized. Before performing adjustments, turn on the power of the monitor and warm it up.

Attention

- The warming-up time varies depending on the monitor being used. For details on the warming-up time, see the User's Manual of the monitor.
- SelfCorrection requires a warming-up that takes 60 minutes or more.

1. Turn on both the monitor and the computer.

2. Disable the power management function of the computer.

To prevent the monitor from transitioning to Display Off during warm-up, disable the computer’s power management settings related to turning off the display and transitioning to standby mode.

Attention

- When the monitor transitions to Display Off, it enters the same state as when the power is turned off. Therefore, after returning from Display Off, it takes some time for the monitor’s brightness and chromaticity to stabilize during warm-up.

3. Set the display resolution and number of colors.

The monitor should be used at the recommended resolution.

Set the monitor color to 16.7 million (24-bit) or more.

Note

- For details on the recommended monitor resolution, see the User's Manual of your monitor.

2-5. Uninstalling the Software

● Mac

1. Open the computer's library folder.

Note

- The library folder can be opened with the following procedure.
  1. Click the "Finder" icon on the Dock while pressing "control", or right-click the icon and select "Go to the folder:" from the menu.
  2. Enter "/Library", and click "Move".

2. Select the "EIZO" folder from the "Application Support" folder.

The "EIZO" folder opens.

3. Select the "tools" folder from the "ColorNavigator 7" folder.

The "tools" folder opens.

4. Double-click the "ColorNavigator 7 Uninstaller.app" file.

Note

- To delete all the data including adjustment data from the computer, go to the "tools" folder and double-click "ColorNavigator 7 Uninstaller Full.app".
- When you enter the following in the "Go to the folder:", you can directly open the folder where the uninstaller is stored. /Library/Application Support/EIZO/ColorNavigator 7/tools

● Windows

Attention

- A user account with "Administrator" privileges is required.
- Please consult your system administrator for the privilege setting of your account.

1. Click "Start" - "Settings" - "Apps".

2. Click "Uninstall" for "ColorNavigator 7" from the list.

● Linux

Note

- Contact your local EIZO representative about downloading the Linux version of the installer.

1. After unzipping the downloaded file, run "uninstall.sh".

The installer starts up.

2. Uninstall the software.

Follow the instructions to uninstall the software.

Attention

- A user account with root privileges is required.

Chapter 3 Basic Usage

3-1. Before You Use

You need to select a color mode type that is appropriate for your applications and color management policies. See “3-11. Management of Color Mode” (page 53) for details.

One target and setting is assigned to each color mode.
If you have a specific target you want to use, you need to assign this target to any of the color modes that are set to Advanced (ADV) See “3-8. Selecting Targets for Color Mode” (page 48) for details.

The color mode can be switched in the following methods:

- Switching from the color mode list of the ColorNavigator 7 main window.
- Switching from the menu of the ColorNavigator Agent.

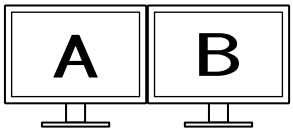
Note

- The settings made in ColorNavigator 7 will be saved in the monitor unit itself.

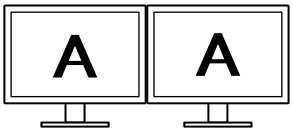
3-2. How to Open the Main Window

Attention

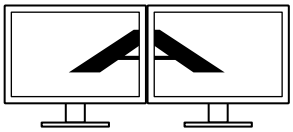
- When multiple monitors are connected, each monitor should display an independent screen. Displaying the same screen on each monitor or across multiple monitors prevents adjustment using the ColorNavigator 7 software.



Independent screen on each monitor (Supported)



Same screen on each monitor (Not supported)



A screen over the multiple monitors (Not supported)

- When you use ColorNavigator 7 for the monitor with a laptop computer connected, you have to disable the mirroring/duplicating display settings in the OS settings. Adjustment using ColorNavigator 7 is not possible if identical screens are displayed on the monitor and laptop computer.

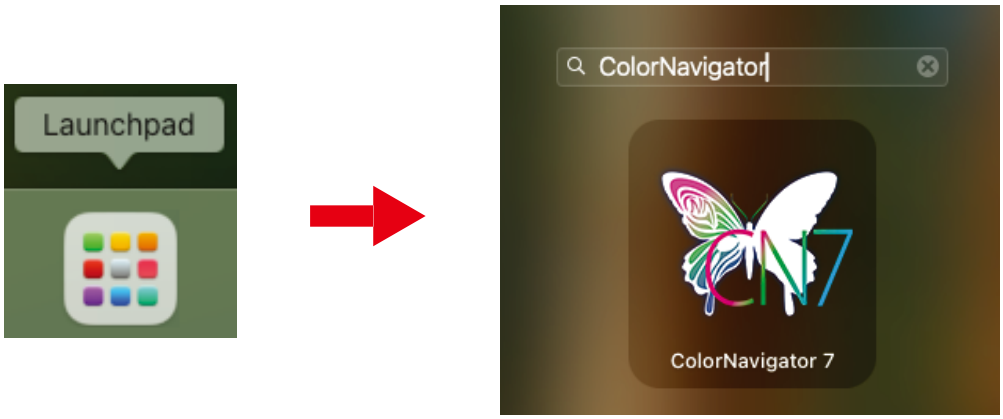
Independent screen on the monitor and laptop PC monitor (Supported)

Same screen on the monitor and laptop PC monitor (Not supported) (Mirroring/duplicating)

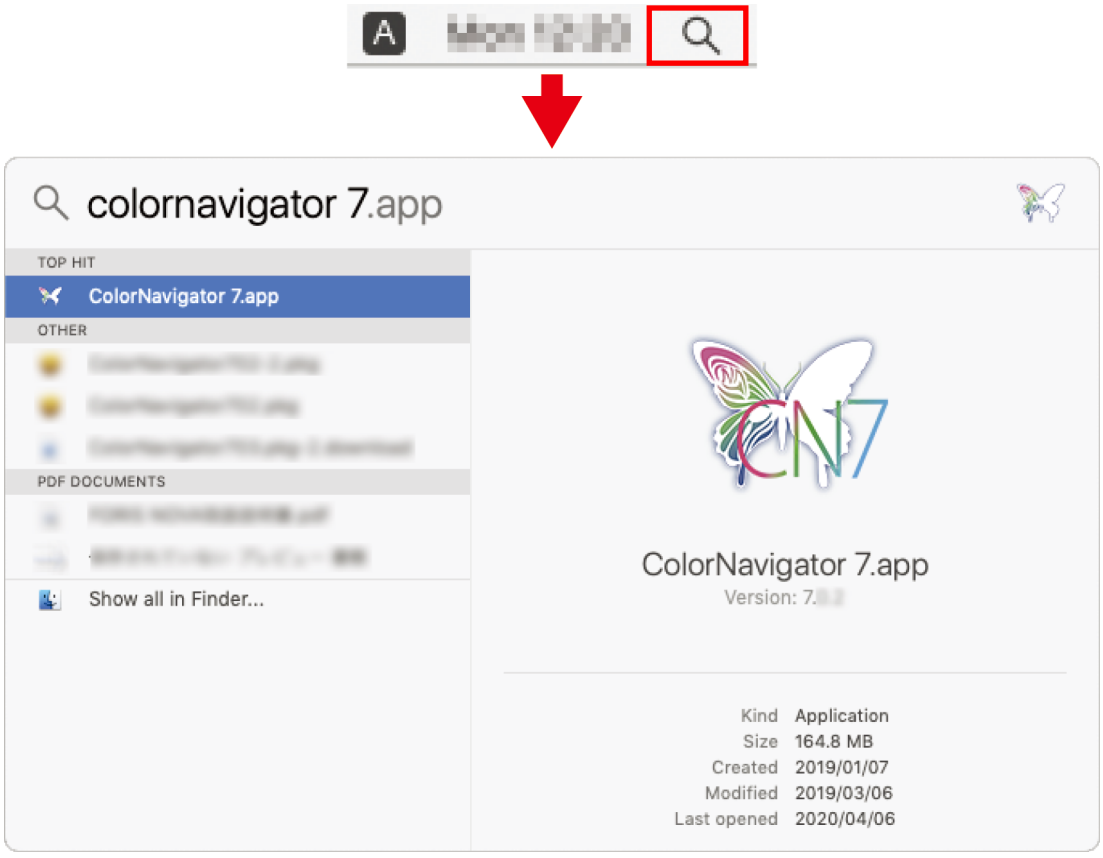
● Mac

The main window can be opened with any of the following methods.

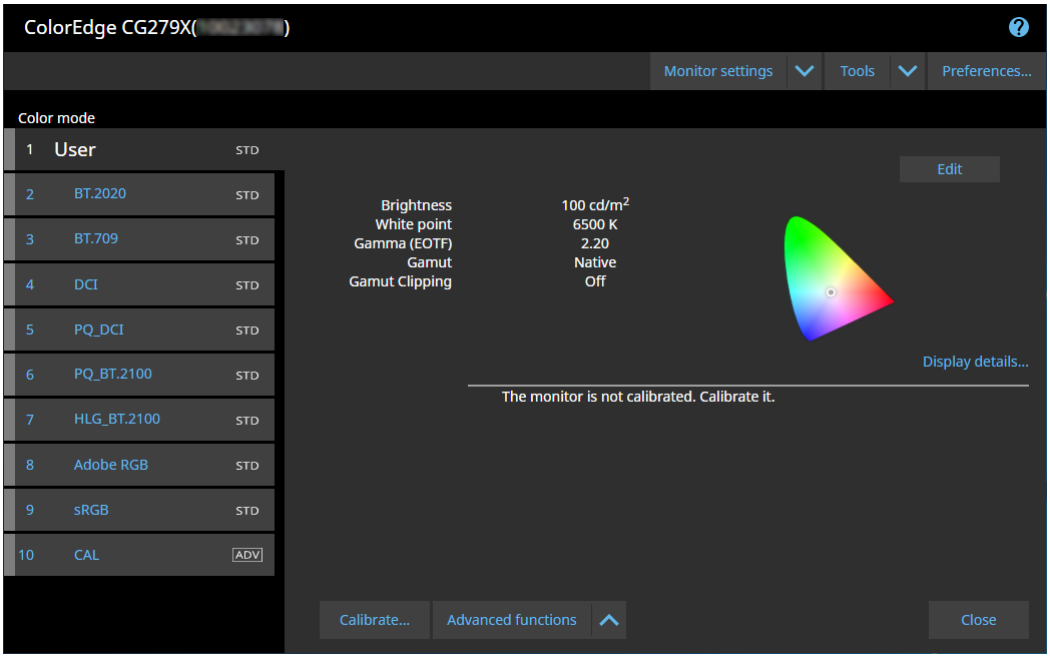
- **Double-click the “ColorNavigator 7” icon inside the “Application” folder.**
- **Click the Launchpad icon on the Dock. Enter “ColorNavigator 7” in the search area, and click the “ColorNavigator 7” icon displayed in the search results.**



- **Click the search icon on the menu bar to open the Spotlight search window. Enter “ColorNavigator 7” and then click the “ColorNavigator 7” icon displayed in the search results.**



The ColorNavigator icon appears on the menu bar, and the main window opens.



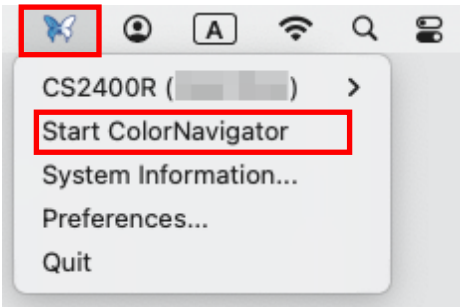
Note

- If a message “The adjustment capable monitor cannot be found.” is displayed, refer to “2-3. If the Monitor is not Detected” (page 12).
- If a message “Screen error” is displayed, refer to “9. Screen Error” (page 93).

If the Main Window Does not Open

1. Click the ColorNavigator icon on the menu bar to open the menu.

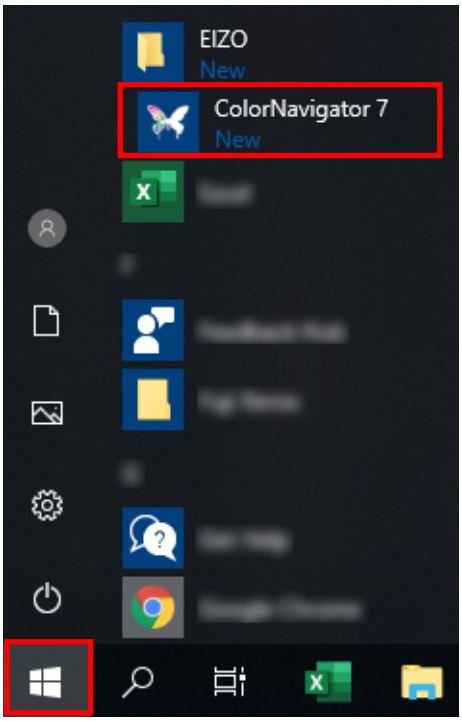
2. Select “Start ColorNavigator”.



● Windows

The main window can be opened with any of the following methods.

- **Click “Start” - “All apps” - “EIZO” - “ColorNavigator 7”.**



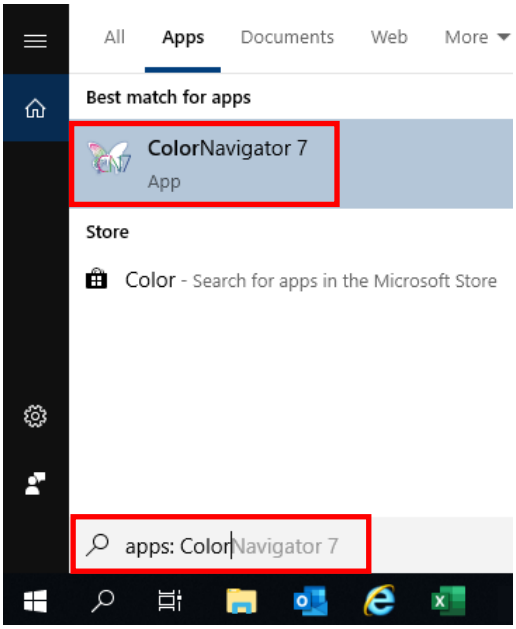
- **Double-click the “ColorNavigator 7” icon on the desktop.**

Large icon

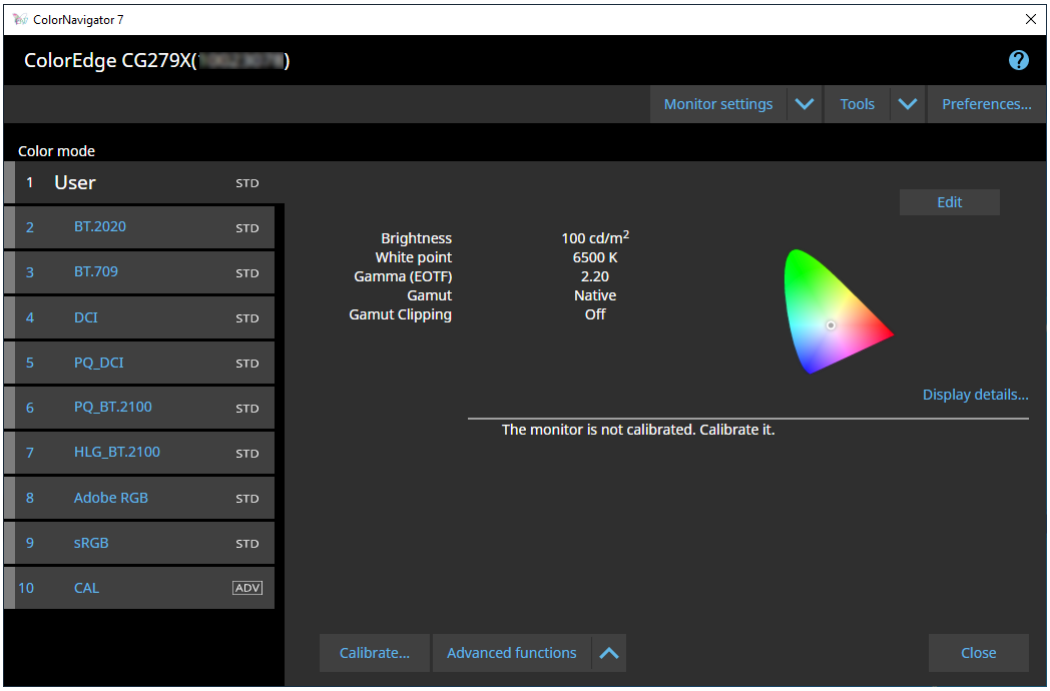
Medium icon

Small icon

- **After selecting “apps” in Windows file search, enter “ColorNavigator 7” and click the “ColorNavigator 7” icon displayed in the search results.**



The ColorNavigator icon appears on the task tray, and the main window opens.



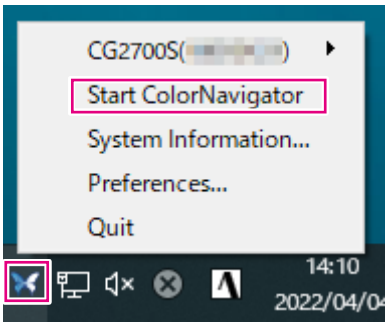
Note

- If a message “The adjustment capable monitor cannot be found.” is displayed, refer to “2-3. If the Monitor is not Detected” (page 12).
- If a message “Screen error” is displayed, refer to “9. Screen Error” (page 93).

If the Main Window Does not Open

1. Right-click the ColorNavigator icon on the task tray to open the menu.

2. Select “Start ColorNavigator”.



● Linux

Open the main window with the following method.

- **Go to the “Application” menu and select “Accessories” - “ColorNavigator 7”.**

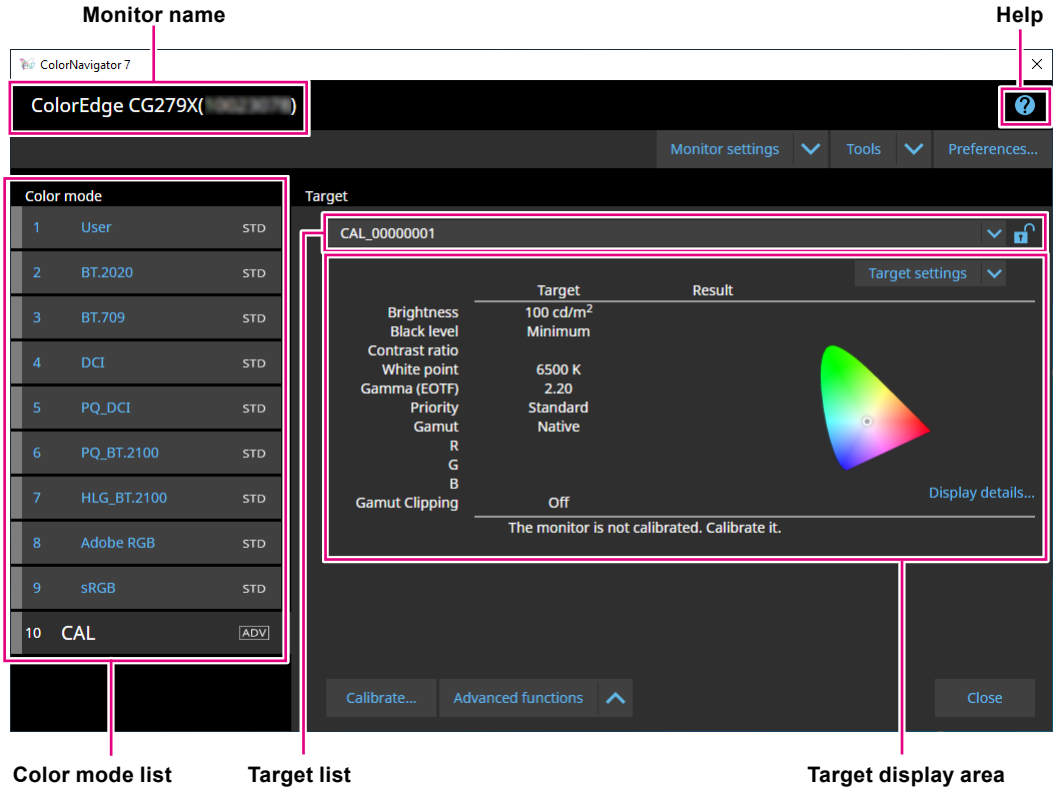
3-3. Main Window Structure

Note

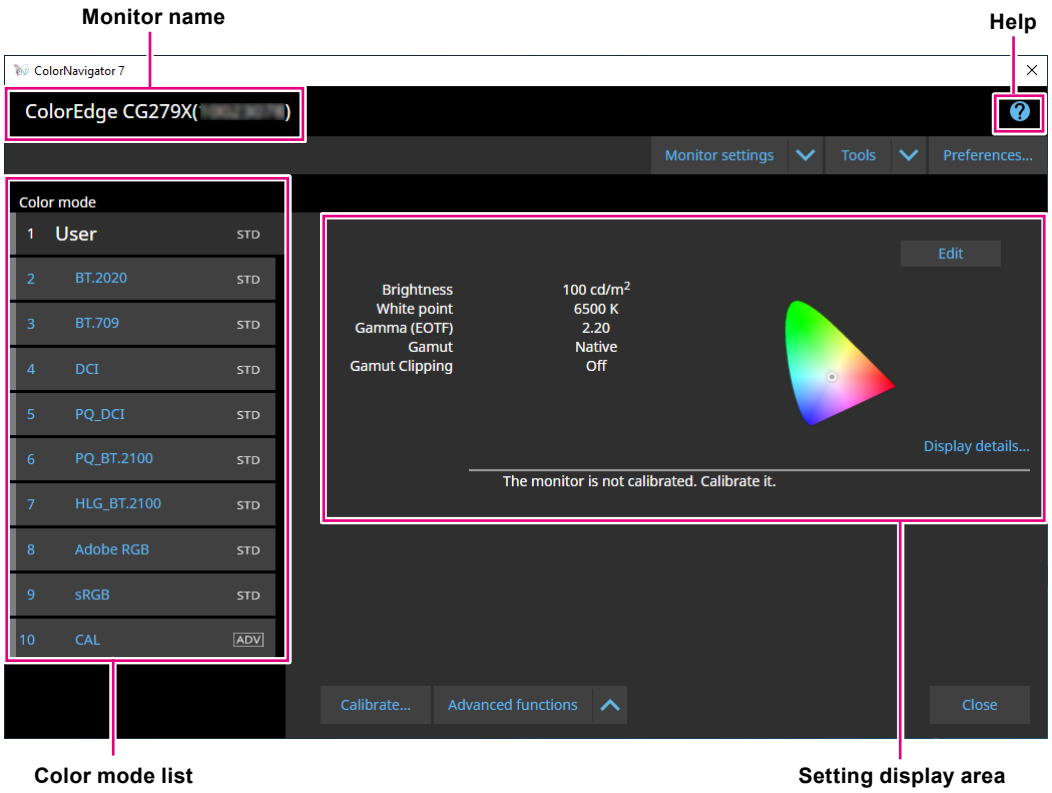
- At the initial startup of ColorNavigator 7, a dialog box asking for your participation in the “Quality Improvement Program” will be displayed. Select either “Yes, I want to participate in the program” or “No, I don't want to participate in the program”.
- ColorNavigator 7 is the resident software by default (ColorNavigator Agent (page 77)).
- When you connect multiple monitors that are adjustable with ColorNavigator 7, the monitor to be adjusted must be selected.

When ColorNavigator 7 starts up, the main window appears first. Each function of ColorNavigator 7 is selectable from the main window.

● Color mode type is Advanced (ADV)



● Color mode type is Standard (STD) or Sync Signal (SYNC)

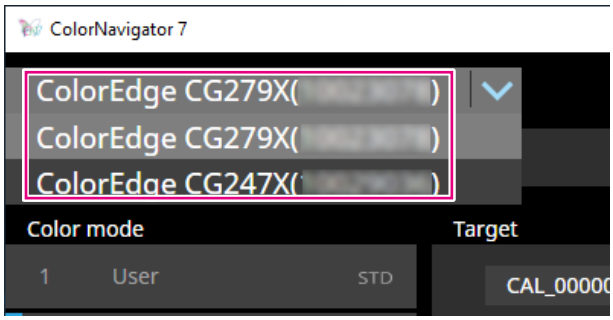


The major functions of the main window are described hereinafter.

● Monitor name

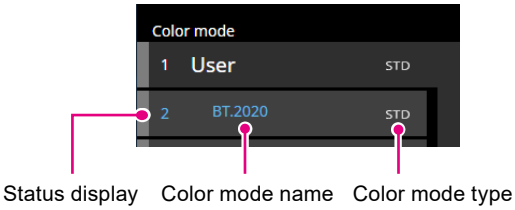
It displays the monitor currently in use.

If more than one monitor is connected, select a monitor to be adjusted from the pull-down menu.



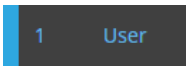
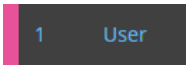
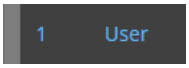
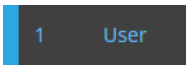
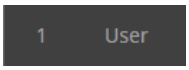
● Color Mode List

It displays the configured color mode of the monitor in use. Depending on the monitor you use, the number of displayed color modes and their names are different.



Status display

The color band corresponding to the current status is displayed on the left side of the color mode item.

Display	Enabled/ Disabled	Calibration	Management policy	Elapsed time
	Enabled	Performed	Periodic calibration	Within the set time
	Enabled	Performed	Periodic calibration	Exceeding the set time
	Enabled	Not performed	-	-
	Enabled	Performed	None	-
	Disabled	-	-	-

Color mode name

It displays the name of the color mode being set to the monitor.

Color mode type

It displays the color mode type. For more information about the color mode types, see “3-11. Management of Color Mode” (page 53).

Display	Description
	Standard color mode type.
	Advanced color mode type.
	Sync Signal color mode type.

Target list

When the color mode type is set to Advanced (ADV), you can select a target to be assigned to the color mode.

Clicking the key icon ( ) locks the target currently selected and prevents the target from being edited or deleted. Click the icon again to unlock.

Target display area / Setting display area

It displays the details of the target and setting currently in use.

Help

A PDF file of the User's Manual opens in a separate window.

3-4. Calibrating the Monitor

Adjust (calibrate) the monitor’s color mode according to your application.

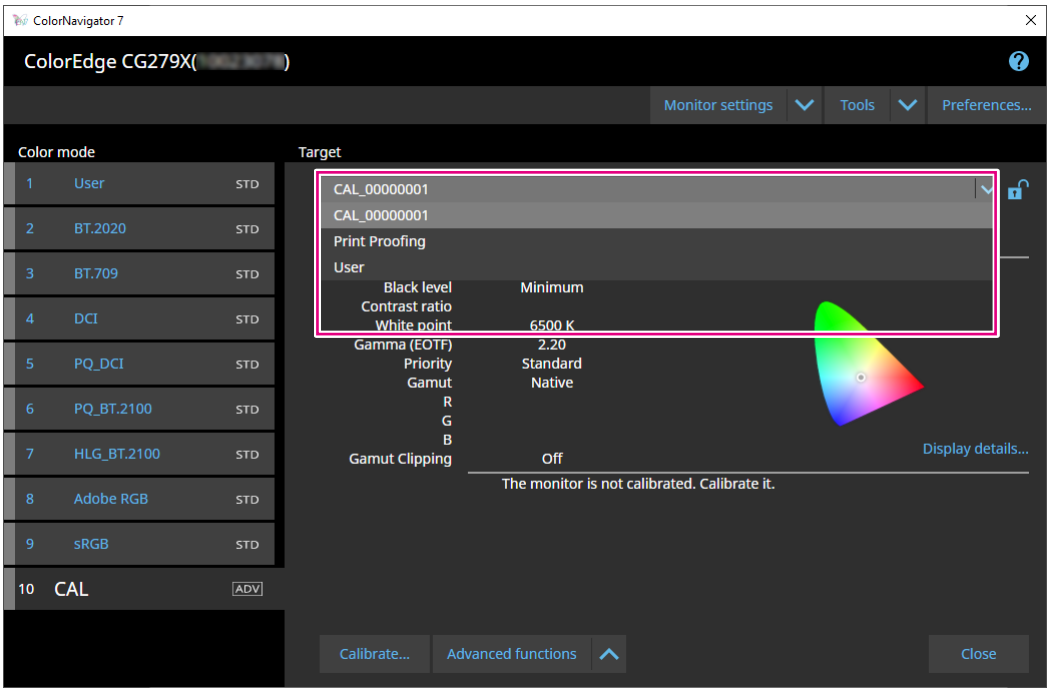
Attention

- Before you begin, make sure that your computer and monitor are connected with a USB cable. For details on the setup method, see the Setup Guide for your monitor.
- If you use an external measurement device, make sure that the measurement device is connected to the USB downstream port on the computer unit or the monitor.

1. In the color mode list, select a color mode applied for calibration.

The monitor's color mode switches.

2. When the color mode type is set to Advanced (ADV), select a target from the target list.



The target display area shows the target values of the selected target.

Select an appropriate color mode and a target for your applications.

	Applications				
	Video creation	**Web content creation/ browsing**	**Production data checking/ editing**	**Production data printing**	**Print proofing (advanced adjustments)**
Color Mode	BT.2020 BT.709 DCI, etc.	sRGB	Adobe RGB	CAL	CAL
Target/Settings	Default	Default	Default	Printing 5000K*1 Printing 5500K*1	Print proofing*1

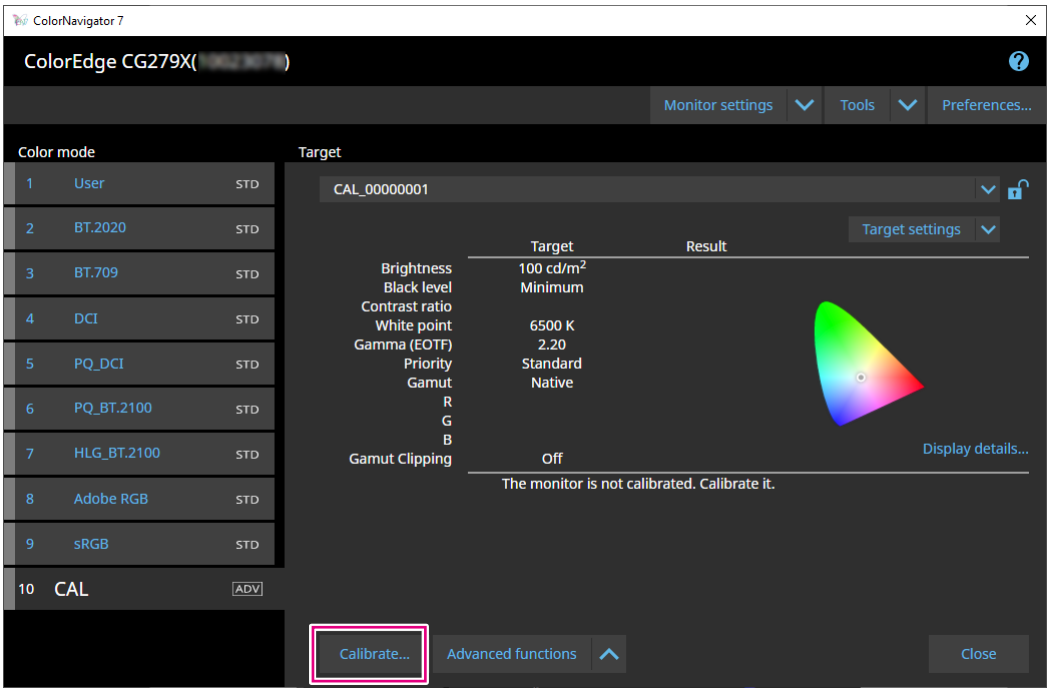
*1 Setting values are as listed in the table below.

	Printing 5000K	**Printing 5500K**	**Print Proofing**
Brightness	100 cd/m^2	100 cd/m^2	120 cd/m^2
Black level	Minimum	Minimum	Minimum
White point	5000 K	5500 K	5000 K
Gamma (EOTF)	2.2	2.2	2.2
Priority	Standard	Standard	Gray balance
Gamut	Native	Native	Native

Note

- When the color mode type is Standard (STD) or Sync Signal (SYNC), the target selection is not required.
- When you upgrade from ColorNavigator 6, the target used in ColorNavigator 6 will be displayed.
- When you upgrade from ColorNavigator NX, the target used in ColorNavigator NX will be displayed. Targets specified for each color mode in ColorNavigator NX will be configured to the corresponding color modes.
- Depending on the monitor you use, the displayed color modes are different. For details and features of the color modes, refer to the User's Manual of the monitor being used.

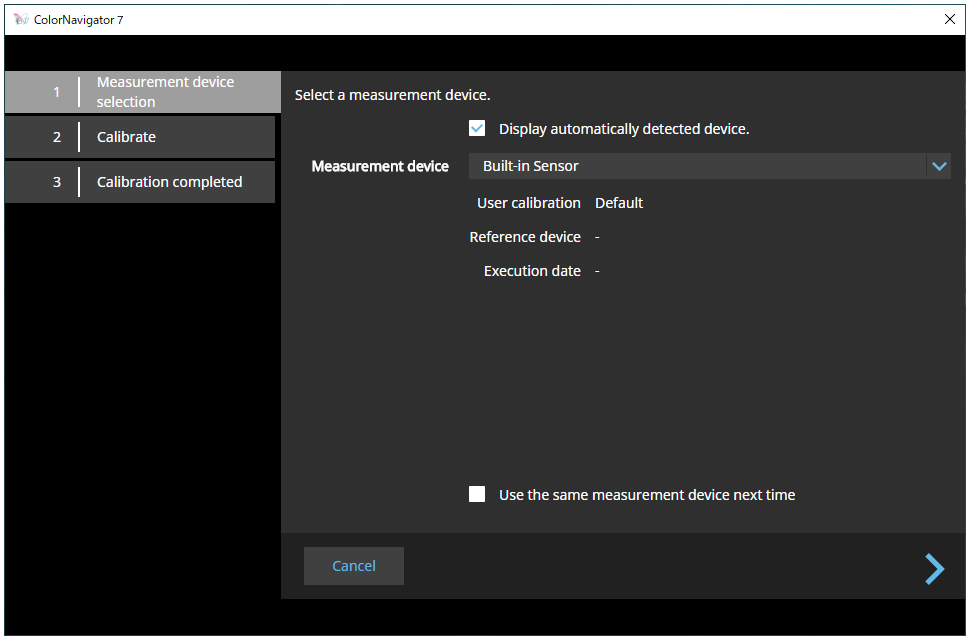
3. Click the “Calibrate” button.



The Measurement Device Selection window will be displayed.

4. Select a measurement device and click .

The operating method is displayed for the measurement device in use. Initialize the measurement device if it needs to be initialized. Initialization of a measurement device will complete in a few seconds. To abort the calibration, close the window by clicking the “Close” button.



For the following measurement devices, the current settings for “Compensation method” are displayed (except when the color mode type is set to “Standard (STD)”).

- X-Rite i1Display Pro, i1Display Pro Plus
- Calibrite ColorChecker Display Pro, ColorChecker Display Plus, Display Pro HL, Display Plus HL
- EIZO EX3, EX4
- Datacolor Spyder5, SpyderX

To change the setting, click “Customize” and select from the pull-down menu.

Item	Description
Color management	A setting optimized for accurate color management workflow. Suitable for use with a single monitor use.
Multiple monitor matching	A setting optimized for matching colors across different monitors.
No compensation	A setting optimized for use when using another manufacturer’s monitor validation software. The measured values from the measurement device are used as is. Depending on the measurement device, the measurements of wide gamut monitors may not be accurate.

For the following measurement devices, the current settings for “Color matching function” are displayed (except when the color mode type is “Standard (STD)”).

- X-Rite i1Pro 2, i1Pro 3, i1Studio
- Calibrite ColorChecker Studio
- Konica Minolta CS-2000, CS-2000A, CS-3000, CS-3000HDR, CS-2000Plus, MYIRO-1
- Photo Research PR-655, PR-680
- Colorimetry Research CR-250, CR-300

To change the setting, click “Customize” and select from the pull-down menu.

Item	Description
CIE 1931 2-degree Standard Observer	This is the CIE 1931 2-degree Standard Observer setting.

Item	Description
CIE 1964 10-degree Standard Observer	This is the CIE 1964 10-degree Standard Observer setting. Standard values and color temperature values are based on the CIE 1931 2-degree Standard Observer coordinate system. This cannot be managed using SelfCalibration. If executed using OSD operation, the setting will be overwritten with the CIE 1931 2-degree Standard Observer setting.

The measurement devices listed below have the compensation function unique to each measurement device. When “Compensation table” appears, select a compensation table you will use from the pull-down menu. Note that the compensation method of ColorNavigator 7 will be disabled.

- Konica Minolta CS-200, CA-310, CA-410
- Klein K-10, K-10A
- Colorimetry Research CR-100

Attention

- While the measurement device is being initialized, make sure to prevent light from entering the sensor unit of the measurement device. If light enters into the sensor unit during initialization, the results will not turn out to be accurate.
- Depending on the measurement device being used the “Display automatically detected device” checkbox needs to be unchecked. See “Measurement Device” (page 7) for applicable measurement device(s).
- “Gray balance” cannot be adjusted if the following measurement devices are used:
  - CG2420’s and CG2730’s built-in calibration sensors
  - EIZO EX3, EX4, EX5
  - Datacolor Spyder5, SpyderX, SpyderX2, SpyderPro, Spyder

Note

- When the “Use the same measurement device next time” checkbox is selected, the currently selected measurement device will be automatically selected the next time.

5. To use an external measurement device, install the measurement device on the measurement window.

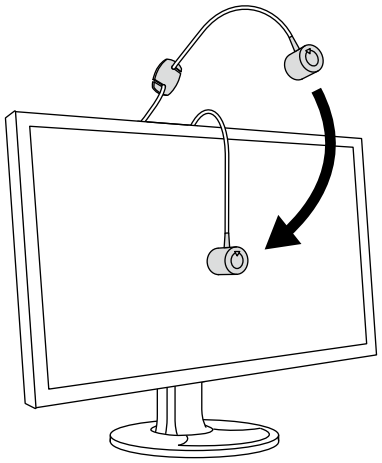
The installation method varies by the measurement device. For details, refer to the User's Manual of the respective measurement device.

Attention

- Depending on the settings of the monitor and the OS, the measurement window may not appear in the center of the screen. If that happens, install the measurement device close to the center of the monitor regardless of where the measurement window is located.

Measurement device used by being in contact with the monitor

Tilt the monitor panel surface slightly upward and install the measurement device to the measurement window.

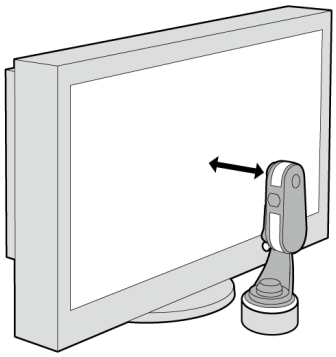


Calibrating CG3145 / CG3146 / CG1

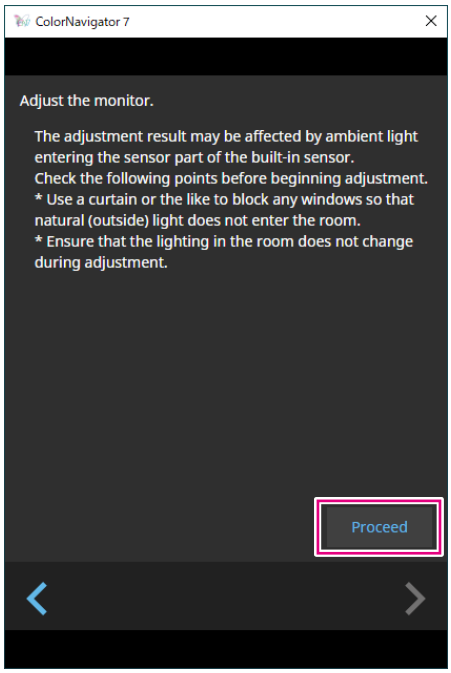
Install the measurement device on a tripod or a similar fixing base, and place it approximately 5 cm to 20 cm away from the panel surface.

Attention

- If the measurement is taken while the monitor is in contact with the panel, the results will not turn out to be accurate due to the accumulated heat.



6. Click the “Proceed” button.



The measurement pattern appears and calibration starts automatically.

Attention

- If the built-in calibration sensor is used, the measurement results may be affected by ambient light entering into the sensor unit. Check the following points before taking measurements.
  - Block natural light from entering the room by closing the window curtain, etc.
  - Do not change the room lighting during measurement.
  - Attaching the light-blocking hood is recommended.
- The shape of the displayed measurement device will vary by the measurement device you use.
- When the color mode type on CG3146 / CG1 is set to Standard (STD) or Sync Signal (SYNC) it will take some time for the calibration to finish due to the following reason:
  - Chromaticity at high brightness and low brightness is adjusted during calibration. After switching brightness, the monitor requires some time to warm up in order to stabilize the display status.

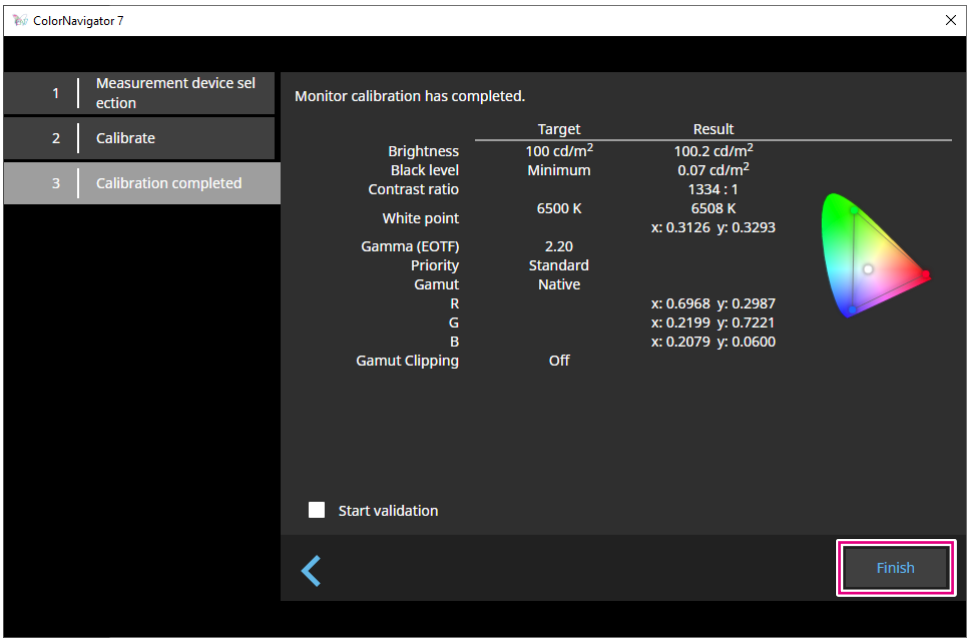
Note

- For the following models, the “Use Measurement Position Marker” checkbox appears.
  - CG2700S, CG2700X, CG3146, CG1, CG2400S, CG3100X, CG2400SV, CG3200X, CS3200X
- For models with a built-in correction sensor, the white point is measured with the built-in correction sensor after the monitor adjustment is performed by the measurement device. The measurement result is referenced when SelfCorrection is executed.

During calibration, the progress status is displayed in the lower-right corner of the screen.

Once calibration is complete, the “Calibration completed” window appears.

7. Click the “Finish” button to complete the adjustment.



Attention

- If the adjustment fails, an error message will be displayed. Follow the instructions on the window and redo the monitor adjustment. Possible causes include the following:
  - The measurement device may not have been firmly attached to the monitor.
  - Light had entered into the sensor unit during initialization.

Note

- The “Calibration completed” window displays the target value and calibration result. Clicking “Finish” after selecting the “Start validation” checkbox starts the monitor validation (for verifying difference between the current status and the target based on the validation target).

● Verifying the Calibration Result

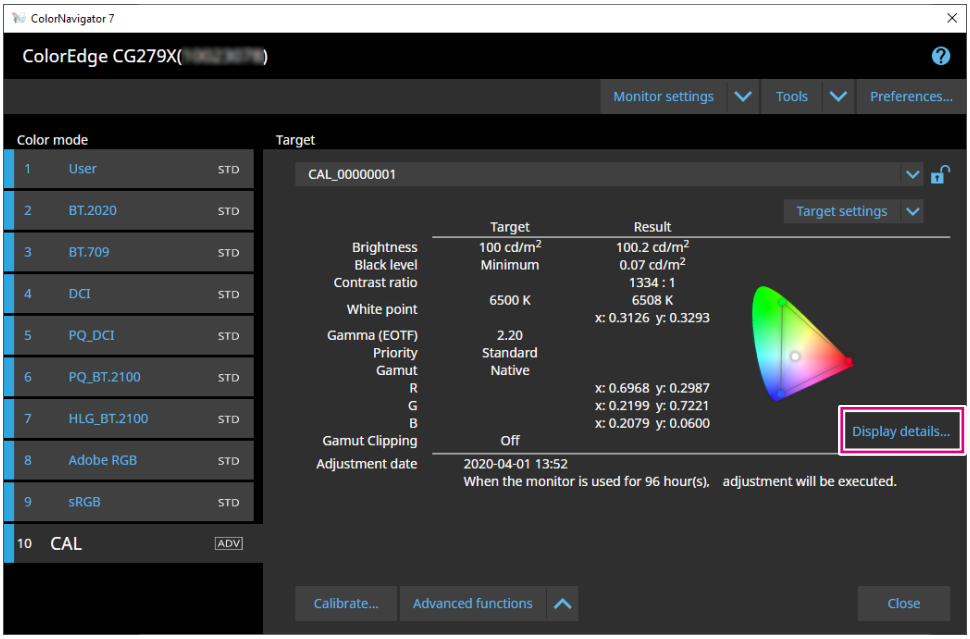
The calibration result of each color mode can be verified.

1. Open the main window.

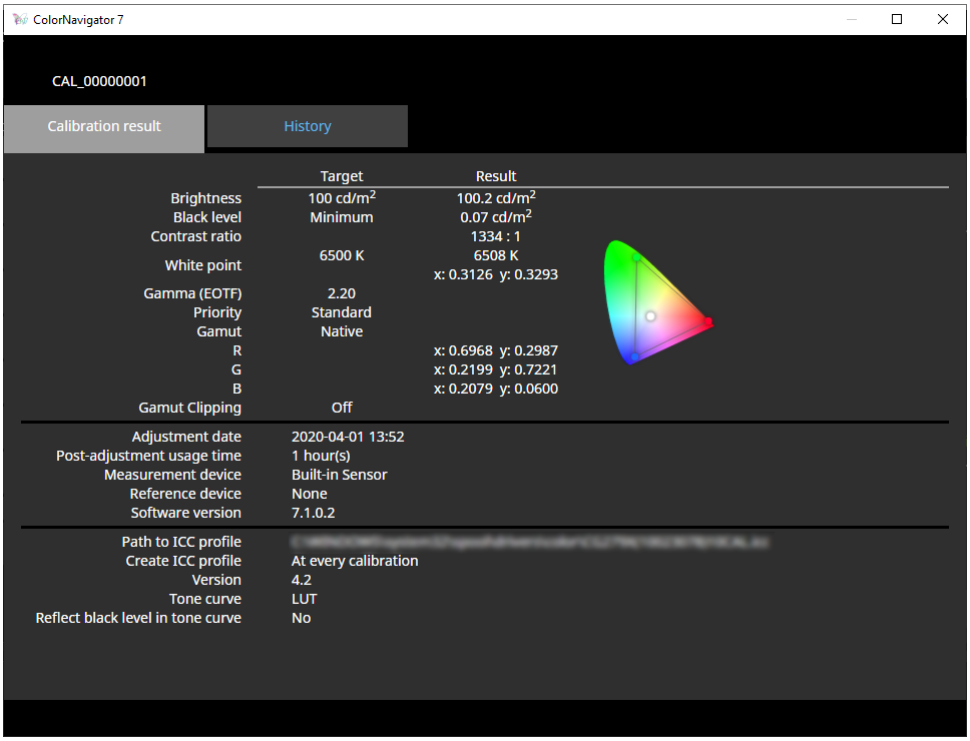
2. Select a color mode.

The color mode of the monitor is switched, and the current adjustment status is displayed.

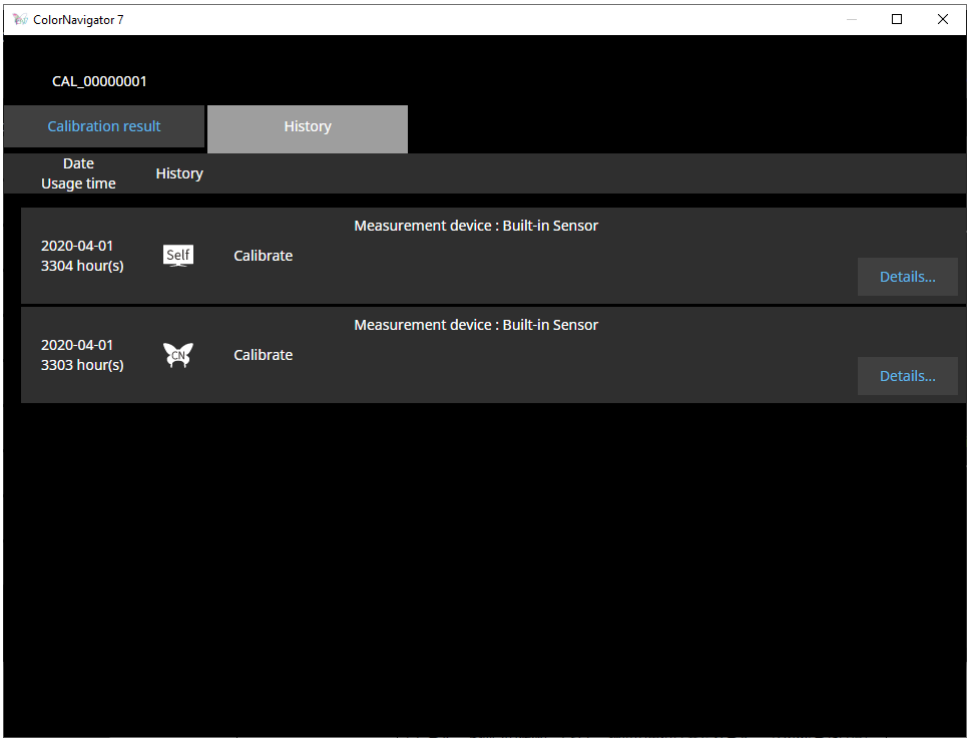
3. Click “Display details” in the target display area or setting display area.



The latest calibration result will be displayed. Clicking “History” tab displays the past calibration results.



The History window displays the history of past calibration results and validation results.



Clicking “Details” of the individual history items displays the details of each item.

- Self: Results of SelfCalibration or SelfCorrection.
- CN: Results of the calibration and validation executed with ColorNavigator 7.

By displaying individual history items and clicking “Output report”, you can output a report containing the details of the calibration and validation results.

Attention

- For SelfCorrection, the results of the most recently executed calibration are displayed in “Calibration result”. SelfCorrection adjustment results are not displayed.
- The black level and contrast ratio may not be displayed with the following models.
  - CG2700S, CG2700X, CG3145, CG3146, CG1, CG2400S, CG3100X, CG2400SV

3-5. Manual Adjustment

Once the monitor has been calibrated, you can adjust the display status while viewing the screen.

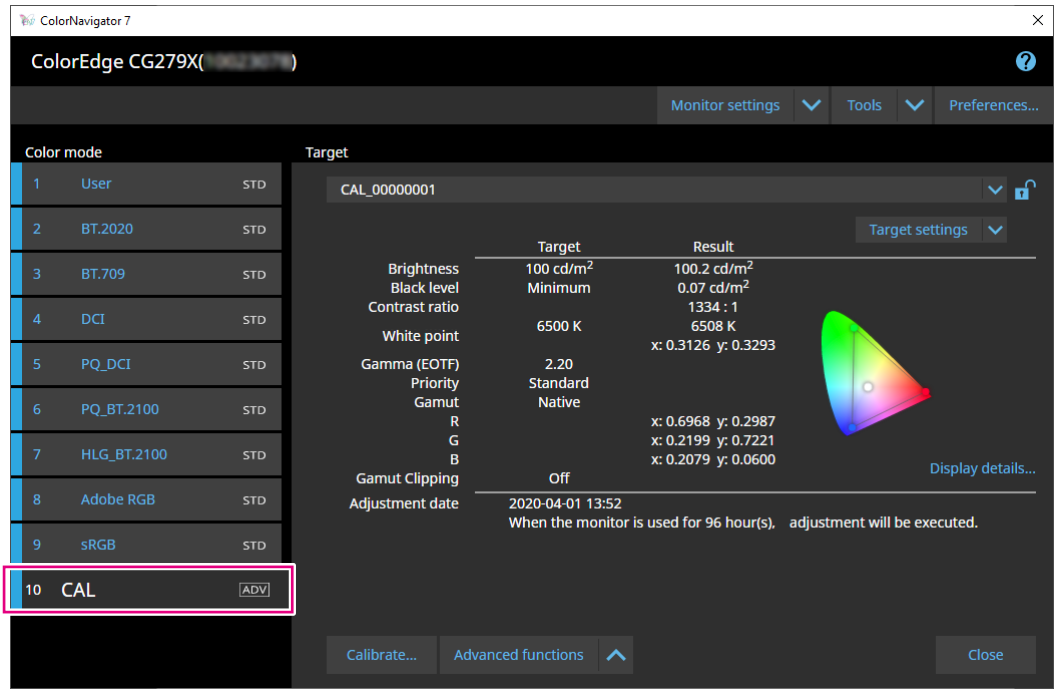
● Color mode type is Advanced (ADV)

White point, brightness, black level, gamma (EOTF), hue and saturation (lightness depending on the models) of 6 colors (red, green, blue, cyan, magenta, yellow) can be adjusted manually. After making adjustments, use the measurement device to measure the adjustment status.

Attention

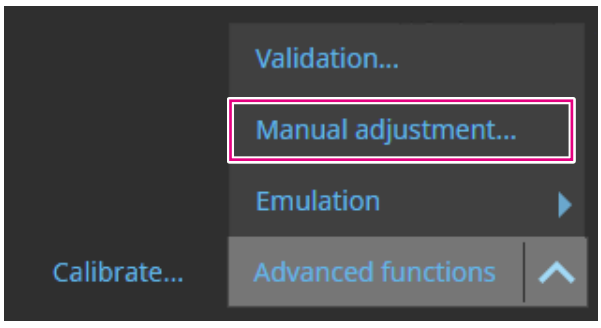
- Calibration must be performed in advance.

1. Select the Advanced (ADV) color mode.



The monitor's color mode switches.

2. Click “Advanced Functions” and select “Manual adjustment” from the menu.



The Manual Adjustment window will be displayed.

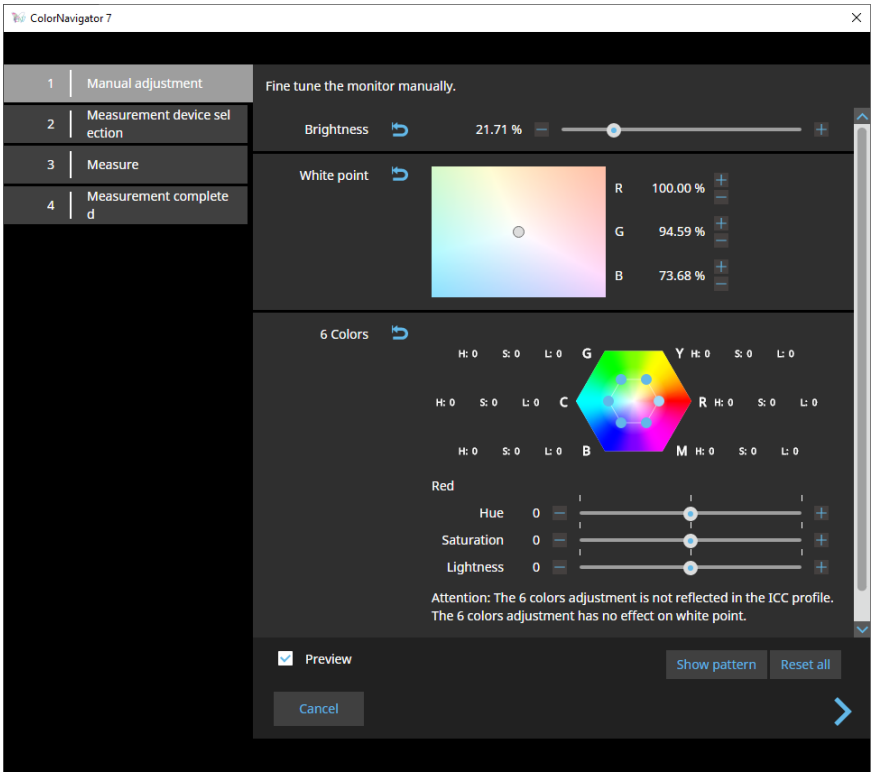
3. Adjust each item while viewing the monitor screen.

Attention

- Manually adjustable items will vary by the target settings. Items that cannot be adjusted will not be displayed on the screen.

Note

- Clicking ↩ resets the manual adjustment results of each item.

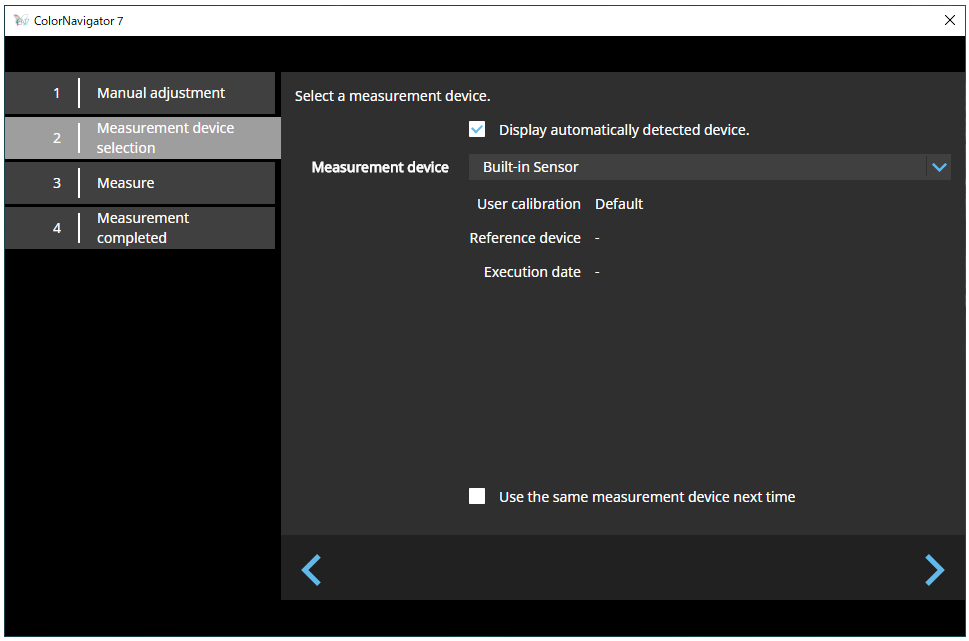


Item	Description
Brightness	It adjusts the monitor brightness. Use the slider or the + and − buttons to specify a value. Depending on the monitor you use, the unit of measure for brightness is different. (cd/m^2 or %)
Black level	It adjusts the brightness of the darker area of an image displayed on the monitor. Specify a value using the slider. **Note** • Increasing the black level reduces the contrast.
White point	Use + and − buttons or use your mouse and drag the circle (○) inside the white point area to adjust the white point.
Gamma (EOTF)	Specify a value using the slider.
6 colors	Click the blue circle (●) inside the hexagon or the letters R/G/B/C/M/Y to specify each color level. Then, use the slider for hue, saturation, and lightness settings to adjust the color. **Attention** • Adjustments will not be necessary in most cases.
Preview	With the checkbox selected, you can make adjustments while viewing the status changes made to the monitor.
Show pattern	A test pattern used for visually checking the adjustment status will be displayed in full-screen.
Reset all	All the values are restored to the initial values when the manual adjustment was started.

4. Once the adjustments are complete, click ›.

The Measurement Device Selection window will be displayed.

5. Select a measurement device and click .



The operating method is displayed for the measurement device in use.

Initialize the measurement device if it needs to be initialized. Initialization of a measurement device will complete in a few seconds.

To use an external measurement device, install the measurement device on the measurement window.

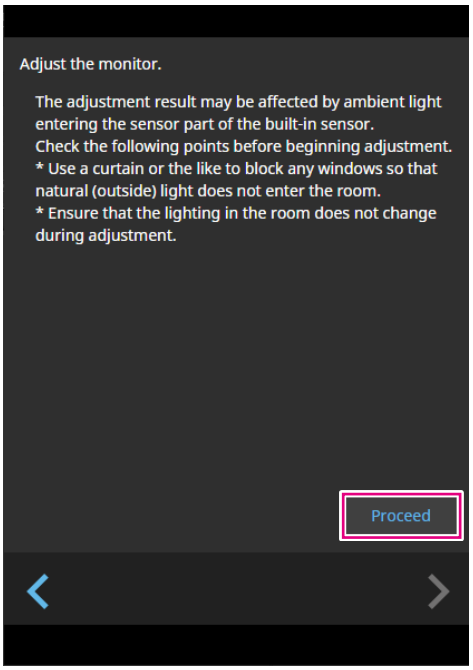
Attention

- Depending on the settings of the monitor and the OS, the measurement window may not appear in the center of the screen. If that happens, install the measurement device close to the center of the monitor regardless of where the measurement window is located.

Note

- When the “Use the same measurement device next time” checkbox is selected, the currently selected measurement device will be automatically selected the next time.

6. Click the “Proceed” button.



The measurement pattern appears and measurements start automatically.

Attention

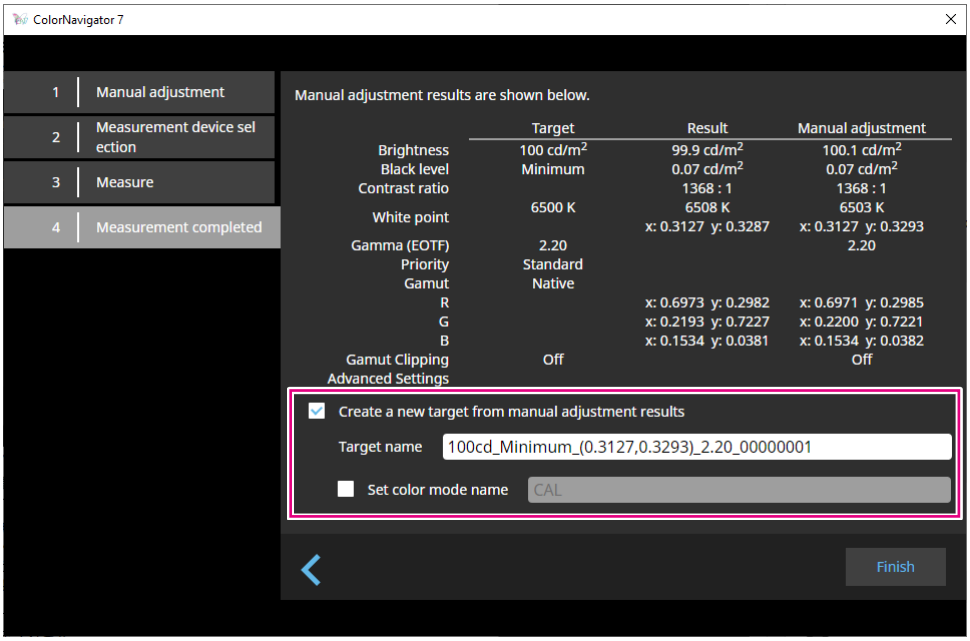
- If you use the built-in calibration sensor, the measurement results may be affected by ambient light entering into the sensor unit. Check the following points before taking measurements.
  - Block natural light from entering the room by closing the window curtain, etc.
  - Do not change the room lighting during measurement.
  - Attaching the light-blocking hood is recommended.

During the measurement, the progress status is displayed in the lower-right corner of the screen.

The Measurement Result window will be displayed once the measurement is complete.

7. To create a new target by using the results of manual adjustment, select the checkbox for “Create a new target from manual adjustment results” and enter the target name.

Without creating a new target, the values of the currently selected target will be overwritten.



Attention

- If the black level value becomes negative and the measurement fails, an error message will be displayed. Check the following and redo the measurement.
  - Install the measurement device in a stable condition.
  - Block natural light from entering the room by closing the window curtain, etc.
  - Do not change the room lighting during measurement.

8. Click the “Finish” button.

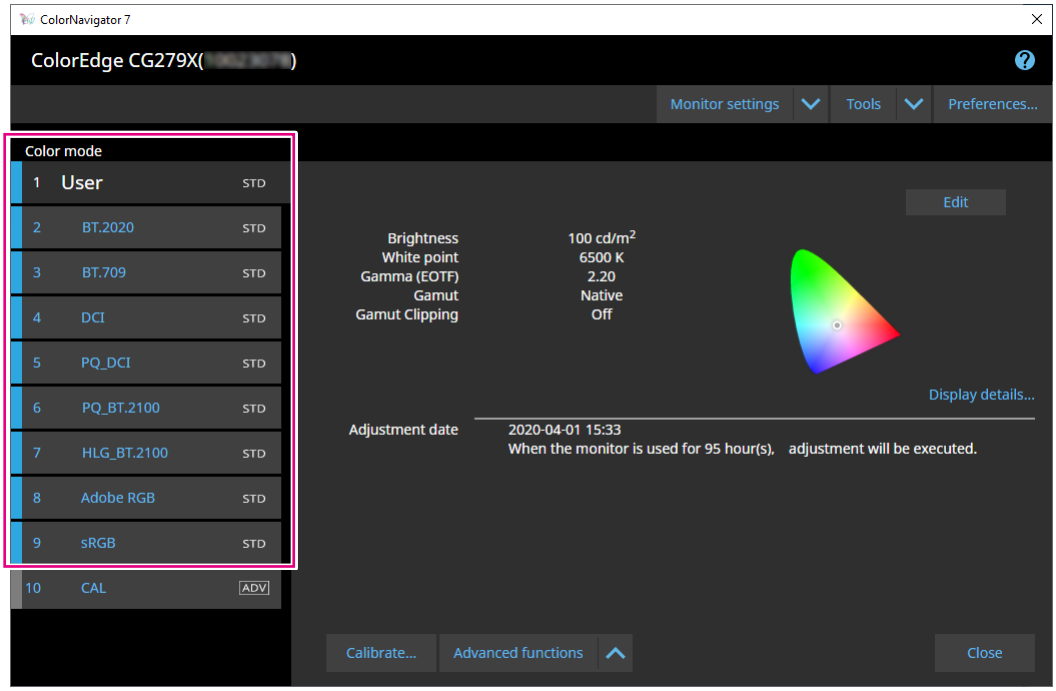
● Color mode type is Standard (STD) or Sync Signal (SYNC)

When the color mode type is Standard (STD), you can adjust the white point and brightness manually.

Note

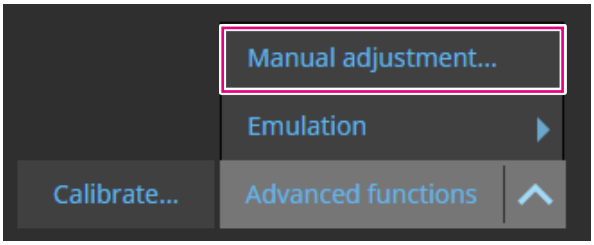
- For Sync Signal, you can manually adjust only the white point. Sync Signal is supported by the following model only:
  - CG2700S, CG2700X, CG3146, CG1, CG2400S, CG3100X, CG2400SV

1. Select the color mode from either Standard (STD) or Sync Signal (SYNC).



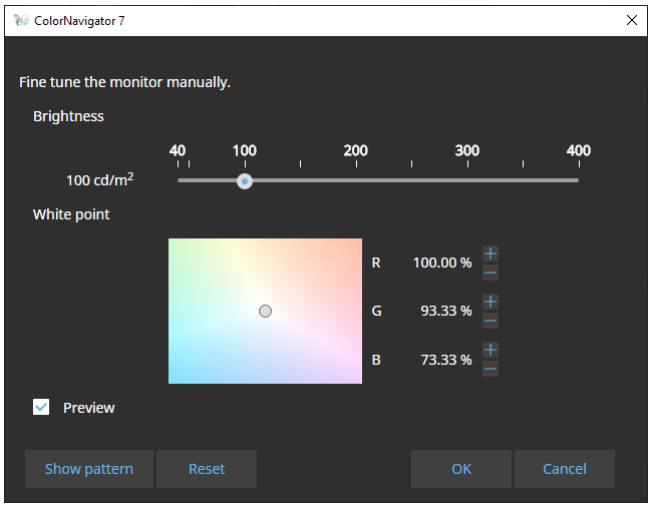
The monitor's color mode switches.

2. Click “Advanced Functions” and select “Manual adjustment” from the menu.



The Manual Adjustment window will be displayed.

3. Adjust each item while viewing the monitor screen.



Item	Description
Brightness	Move the slider and adjust the monitor brightness. Depending on the monitor you use, the unit of measure for brightness is different. (cd/m^2 or %)
White point	Use + and − buttons or use your mouse and drag the circle (○) inside the white point area to adjust the white point.
Preview	With the checkbox selected, you can make adjustments while viewing the status changes made to the monitor.
Show pattern	A test pattern used for visually checking the adjustment status will be displayed in full-screen.
Reset	The values are restored to the initial values when the manual adjustment was started.

4. Click the “OK” button.

3-6. Creating a New Target

Create a target as instructed by the interactive messages.

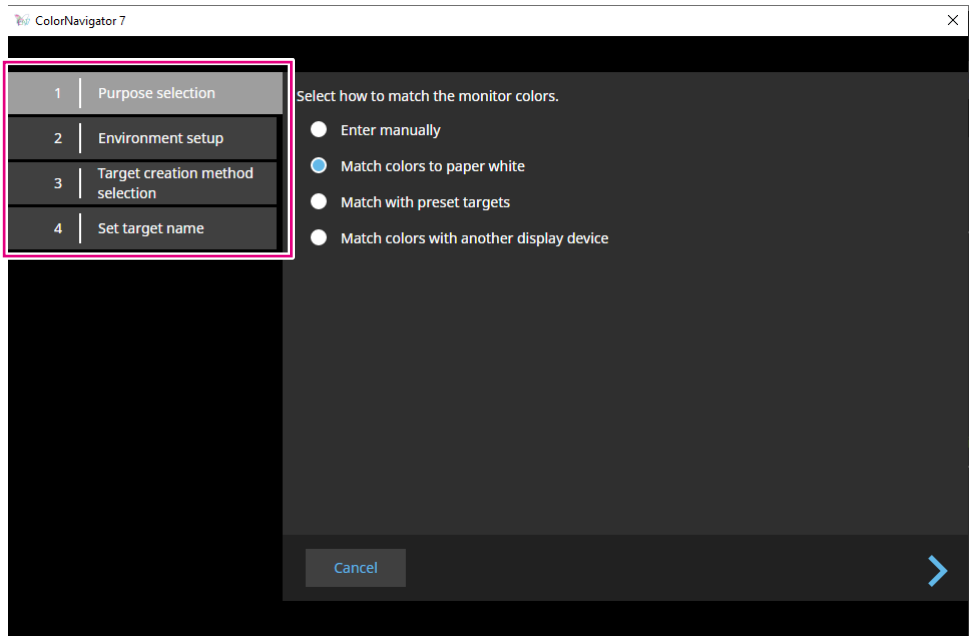
1. Select the Advanced (ADV) color mode.

2. Click “Target settings” and select “Create a new target” from the pull-down menu.

The Target Creation Wizard window will be displayed.

3. Follow the window instructions to configure the settings.

Depending on the item you select, the setting window that opens next will be different.



Enter manually

- Specify each item of the target manually.

Match colors to paper white

- Follow the screen instruction to verify if your operating environment is suitable for the application.
- Select a method for creating a target.
  - Create a target from the suitable setting for printing
  - Create a target by measuring paper
  - Create a target by measuring ambient light

Match with preset targets

- Select a preset you will use from the preset list.

Match colors with another display device

- Select a method of creating a target.
  - Create a target from existing targets
  - Load an ICC profile
  - Measure a target of monitor or display device

4. Name the created target and click “Finish”.

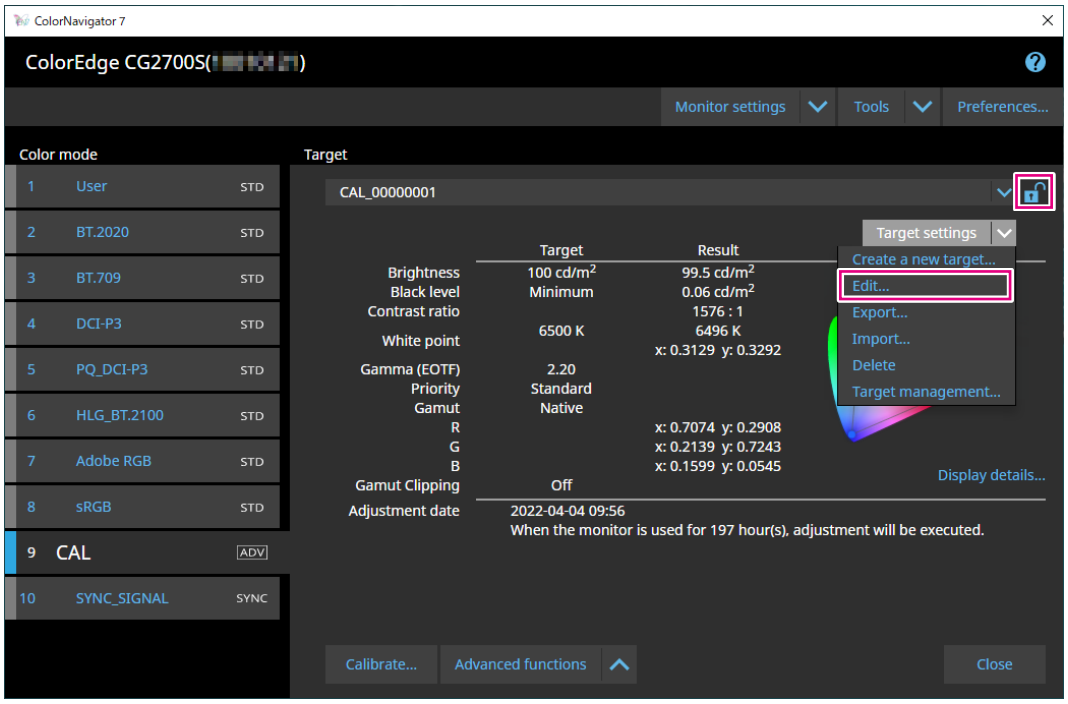
3-7. Editing Target Values

1. Select a color mode.

2. Open the edit window.

Color mode type is Advanced (ADV)

1. Verify that the target list is unlocked.
2. Click the “Target settings” in the target display area, and select “Edit” from the pull-down menu.



Color mode type is Standard (STD) or Sync Signal (SYNC)

1. Click “Edit” in setting display area.

3. Specify settings on the edit window and click the “OK” button.

- **Color mode type is Advanced (ADV)**

Target name

Enter a target name. To change the target name, edit the target name displayed in the text box.

Color mode name

To change the color mode name with its target configured, select the checkbox and enter a new color mode name you want to specify.

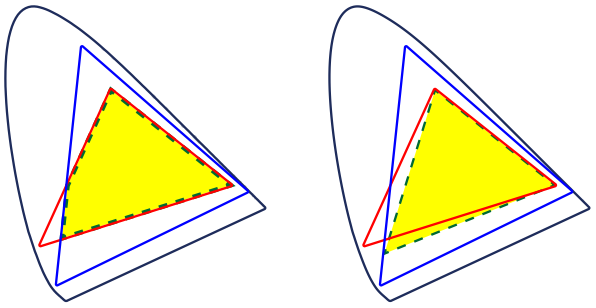
Target value

Set a value of each item.

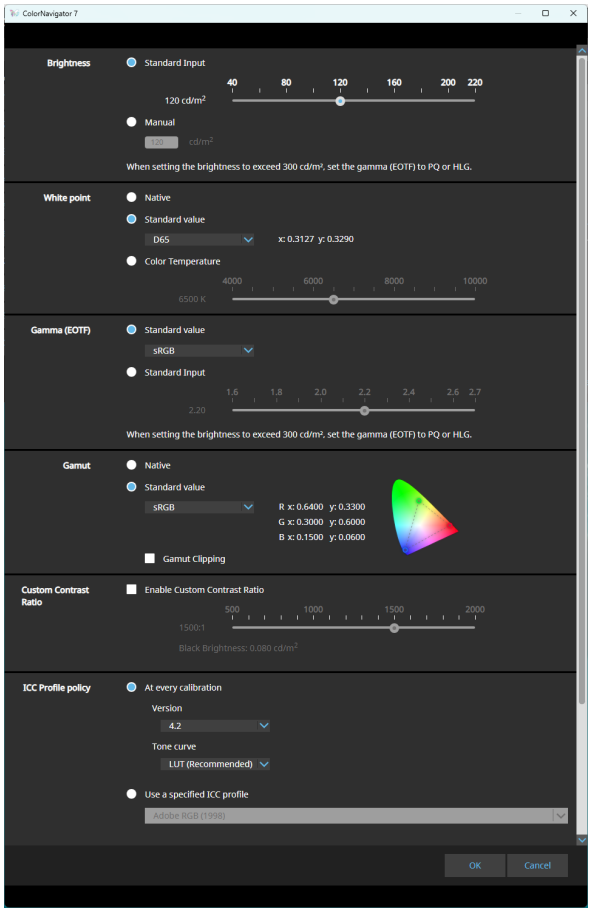
Note

• Depending on the monitor you use, the displayed items and selectable items are different.

Item	Description of the settings
Preset target	Select a preset target from the pull-down menu.
Brightness	Specify the target brightness. When using the slider to specify a value, select “Standard Input”. To enter a value directly, select “Manual”. Selecting “Maximum” or “Minimum” will set the target values to the maximum or minimum brightness of the current monitor.
Black level	Specify the brightness of black color for the monitor. Set the value by using either the minimum brightness value of the monitor or manually entering the brightness value. If the contrast is too high, increasing the black level can reduce the contrast.
White point	Specify the white point. Select “Standard value”, “Color temperature”, or “Coordinate” for the setting method, and then specify a value.
Gamma (EOTF)	Set a gamma value. Select a setting method from the following options and set the value. • Set the value from the standard value to be referenced • Set the gamma value using the slider or input a value manually • Specify the L*gamma value • Specify the gamma value by loading the LUT file **Note** • The following describes LUT files that are loadable: - Data format is CSV - Values are 256 or 1024 - Values are integer or fractional values equal to or above 0 and increases upward
Priority	Select a gamma priority from the following options. • Standard (Color tones are adjusted for the middle tone only and no adjustment is made for the low tone) • Gray balance (Color tones including the low tone are adjusted) • Fixed gamma (Colors are displayed in the status configured by the gamma (EOTF) settings and no color tone adjustment is made) **Attention** • “Gray balance” cannot be adjusted if the following measurement devices are used: - CG2420’s and CG2730’s built-in calibration sensors - EIZO EX3, EX4, EX5 - Datacolor Spyder5, SpyderX, SpyderX2, SpyderPro, Spyder

Item	Description of the settings
Gamut	Specify the color gamut for the monitor. Use the monitor's color gamut as is, use the standard value, or set the value manually, and enter a value as needed. “Gamut Clipping” allows you to set the display method of colors that cannot be displayed by the monitor. • Checking the checkbox will accurately display colors displayable by the monitor in line with standards. Colors that cannot be displayed are saturated. • Unchecking the checkbox will display colors by prioritizing color tone curve instead of accuracy. The peak of the standard-defined gamut is moved into the monitor display range. Therefore, it will be displayed in the closest color displayable by the monitor. • Checked • Unchecked  Color gamut of monitor Color gamut defined by standard Color gamut displayed on screen * This is a conceptual diagram, and does not display the actual color gamut of the monitor. • This setting will be disabled if "Native" is selected at "Gamut".
ICC Profile policy	This menu allows you to specify whether to update the ICC profile after calibration. If you have selected “At every calibration”, refer to “5-2. ICC Profile Detail Settings” (page 79) and set each item. When the “Use target name as profile name” checkbox is selected, the profile name will include the target name. If unchecked, the profile name will include the color mode name. • (Product name)((Serial number))(Color mode number)(Target name) Example: CG2700S(00000001)09CAL_00000001 • (Product name)((Serial number))(Color mode number)(Color mode name) Example: CG2700S(00000001)01User
Options	Enable or disable the setting “Optimize for Limited (109% White)”. Select this checkbox only when you perform calibration appropriate for Limited (109% White). This option is selectable when the gamma (EOTF) is set to “Standard Input” or “Manual”.

Color mode type is Standard (STD) or Sync Signal (SYNC)



Settings

Note

- Depending on the monitor you use, the displayed items and selectable items are different.
- When the color mode type is Sync Signal (SYNC), only the white point and gamut clipping can be modified.
  Sync Signal is supported by the following model only:
  - CG2700S, CG2700X, CG3146, CG1, CG2400S, CG3100X, CG2400SV, CS3200X

Item	Description of the settings
Brightness	Specify the target brightness. When using the slider to specify a value, select “Standard Input”. To enter a value directly, select “Manual”.
White point	Specify the white point. Use the default monitor settings, use the standard value, or set the color temperature value, and enter a value as needed.
Gamma (EOTF)	Set a gamma value. Select the standard value to be referenced, or specify the gamma value using the slider or by inputting a value manually.
Gamut	Specify the color gamut for the monitor. Use the monitor's color gamut as is or select the standard value.
Options	Select or clear the “Enable Custom Contrast Ratio” checkbox. If you select it, specify a value using the slider.
ICC Profile policy	This menu allows you to specify whether to update the ICC profile after calibration.

3-8. Selecting Targets for Color Mode

For the Advanced color mode (ADV), a target to be assigned to the color mode can be selected.

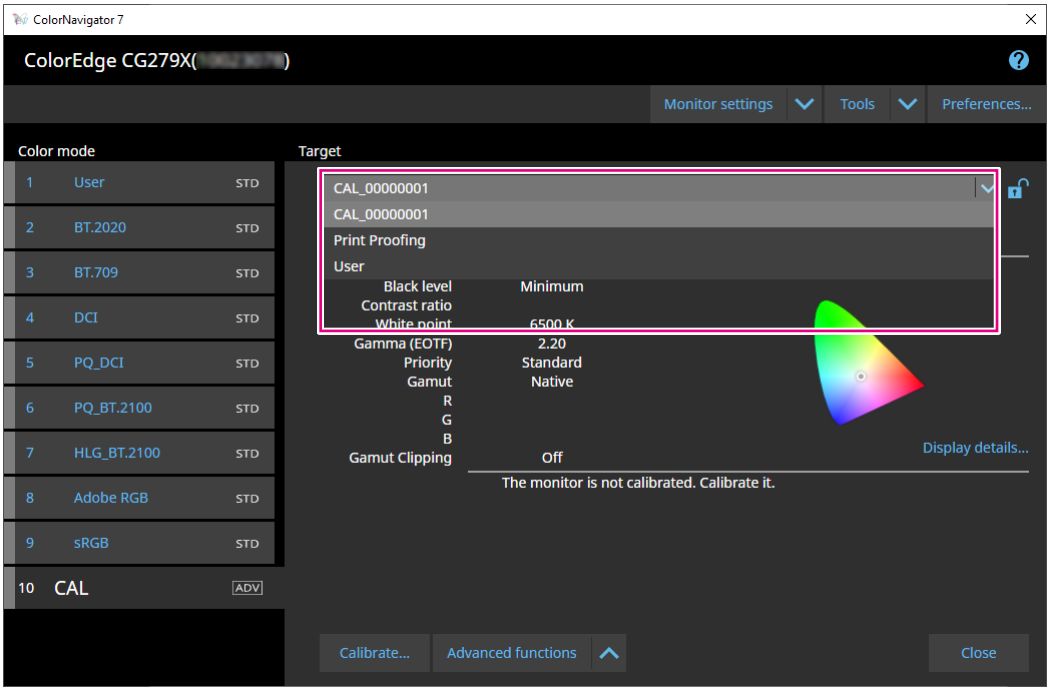
1. Open the main window.

2. Select the Advanced (ADV) color mode.

3. Select a target from the target list.

Note

- When you upgrade from ColorNavigator 6, the target used in ColorNavigator 6 will be displayed.
- When you upgrade from ColorNavigator NX, the target used in ColorNavigator NX will be displayed. Targets that were designated for each color mode of ColorNavigator NX are now configured to the corresponding color modes.



The adjustment status of the selected target will be displayed.

3-9. Calibrating the Monitor Periodically

Calibration can be executed periodically by setting a schedule, such as the monitor operating time and date information.

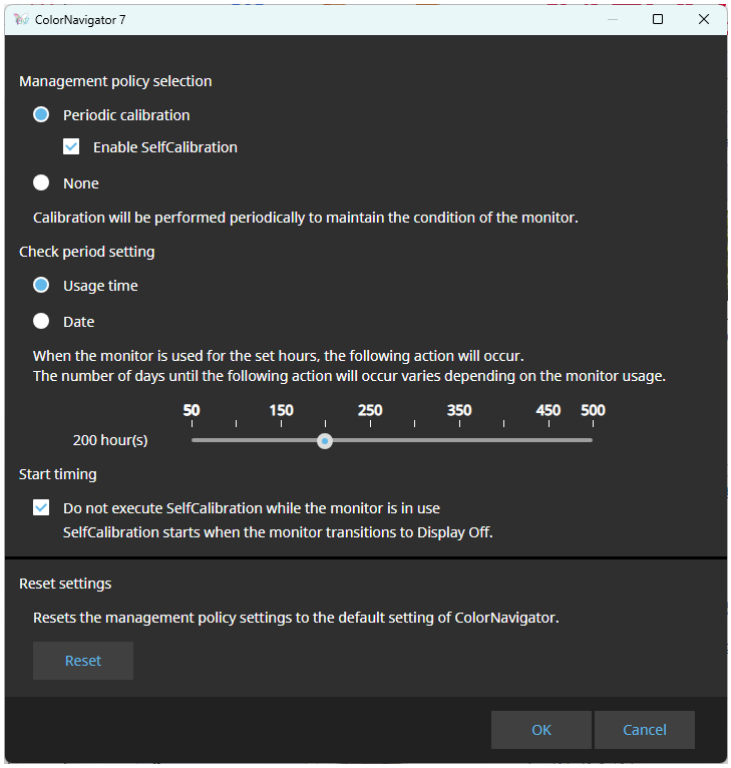
Note

- Using the monitor for a prolonged period will cause the brightness and color gamut to change. For this reason, periodic calibration is recommended.
- The monitor should be calibrated once a month or every two months.
  Note that performing the following tasks will require monitor calibration regardless of the scheduled calibration being executed.
  - Changing the computer or graphics board connected to the monitor when it is necessary to apply an ICC profile
  - Changing the connectors (e.g. from SIGNAL1 to SIGNAL2) to connect a computer or a graphic board to the monitor (only CS230)
  - Changing the resolution or number of colors for the monitor when it is necessary to apply an ICC profile
  - Changing the DUE priority

1. Open the main window.

2. Click the “Monitor settings” menu, and select “Management Policy” from the pull-down menu.

The Management Policy window will be displayed.



Management Policy Selection

Item		Function overview
Periodic calibration	Enable SelfCalibration	Adjusts the monitor periodically by using ColorNavigator 7. If your monitor has a built-in sensor, SelfCalibration/ SelfCorrection are available. If your monitor does not have a built-in sensor, ColorNavigator 7 will notify you of the timing of calibration.
	Enable SelfCorrection	
None		Periodic calibration is not performed.

Note

- SelfCalibration and SelfCorrection are functions designed to maintain the state adjusted by ColorNavigator 7. The ICC profile is not updated. When the ICC profile needs to be updated, use ColorNavigator 7 to make the adjustments.
- For the Advanced (ADV) color mode type, use ColorNavigator 7 and perform adjustments in advance.

Check Period Setting

Set a check period of the periodic calibration.

Item	Function overview
Usage time	This is the setting based on the hours that the monitor was actually used. When the monitor usage time reaches the setting value, the next periodic calibration will execute.
Date	This is the setting based on the elapsed time. This allows you to set a period until the next periodic calibration executes.

Start Timing

Item	Function overview
Do not execute SelfCalibration while the monitor is in use	When this checkbox is selected, SelfCalibration will not execute while the monitor is in use. SelfCalibration starts when the monitor transitions to Display Off.

Resetting Setting

Resets the management policy setting to default.

3-10. Validating the Monitor's Adjustment Status

Validates the monitor's adjustment status and target. The monitor validation allows you to verify to what degree the monitor's calibrated status matches the target. The monitor is measured by displaying the color patch used for validation. It validates the degree how much the actual values match the ICC profile values.

Attention

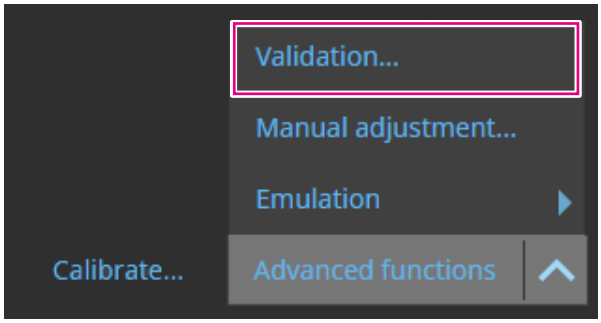
- The monitor validation can be executed only in the “Advanced (ADV)” color mode.
- CG2420's and CG2730's built-in calibration sensors do not support monitor validation.
- The CMYK validation cannot be executed with Linux.
- The CMYK validation is not supported by the ColorEdge CS series, CG3145, CG3146, CG1, and CG3200X.
- When you perform the CMYK validation by using the built-in calibration sensor, the tool bar, menu bar, Dock, or task bar may be placed under the sensor unit of the built-in calibration sensor depending on the system environment or the software. In this case, you may not be able to obtain accurate CMYK validation results. Move the window according to the message so that the color patch will be displayed on the sensor part.
- When you perform validation by using a CMYK-type validation target, you need the software for displaying the color patch. The following software applications support the color patch display.
  - Adobe® Photoshop® CC 2026 / 2025 / 2024
  - Adobe Acrobat® Pro DC
- For more information about the support policies of the software used for color patch display and the supported operating systems, refer to the support information of the relevant software.
- When you perform the CMYK-type monitor validation in the multiple monitor configuration, the ICC profile of the main (primary) monitor may be applied depending on the software used to display the color patch. Therefore, if the monitor to be validated is not set as the main monitor, the validation results may turn out to be less accurate than the actual results. Set the monitor to be validated as the main monitor, then perform validation again.
- The evaluation criteria for CMYK validation are established based on the assumption that the white point is set to D50. Performing calibration with the white point setting of other than D50 may adversely affect the validation result.
- The 6-color adjustment results are not reflected in the ICC profile. Therefore, when 6-color adjustment is performed, the result of RGB validation may become worse.

1. Open the main window.

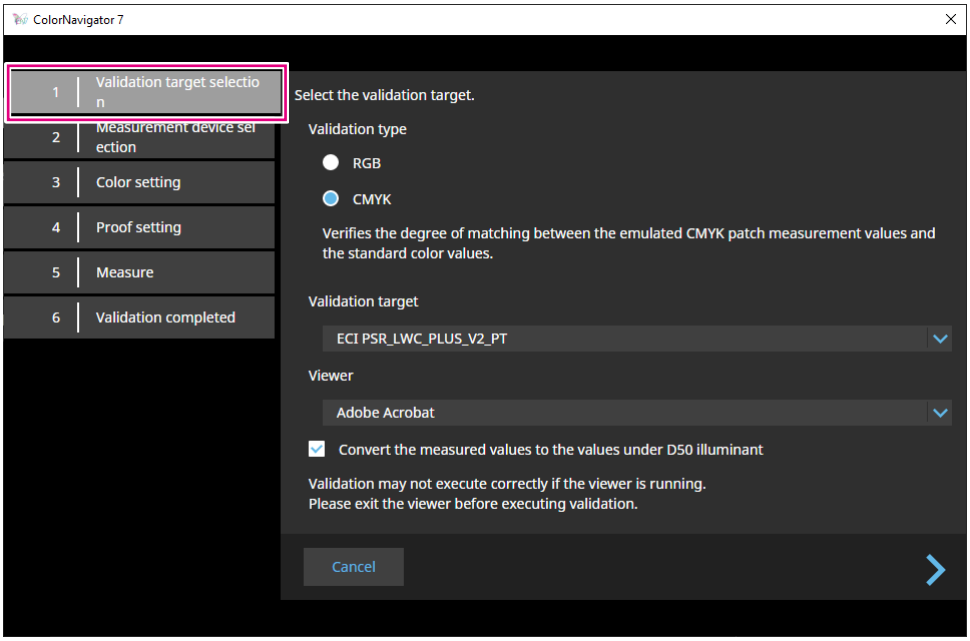
2. Select the Advanced (ADV) color mode.

The color mode of the monitor is switched, and the current adjustment status is displayed.

3. Click “Advanced Functions” and select “Validation” from the pull-down menu.



The validation wizard is displayed.



4. Set “Validation target selection”.

Item	Function overview
Validation type	Selecting “RGB” validates the degree of equivalence between the RGB patch measurement values displayed on the monitor and the ICC profile values. Selecting “CMYK” validates the degree of equivalence between the standard values and the measurement values of the emulated CMYK patch.
Validation target	Select a validation target from the pull-down menu.
Viewer	Select the software to display the color patch from the pull-down menu.
Convert the measured values to the values under D50 illuminant	Select the checkbox for using a light source other than D50 for validation.

Once the settings are complete, click .

5. Set “Measurement device selection”.

Select a measurement device from the pull-down menu, and click .
Initialize the measurement device according to the instructions on the window. The operating method is displayed for the measurement device. Follow the screen instructions.

Initialize the measurement device if it needs to be initialized. Initialization of a measurement device will complete in a few seconds.

6. When “CMYK” is selected for “Validation type”, configure the settings as instructed on the window.

Once the settings are complete, click .

7. Start the monitor validation.

The measurement window will be displayed. Attach the measurement device to the measurement window. Refer to the user’s manual of the measurement device for the attachment procedure.

Pressing the “Proceed” button displays the measurement pattern and starts validation automatically. Time until completion of the validation depends on the number of color patches.

Attention

- For measurement devices used by being in contact with the monitor, attach the device to the panel surface of the monitor slightly upward to keep the monitor in contact, as well as to prevent misalignment during calibration.
- If the built-in calibration sensor is used, the measurement results may be affected by ambient light entering into the sensor unit. Check the following points before taking measurements.
  - Block natural light from entering the room by closing the window curtain, etc.
  - Do not change the room lighting during measurement.
  - Attaching the light-blocking hood is recommended.
- The shape of the displayed measurement device will vary by the measurement device you use.

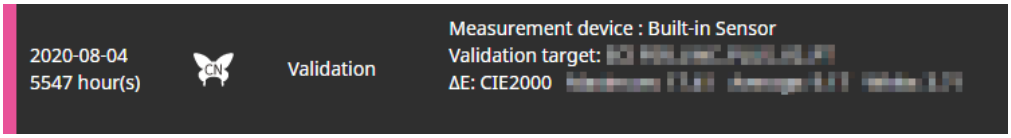
When the validation completes, the validation result is displayed.

8. Click the “Finish” button.

Click “Details” to display the validation result.

Note

- Validation results can also be verified from the “History” screen. See “Verifying the Calibration Result” (page 32) for details.
- If the CMYK validation result shows one or more failed patch, a pink color band will be displayed on the left side of the “History” screen result.



3-11. Management of Color Mode

ColorNavigator 7 has the following color mode types: Advanced (ADV), Standard (STD) and Sync Signal (SYNC).
Details of each type are specified below.

Note

- Sync Signal is supported by the following model only:
  - CG2700S, CG2700X, CG3146, CG1, CG2400S, CG3100X, CG2400SV, CS3200X

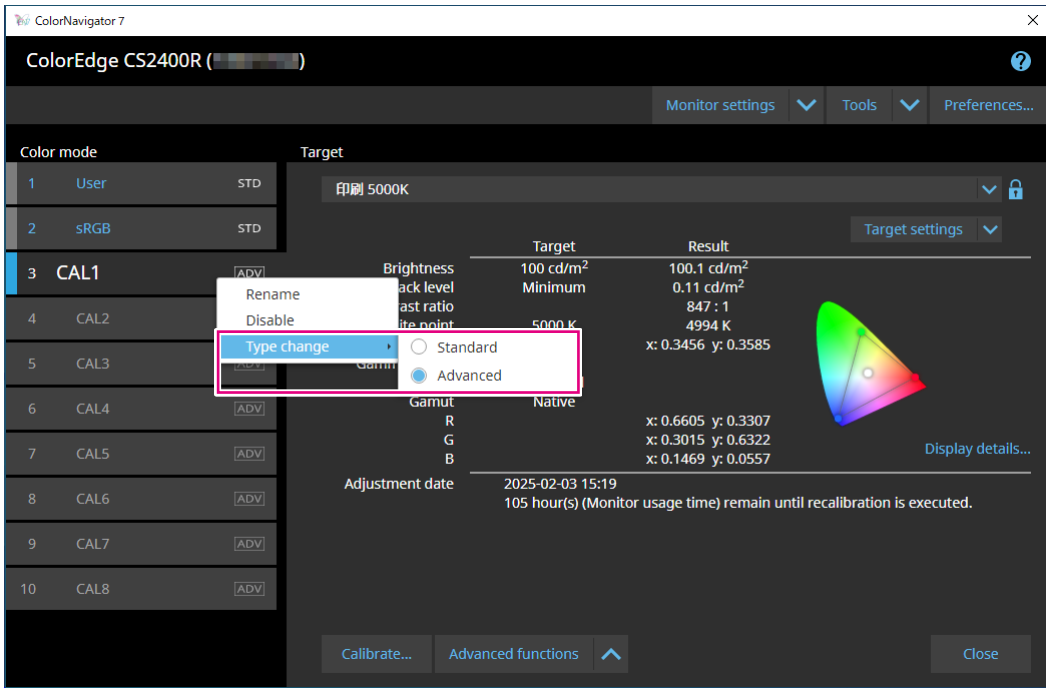
	Advanced (ADV) ADV	Standard (STD) STD	Sync Signal (SYNC) SYNC
Features	Highly accurate calibration is possible. This mode allows you to set a black level for the target, create a new target and fine-tune each color tone with 6 colors adjustment after calibration. This mode is recommended for those who want to fine-tune the settings or verify the monitor status after calibration.	Calibration can be completed in a short period. This color mode is recommended for those who do not have time to spare for color management since calibrating only one of the color modes will calibrate all the color modes that are set to Standard (STD) or Sync Signal (SYNC).	
Major applications	Commercial applications including print proofing, photography printing	Video creation, Web content creation	Video creation
Adjustment items in calibration	Brightness, White point, Black level, Gamut, Gamma (EOTF) (including gray balance and LUT)	Brightness, White point, Color gamut, Gamma (EOTF)	White point
Manually adjustable items	Brightness, Black level*1, White point, Gamma (EOTF)*1, 6 colors	Brightness, White point	White point

*1 The value can be adjusted only when the Gamma (EOTF) priority is set to “Fixed gamma”.

● Changing the Color Mode Type

1. Open the main window.

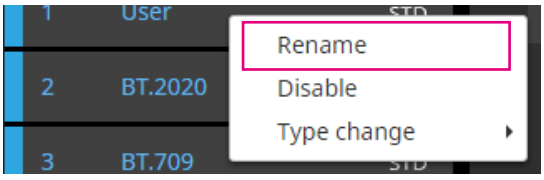
2. Right-click the color mode in the color mode list. From “Type change” in the context menu, select a color mode type.



● Renaming the Color Mode

1. Open the main window.

2. Right-click the color mode, and select “Rename” from the context menu.



3. Enter a color mode name.

Note

- There are limitations in characters and the number of characters you can use.

After entering a name, press the “Enter” key on the keyboard.

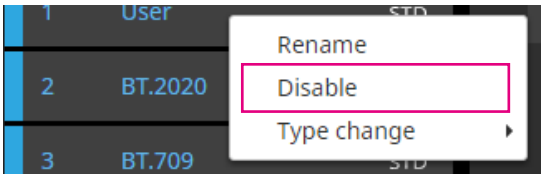
● Setting the Color Mode to Enable/Disable

Disabling an Unused Color Mode

When selecting a color mode with the control button of the monitor, you can disable a particular color mode. Use this function when the displayed color mode is limited or if you do not want to change the display status without particular reasons.

1. Open the main window.

2. Right-click the color mode and select “Disable” from the context menu.

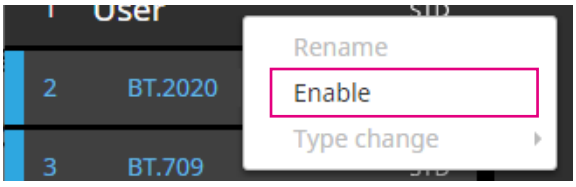


The color mode is disabled, and the list display is updated.

Enabling a Disabled Mode

1. Open the main window.

2. Right-click the color mode, and select “Enable” from the context menu.



The color mode is enabled, and the list display is updated.

● Resetting the Color Mode to Default

Attention

- Once executing the reset, you cannot restore the state prior to the reset.

Note

- For the initial value of the color mode, see the User's Manual of the monitor in use.

Resetting the Specific Color Mode to Default

To reset only the color adjustment value of the presently selected color mode to the default setting, perform the following.
With the main window of ColorNavigator 7 closed, open the adjustment menu of the monitor and execute “Reset” for color adjustment. For more information about the execution method, see the User's Manual of the monitor in use.

Resetting All Color Modes to Default

To reset all color modes to the default setting, perform the following.
With the main window of ColorNavigator 7 closed, open the adjustment menu of the monitor and execute “Monitor Reset” of Preferences. For more information about the execution method, see the User's Manual of the monitor in use.

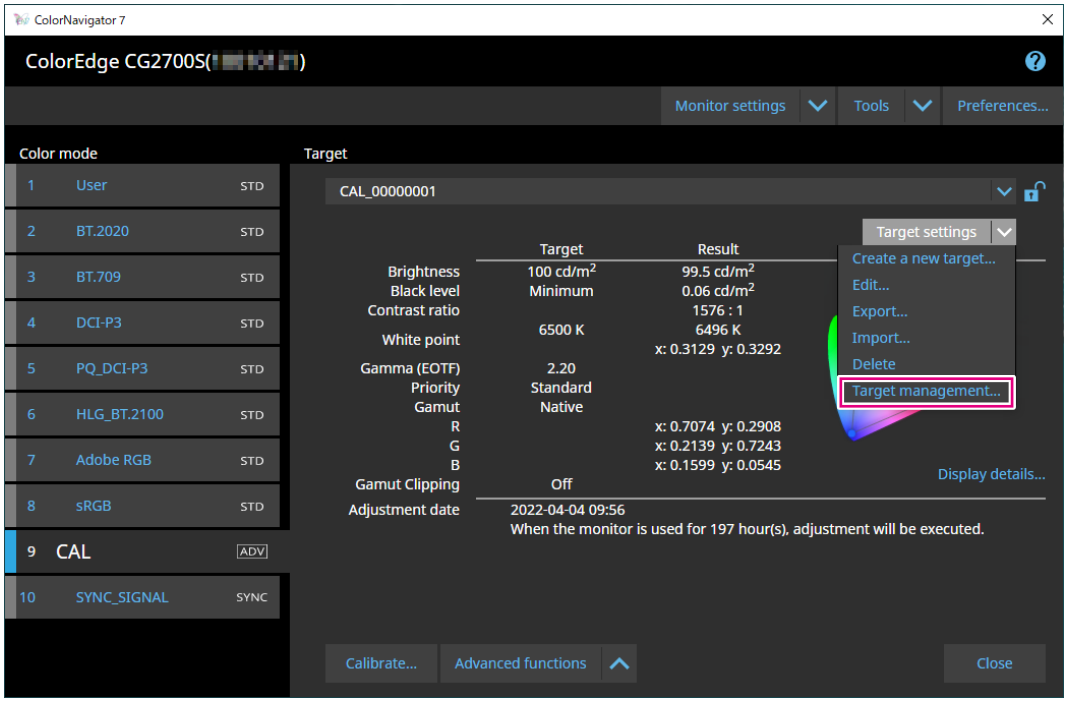
3-12. Target Management

ColorNavigator 7 allows you to manage multiple targets.
Open the Target Management window in the procedure described below.

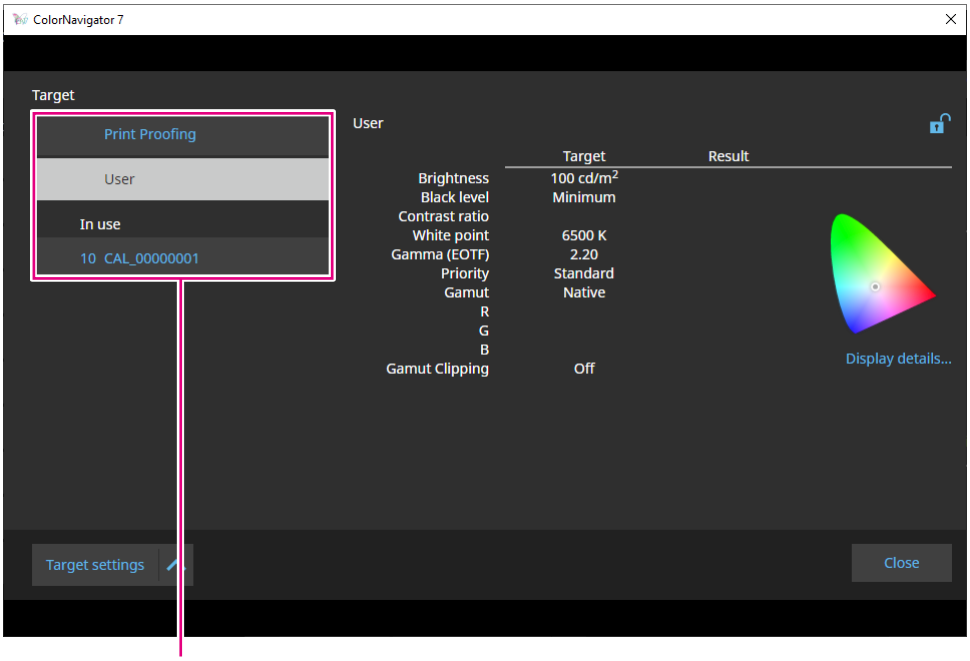
1. Open the main window.

2. Select the Advanced (ADV) color mode.

3. Click “Target settings”, and select “Target management” from the pull-down menu.



The Target Management window will be displayed.



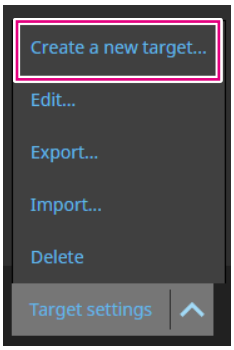
Target list

Target List

The target list displays unused targets on the top and targets in use at the bottom. Color mode numbers are assigned to the targets in use.

● Adding a Target

1. Click “Target settings” and select “Create a new target” from the pull-down menu.



The Target Creation Wizard will be displayed. The displayed content varies depending on the model of the monitor you use.

2. Set the target.

See “3-6. Creating a New Target” (page 41) for details.

For details on how to edit the values of added targets, see “3-7. Editing Target Values” (page 43).

● Deleting Targets

Note

- Targets in use cannot be deleted. If you want to delete the target, do not assign the target to any of the color modes. For details on how to change a target assigned to color modes, see “3-8. Selecting Targets for Color Mode” (page 48).
- From the main window, targets can be deleted by following the procedure below.
  1. Open the main window.
  2. Select “Target settings” - “Delete”.
  3. When the confirmation message appears, click the “OK” button.

1. Select a target you want to delete from the target list.

2. Click “Target settings”, and select “Delete” from the pull-down menu.

3. When the confirmation message appears, click the “OK” button.

The target will be deleted.

● Exporting Targets

Note

- The extension of exported files is “cn7target”.
- On the main window, the target in use can be exported in the procedure described below.
  1. Open the main window.
  2. Select “Target settings” - “Export”.
  3. Enter a file name and click the “Save” button.

1. Select a target you want to export from the target list.

2. Click “Target settings” and select “Export” from the pull-down menu.

3. Enter a file name and click the “Save” button.

The target file will be saved.

● Importing Targets

Attention

- The HDR-compatible target files cannot be imported to monitors that do not support HDR.
- The targets described below cannot be imported to monitors that do not support the corresponding settings.
  - Targets with “Optimize for Limited (109% White)” enabled
  - Targets with “D65 (CRT)” specified for the white point
  - Targets with “Auto” specified in the PQ option

Note

- The extensions of files you can import are “cntarget” and “cn7target”.
- On the main window, targets can be exported in the procedure described below.
  1. Open the main window.
  2. Select “Target settings” - “Import”.
  3. Select a target file and click the “Open” button.

1. Click “Target settings” and select “Import” from the pull-down menu.

2. Select a target file and click the “Open” button.

The file will be imported and the target will be added.

Using the imported target requires the target assignment to a color mode and calibration. See “3-8. Selecting Targets for Color Mode” (page 48) and “3-4. Calibrating the Monitor” (page 25) for details.

Chapter 4 Advanced Usage

4-1. Sync Signal Settings

Set whether the Sync Signal function is enabled or disabled, and the color mode to switch to for each combination of input signal metadata.

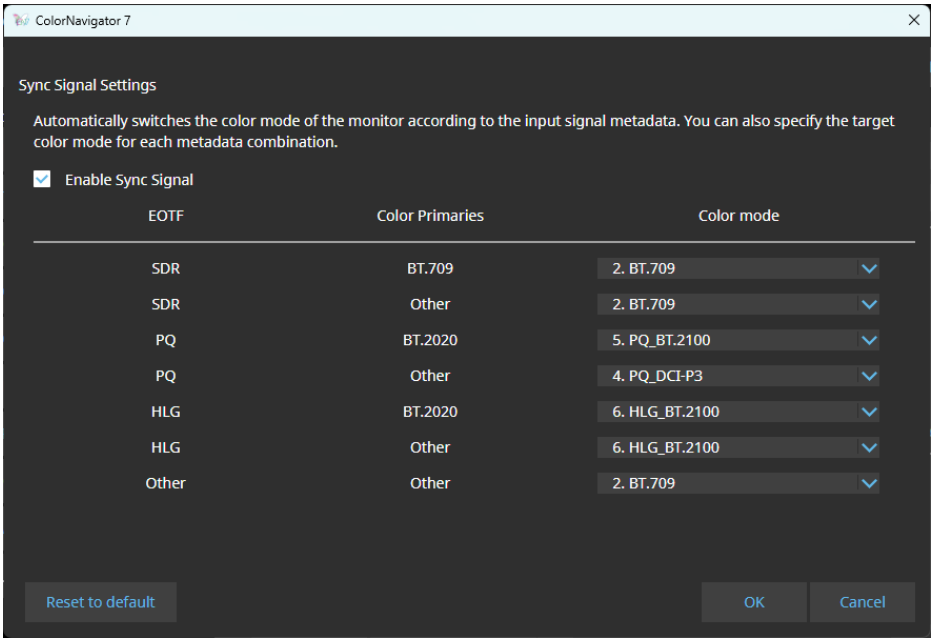
Attention

- This function is supported only on the CG3200X.

1. Open the main window.

2. Click the “Monitor settings” menu and select “Sync Signal Settings” from the pull-down menu.

The Sync Signal Settings window will be displayed.



3. Select the checkbox for “Enable Sync Signal”.

4. For each combination of input signal metadata, set the color mode to switch to.

5. Once the settings are complete, click “OK”.

4-2. Correlation between the Built-in Sensor and the Measurement Device

Correlation of the measurement results between the built-in sensor and the reference measurement device is performed.

Attention

- Turn off the monitor and turn it back on if the USB cable is disconnected from the monitor during correlation performance.
- Only one unit of the reference measurement device can be registered.

1. Open the main window.

2. Click the “Monitor settings” menu, and select “Built-in sensor correlation” from the pull-down menu.

The Built-in Sensor Correlation window will be displayed.

3. Click the “Built-in sensor correlation” button.

To reset to default, press the “Reset to default” button.

4. From the pull-down menu, select a measurement device to set as the reference.

Initialize the measurement device if it needs to be initialized.

Note

- While the measurement device is being initialized, make sure to prevent light from entering the sensor unit of the measurement device. If light enters into the sensor unit during initialization, the results will not turn out to be accurate.

5. Click .

6. The correlation starts.

The measurement window will be displayed.

Attach the reference measurement device to the measurement window. (page 29)

Click the “Proceed” button to display the measurement pattern and perform a correlation automatically.

Note

- For measurement devices used by being in contact with the monitor, attach the device to the panel surface of the monitor slightly upward to keep the monitor in contact, as well as to prevent misalignment during calibration.
- Depending on the settings of the monitor and the OS, the measurement window may not appear in the center of the screen. If that happens, install the measurement device close to the center of the monitor regardless of where the measurement window is located.
- The correlation result may be affected by ambient light entering the sensor part of the built-in calibration sensor.
- Check the following points before beginning the correlation.
  - Block natural light from entering the room by closing the window curtain, etc.
  - Ensure that the lighting in the room does not change during correlation.
  - Attaching the light-blocking hood is recommended.
- The shape of the displayed measurement device will vary by the measurement device you use.

7. Check the correlation results.

Once the correlation completes, the screen displays the RGB values of the measured color patch, the measurement results of the reference device, and the built-in sensor targeted for correlation.

Note

- To perform the correlation by using another measurement device as the reference or to redo the correlation, click to display the setting window.

8. Check the correlation results and click “Finish”.

Attention

- A message will be displayed if there is a problem with the correlation results. Redo the correlation according to the message.

Note

- Since the correlation results are applied to the measurement results of the built-in sensor, adjusting the monitor is recommended after completing the correlation.

4-3. Locking the Control Buttons of the Monitor

This operation locks the control buttons on the monitor unit so that users cannot operate the monitor using the control buttons.

1. Open the main window.

2. Click the “Monitor settings” menu and select “Key Lock” from the pull-down menu.

3. Select a locking method for the control buttons from the pull-down menu.

Item	Locking method
Menu	Adjustment menu button
All	All other buttons except the Power (⏻) button
Off	None (Any buttons are enabled)

4. Clicking “OK” sets the selected key locking method.

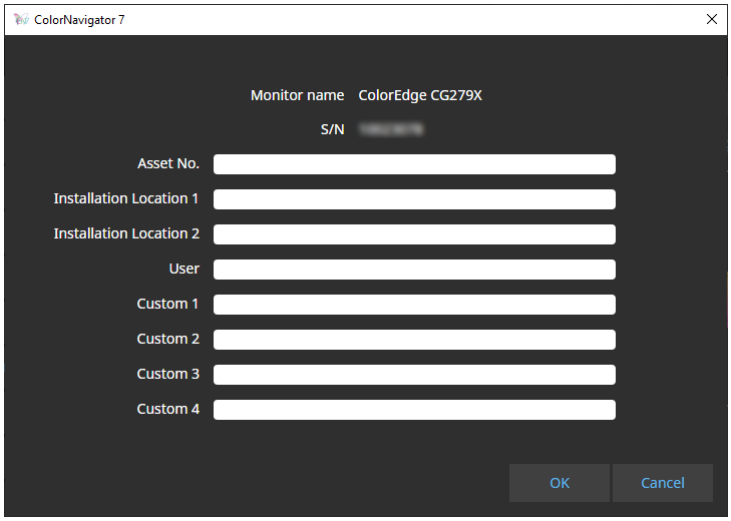
4-4. Registering Asset Information to the Monitor

Asset information unique to the monitor can be registered.

1. Open the main window.

2. Click the “Monitor settings” menu and select “Asset information management” from the pull-down menu.

The Asset Information window will be displayed.



3. Once the settings are complete, click the “OK” button.

The asset information will be saved.

4-5. Adjusting the Light Booth

The brightness or illuminance of the light booth is adjustable.

Attention

- Prepare a light booth separately as needed. The following light booth units are supported:
  - JUST Color Communicator1, JUST Color Communicator2
- For details of the light booth, refer to the User's Manual provided with the light booth.
- Adjust the light booth after connecting the light booth and your computer with a USB cable.
- The following measurement devices are adjustable by the illuminance.
  - X-Rite i1Pro 2, i1Pro 3, i1Display 3, i1Display Pro, i1Display Pro Plus, i1Studio
  - Calibrite ColorChecker Display Pro, Display Plus, Studio
  - Calibrite Display Pro HL / Display Plus HL
  - Konica Minolta MYIRO-1
- Light booth units are not adjustable by the build-in calibration sensor.

Note

- Targets can be created based on the adjustment results.

1. Open the main window.

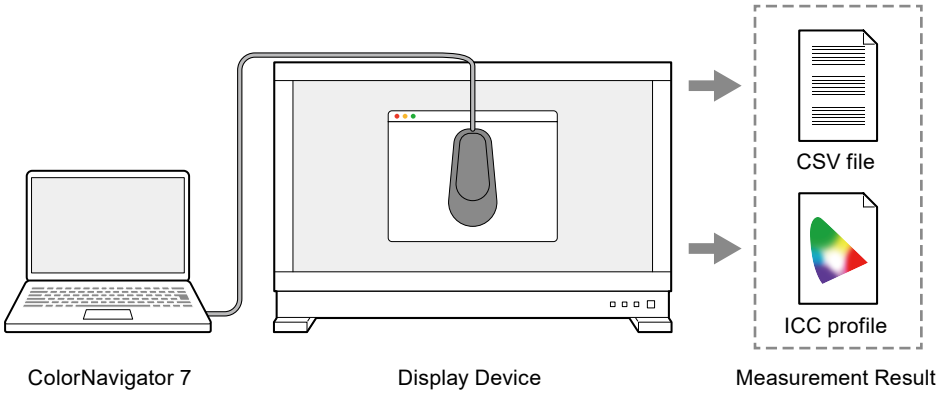
2. Click the “Tools” menu and select “Light Booth Adjustment” from the pull-down menu.

The light booth adjustment wizard is displayed.

Configure the settings as instructed on the screen.

4-6. Measuring Display Devices

You can measure the color patch displayed in a web browser on a display device.
The measurement results can be used to perform emulation of the device. (See “4-8. Emulation” (page 72).) You can also export the measurement results as a CSV or ICC profile. (See “4-7. Creating an ICC Profile Display Devices” (page 70).)

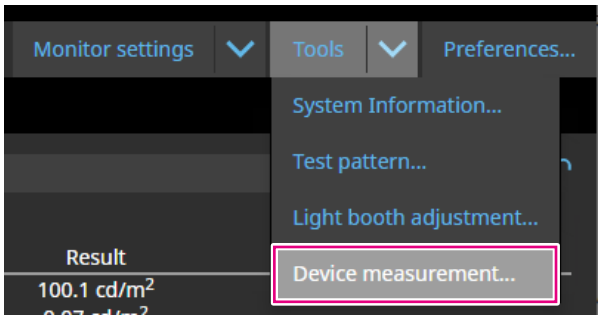


Attention

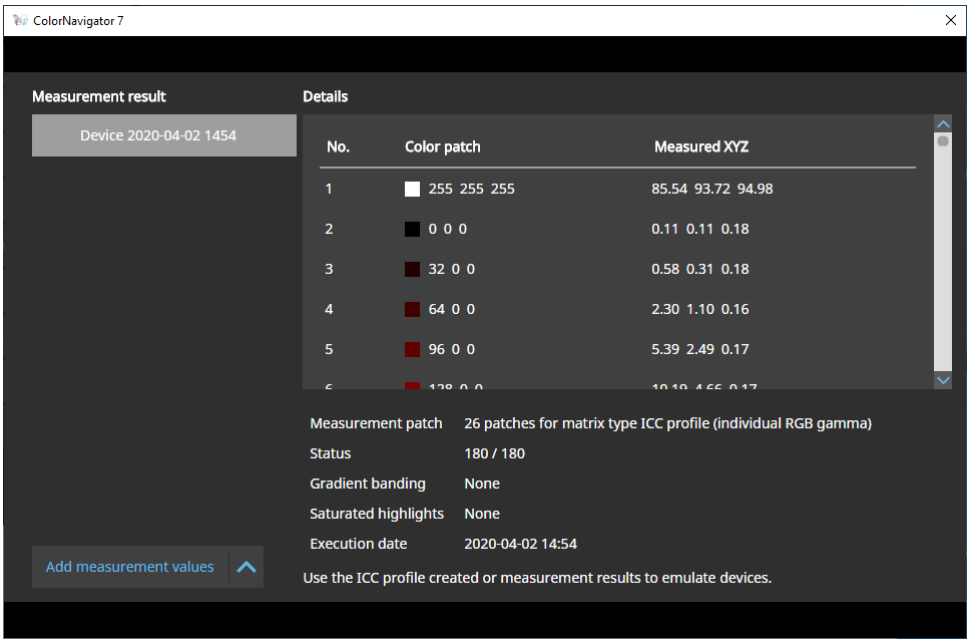
- This function is supported for devices that meet the following conditions:
  - Devices that can display a web browser
  - Devices that can use a web browser to access the computer on which ColorNavigator 7 is installed
- Device measurements are available for spectral-type measurement devices only. To verify the measurement device type, see “1-3. Requirements for ColorNavigator 7” (page 6).
- Since device measurement measures the color patch displayed on a web browser, the measurement results are affected by the color management of the web browser.

● Displaying the Measurement Result Management Window

1. From “Tools” on the main window, select “Device measurement”.

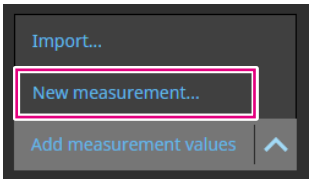


The Measurement Result Management window will be displayed.

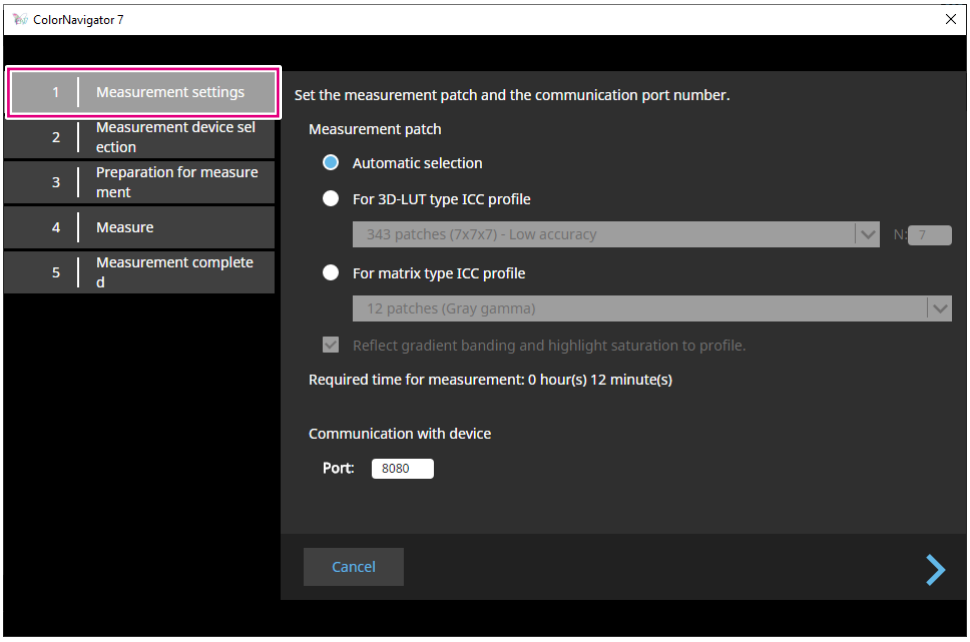


● New Measurement

1. Open the Measurement Result Management window, and click “Add measurement values” - “New measurement”.



2. On the Measurement settings page, specify the measurement patch and the communication port number.



Select the measurement patch.

Measurement patch

Item	Details
Automatic selection	Used for selecting an appropriate measurement patch automatically.
For 3D-LUT type ICC profile	Selected for measuring the device whose characteristic is unknown.
For matrix type ICC profile	Selected for measuring the device that is expected to have high additive mixture performance.

If gradient banding or saturated highlights are observed for the device, select the checkbox “Reflect gradient banding and highlight saturation to profile.” as needed.

Note

- The following measurement device can measure up to 1331 patches (11 x 11 x 11).
  - X-Rite i1Studio
  - Calibrite ColorChecker Studio

Communication with device

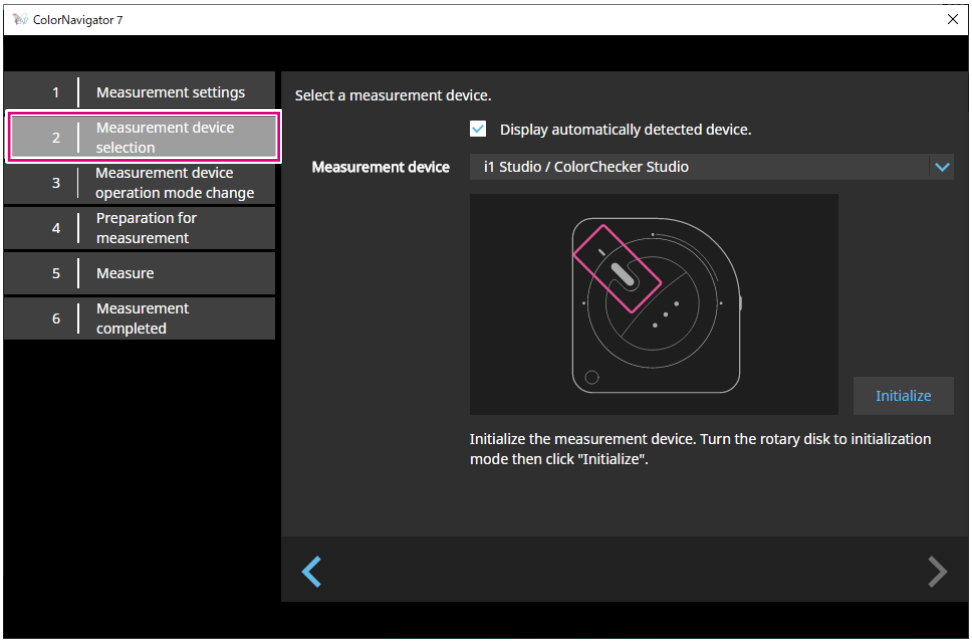
Specify the communication port number used for communicating with the device to be measured.

Default: 8080

Once the settings are complete, click .

3. Select the measurement device.

Initialize the measurement device if it needs to be initialized.



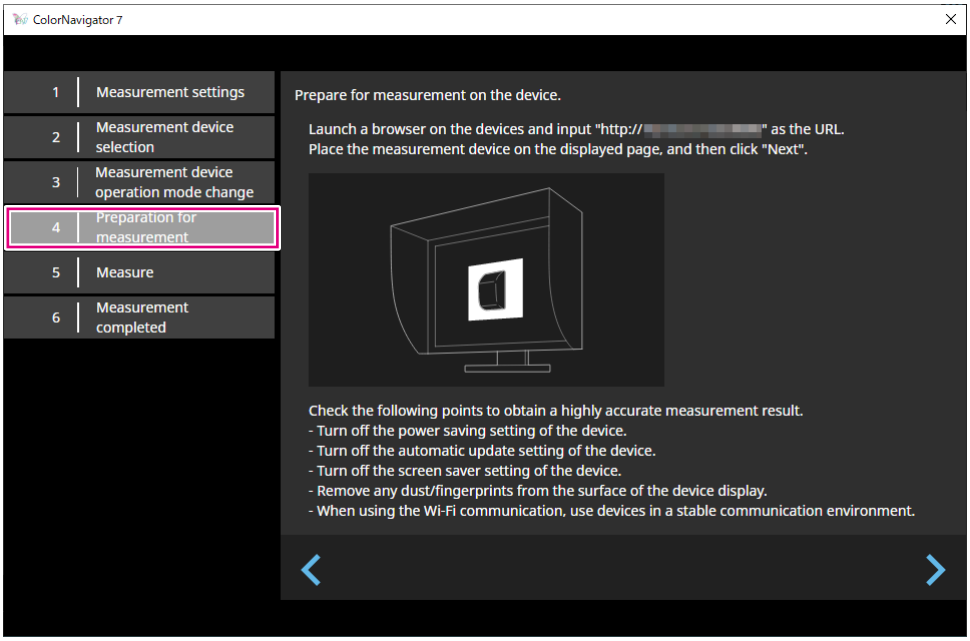
Note

- Device measurements are available for spectral-type measurement devices only. To verify the measurement device type, see “1-3. Requirements for ColorNavigator 7” (page 6).
- While the measurement device is being initialized, make sure to prevent light from entering the sensor unit of the measurement device. If light enters into the sensor unit during initialization, the results will not turn out to be accurate.

Once the device is selected, click .

4. Prepare the device for measurement.

Start a browser of the device to be measured, and enter the URL that is displayed on the window.
When the measurement page appears on the device, place the measurement device.



Attention

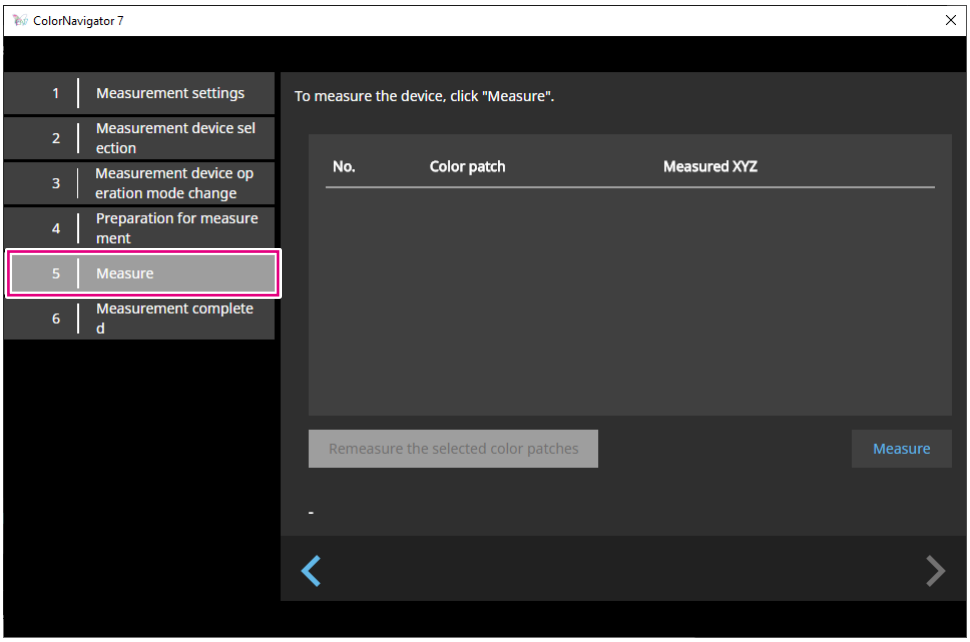
- To perform communication normally, temporarily disable the software for proxy settings and firewall.
- To be able to obtain an accurate measurement result, check the following points:
  - Turn off the power-saving setting of the device.
  - Turn off the auto-update setting of the device.
  - Turn off the screen saver setting of the device.
  - Clean the display surface of the device.
  - If you use Wi-Fi communication, use it in the stable communication environment.
- If there are any functions that could affect the measurement, disable these functions.
- If a warning message appears, take necessary action according to the message.

Note

- The URL varies depending on the environment and is displayed as follows:
  (Example) http://192.0.2.0:8080

Once the preparation is complete, click .

5. Measure the device.



Click “Measure”.

To pause the measurement temporarily, click “Pause”.

To resume the measurement, click “Measure”.

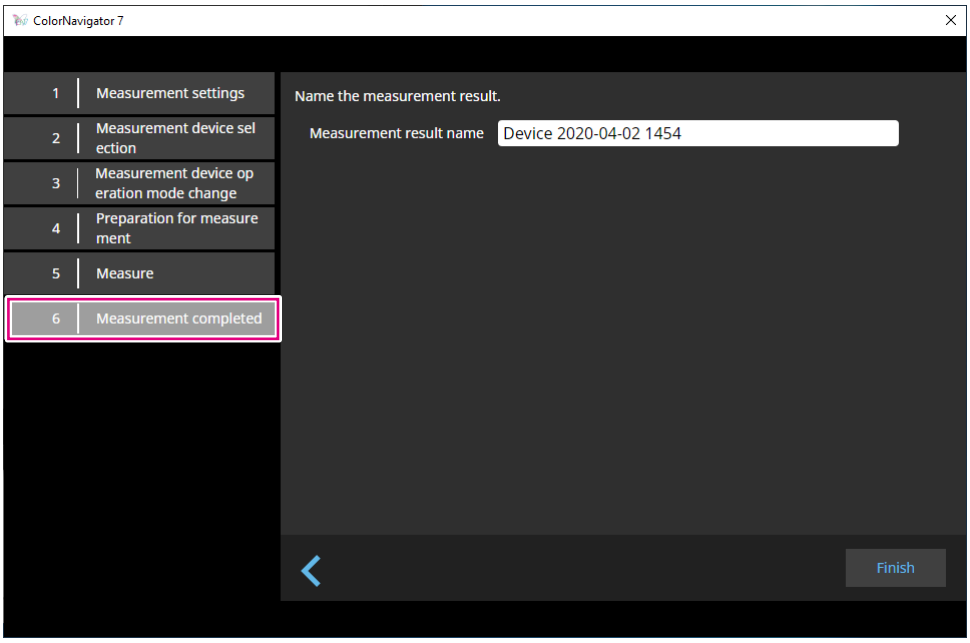
To re-measure the patch that was already measured, select the patch to re-measure and click “Remeasure the selected color patches”.

Note

- The screen shows the approximate time required for measurement.

Once the measurements are complete, click .

6. Name the measurement result.



Note

- Specify the measurement result name within 128 characters.
- The following characters are not allowed for the measurement result name: \/:*?"'<>|
- You can rename the measurement result name by double-clicking the name on the measurement result list.

Once the settings are complete, click “Finish”. The measurement result will be saved.

● Editing Measurement Result

Renaming Measurement Result

Select a measurement result you want to rename from the list. On the context menu that appears by right-clicking your mouse, select “Rename”.

Re-measure

Select a measurement result you want to re-measure from the list. On the context menu that appears by right-clicking your mouse, select “Re-measure”.

Delete

Select a measurement result you want to delete from the list. On the context menu that appears by right-clicking your mouse, select “Delete”.

● Sharing Measurement Result

Exporting Measurement Result

Select a measurement result you want to export from the list. Right-click your mouse and select “Export”. Then, select “ICC profile” or “Csv file” for the format of export.

- To share the file with another environment, select “Csv file”.

Importing Measurement Result

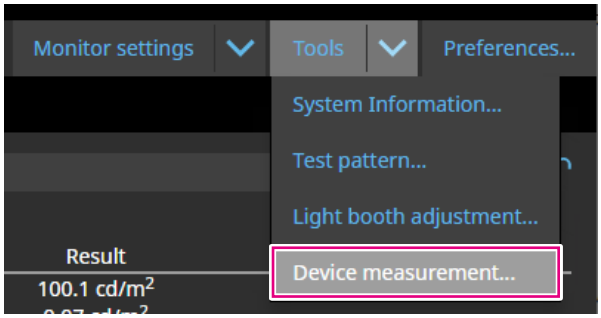
From “Add measurement values”, select “Import” and then select a measurement result to import.

4-7. Creating an ICC Profile Display Devices

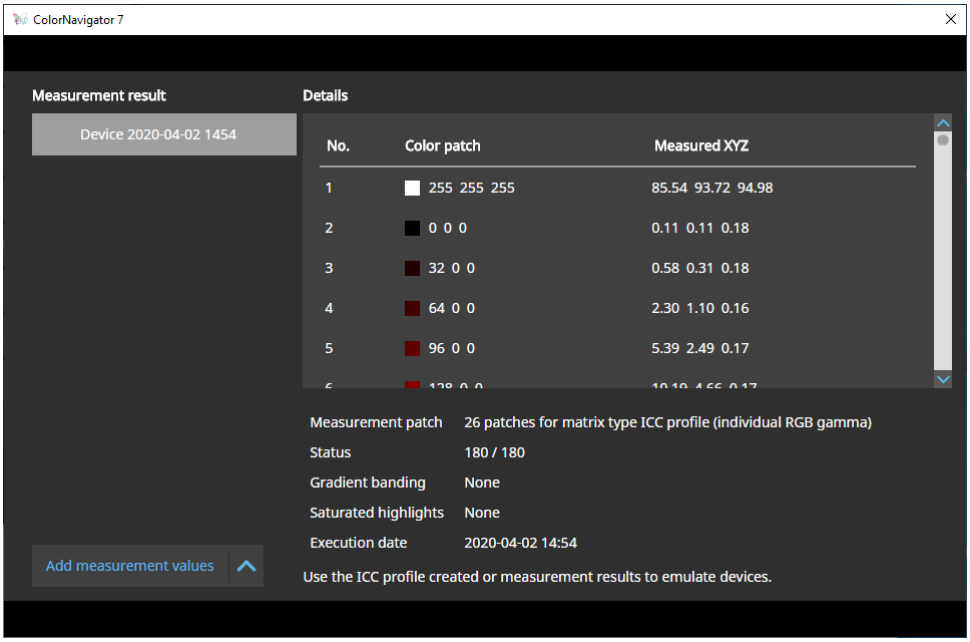
You can create an ICC profile based on the measurement result of a display device.
Emulation can be performed using the created ICC profile. (See “4-8. Emulation” (page 72).)

1. Open the main window.

2. Click the “Tools” menu and select “Device measurement” from the pull-down menu.

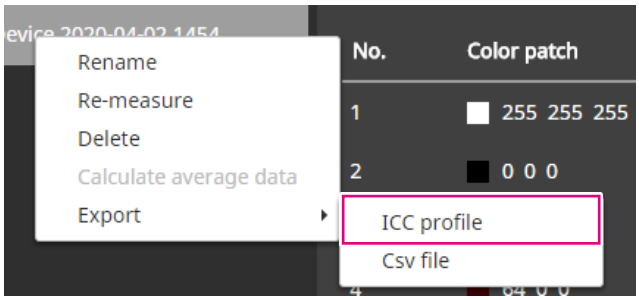


The Measurement Result Management window will be displayed.



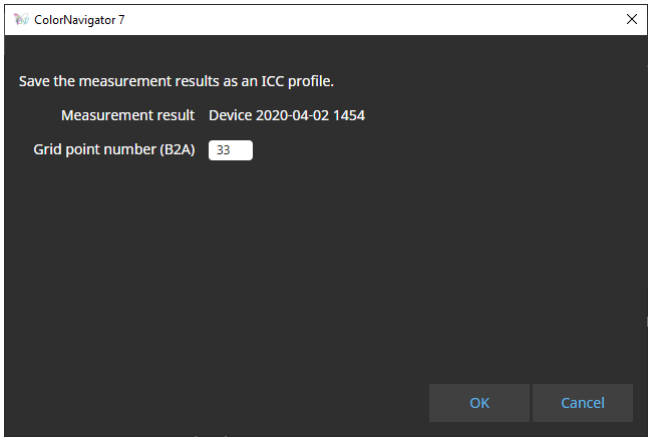
3. Select a measurement result used for creating an ICC profile from the list, and then right-click on it.

4. On the menu that appears, select “Export” - “ICC profile”.



In the ICC profile, record the table indicating display characteristics of the display device. The grid point number indicates the number of steps in the table.

Set the grid point number and click “OK”.



When a dialog to save the file appears, specify a file name and click “Save”.

4-8. Emulation

● Using the ICC profile / Measurement result

You can perform emulation using an ICC profile and measurement results of various devices, such as printers, tablet terminals, and display devices.

Attention

- This function is not available when the color mode type is Standard (STD) or Sync Signal (SYNC).
- If you use CS Series, CG2420, CG2730, or CG3200X, this function is not available.

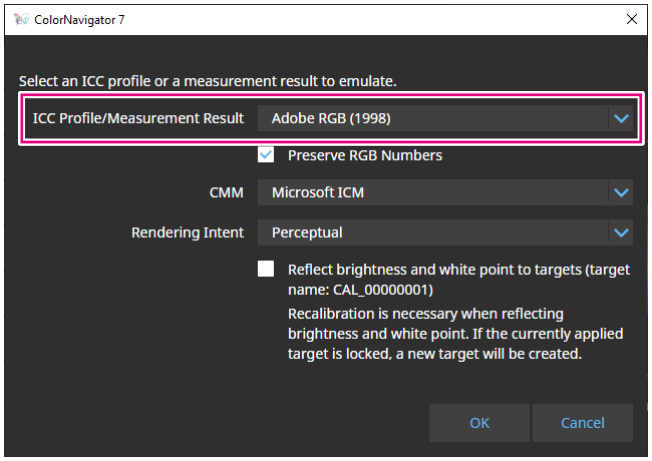
1. Open the main window.

2. Select a color mode applied for calibration.

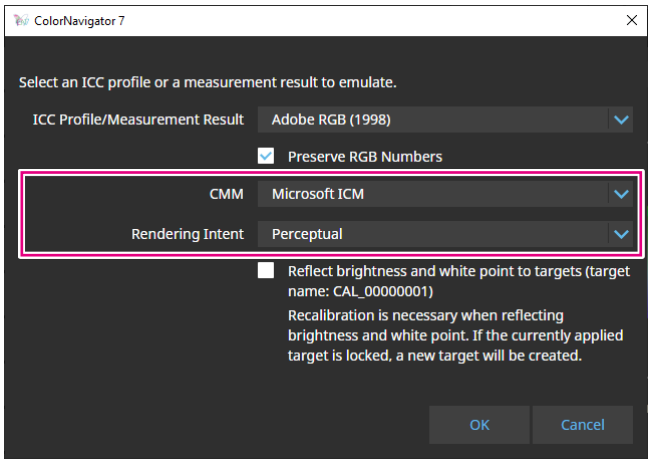
3. Click “Advanced Functions” and select “Emulation” - “ICC Profile/Measurement Result” from the pull-down menu.

The Emulation window will be displayed.

4. From the pull-down menu, select an ICC Profile/Measurement Result used for emulation.



5. Select CMM (Color Management Module) and “Rendering Intent” from the pull-down menu.



Note

- “Preserve RGB Numbers” checkbox
  - When ICC profile for a tablet or a display device is selected:
    ON is recommended (default setting): Colors are directly converted into the color space targeted for emulation.
  - When ICC profile that is not intended for a tablet or a display device is selected:
    OFF is recommended (default setting): After being converted into the monitor's color space, colors are converted into the color space targeted for emulation.
- “Reflect brightness and white point onto target” checkbox
  To reflect the values, re-calibration is required. If the target is locked, a new target will be created.

Once the settings are complete, click the “OK” button.

6. Click the “OK” button.

Emulation will be executed.

● LogView LUT Emulation

Emulation data can be prepared with characteristics files (3D-LUT files) of movie films provided for a color grading system.

Attention

- If you use CS Series, CG2420, CG2730, or CG3200X, this function is not available.
- The extensions of readable 3D-LUT files are as follows:
  *.3dl, *.cub, and *.cube

1. Open the main window.

2. Select a color mode applied for calibration.

3. Click “Advanced functions” and select “Emulation” - “LogViewLUT” from the pull-down menu.

The 3D-LUT File Selection window will be displayed.

4. Select a 3D-LUT file used for emulation.

5. Click the “Open” button.

Film emulation will be executed.

4-9. Monitor Option Settings

Set the correction method for monitor uniformity.

1. Open the main window.

2. Click the “Monitor settings” menu and select “DUE Priority” from the pull-down menu.

3. Select the DUE priority setting of the monitor from the pull-down menu.

Item	DUE setting
Uniformity	Make corrections so that the brightness and color are consistent throughout the entire display.
Brightness	Correct the display by prioritizing the maximum brightness and contrast ratio.

The DUE priority setting of the monitor will be set.

Attention

- To change the DUE priority, execute sensor correlation and perform calibration.
- If you use CG3145, CG3146, CG1, or CG3200X, this function is not available.

4-10. Exporting and Importing Monitor Settings

To share the following monitor settings with other monitors, save (export) the setting file and read (import) the file.

- Color mode name
- Color mode enabled or disabled
- Target set to the color mode
- Monitor management policy
- Key lock settings of the monitor
- DUE Priority settings of the monitor

Attention

- The settings can be shared among monitors of the same model. If the models are different, settings cannot be shared.
- An error message will appear if the setting file being imported includes a color gamut not supported by the import destination monitor, even among monitors of the same model.

● Exporting Monitor Settings

Note

- The extension of exported files is “.cn7monitor”.

1. Open the main window.

2. Click the “Monitor settings” menu and select “Export monitor settings” from the pull-down menu.

3. Enter a file name and click the “Save” button.

The monitor setting file will be saved.

● Importing Monitor Settings

Note

- The extensions of files you can import are ".(the name of the product you are using).cnmonitor" and ".cn7monitor".

1. Open the main window.

2. Click the "Monitor settings" menu and select "Import monitor settings" from the pull-down menu.

3. When the confirmation message appears, click the "OK" button.

4. Select the monitor setting file and click the "Open" button.

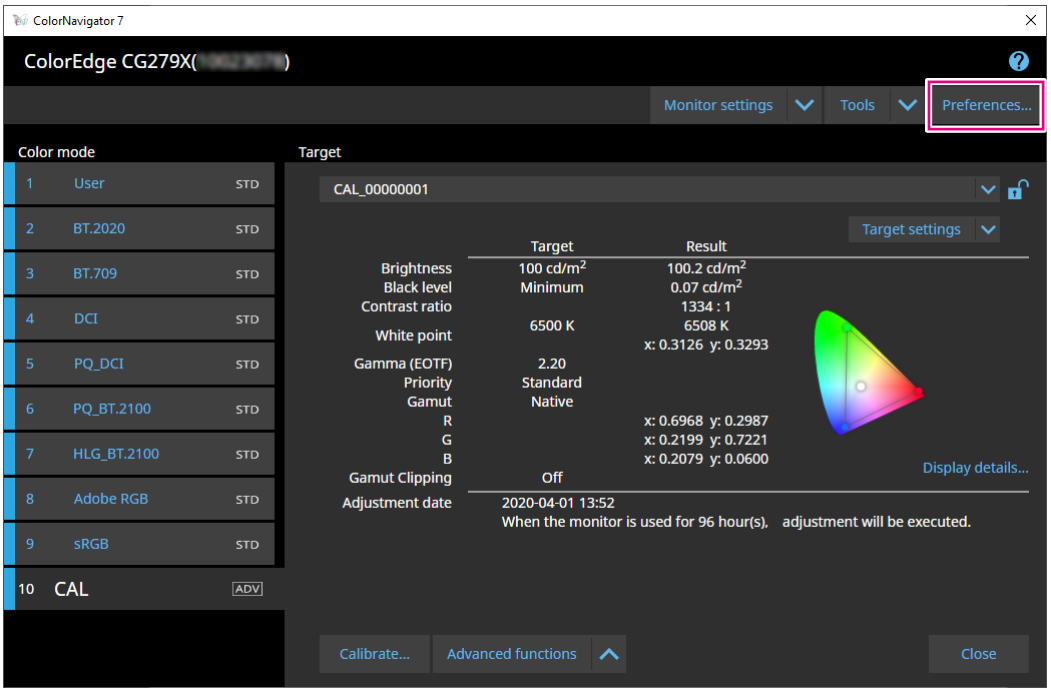
The monitor setting file will be loaded and the monitor settings will be updated.

Chapter 5 Preferences

This chapter explains the Preferences screen of ColorNavigator 7.

1. Open the main window.

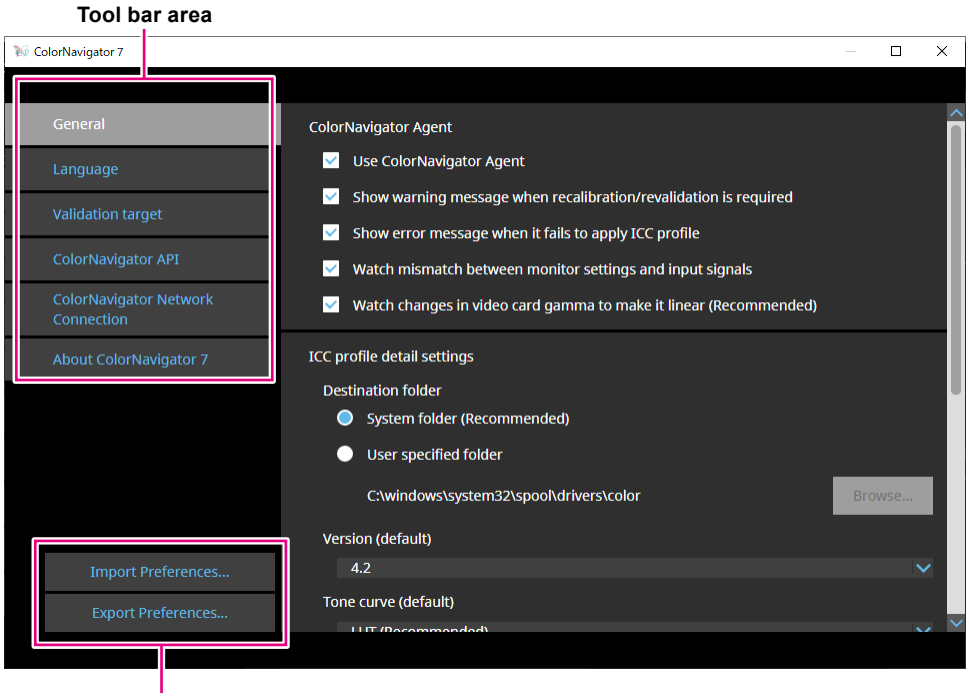
2. Click the “Preferences” button.



The Preferences screen will open.

Note

- You can also click (Mac) or right-click (Windows) the ColorNavigator 7 icon on the menu bar (Mac) or task tray (Windows) to open the Preferences screen from the context menu.



Attention

- Information related to adding or deleting validation targets will not be exported or imported.

Note

- When you close the Preferences screen, the specified settings are applied.

5-1. ColorNavigator Agent Settings

ColorNavigator Agent is a function designed to make ColorNavigator 7 a resident program in the system. The functions listed below are available from the context menu of ColorNavigator Agent.

- Switching color modes of the monitor
- Starting ColorNavigator (opening the main window)
- Opening Preferences

The icon is displayed on the menu bar (Mac) and task tray (Windows) while the application is running as resident. The icon display varies depending on the operating state.

Icon	Operating status
	Normal • The context menu functions are available.
	Warning • The configured item is in the warning state.
	Hibernation • ColorNavigator is running. Operation is not allowed until ColorNavigator is exited.

Configure the ColorNavigator Agent functions.

1. Open the Preferences screen.

2. Select “General” on the tool bar.

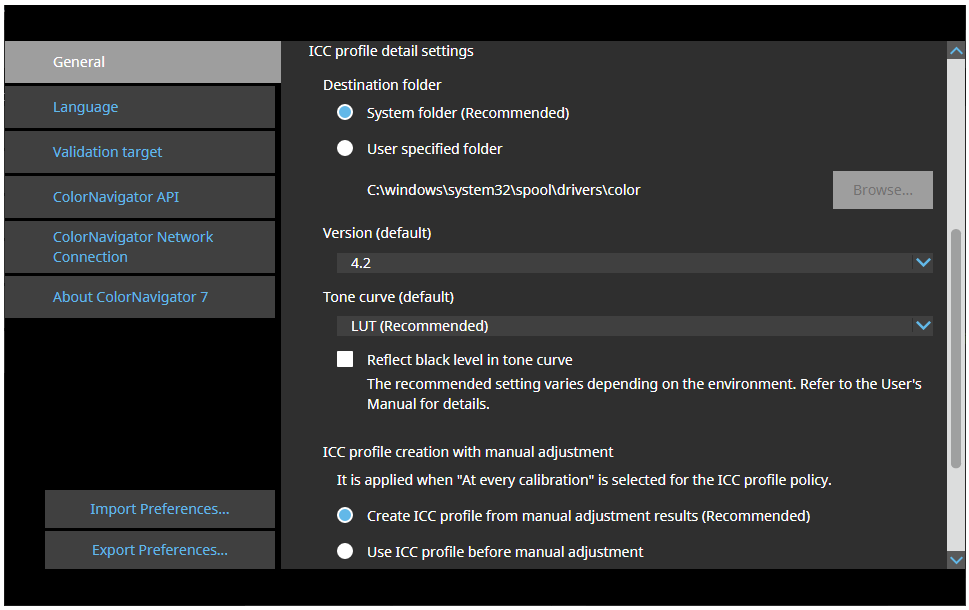
Item	Outline
Use ColorNavigator Agent	ColorNavigator Agent runs as the resident application. **Note** • In the default settings, ColorNavigator Agent is resident in memory during system startup. To prevent the program from running as the resident, uncheck the checkbox.
Show warning message when recalibration/revalidation is required	A warning is displayed when the monitor operating time from the last adjustment has exceeded the value specified in the management policy. Re-calibration is necessary by displaying the main window.
Show error message when it fails to apply ICC profile	A warning is displayed when the ICC profile optimum for the displayed color mode is not configured in the system. By re-selecting a color mode, the optimum ICC profile can be configured in the system.
Watch mismatch between monitor settings and input signals	A warning is displayed when the monitor's signal settings do not match the actual input signals.
Watch changes in video card gamma to make it linear (Recommended)	The program monitors the video card gamma status and automatically restores the monitor to the previous state if any changes are detected. **Attention** • Monitoring the status of video card gamma may not be supported for some of the graphics boards.

5-2. ICC Profile Detail Settings

1. Open the Preferences screen.

2. Select “General” on the tool bar.

3. Set items of “ICC profile detail settings”.



Item			Description
Destination folder	Windows	System folder (Recommended)	The ICC profiles are saved in a folder that is available to all the accounts registered in the computer. Default: C:\Windows\system32\spool\drivers\color
		User-specified folder	ICC profiles are saved in the folder specified by a user. The administrator privileges are required for this setting.
	Mac	User domain (Default)	ICC profiles are saved in individual folders for users. Default: Library/ColorSync/Profiles
		Local domain	The ICC profiles are saved in a folder that is available to all the accounts registered in the computer. The administrator privileges are required for this setting.
	Linux	ColorNavigator folder (Default)	ICC profiles are saved in /var/opt/EIZO/profiles.
		User-specified folder	ICC profiles are saved in the folder specified by a user.
Version			Select an ICC profile version. Select “4.2” under normal circumstances. Select “2.2” if a problem occurs with the software in use.

Item	Description
Tone curve	• Select a recording method for tone curve from the pull-down menu. Select “LUT (Recommended)” under normal circumstances. • “Reflect black level in tone curve” checkbox Uncheck the checkbox under normal circumstances. By selecting the checkbox, the black level value will be applied to the tone curve information of the ICC profile. If the tone curve is not displayed correctly, try unchecking the checkbox. To validate the monitor display by using tools such as the ICC profile validation tool, select this checkbox.
ICC profile creation with manual adjustment	It is applied when “ICC Profile policy” is set to “At every calibration” on the Edit Target window. Select “Create ICC profile from manual adjustment results (Recommended)” under normal circumstances.

5-3. Checking the Resolution at Startup

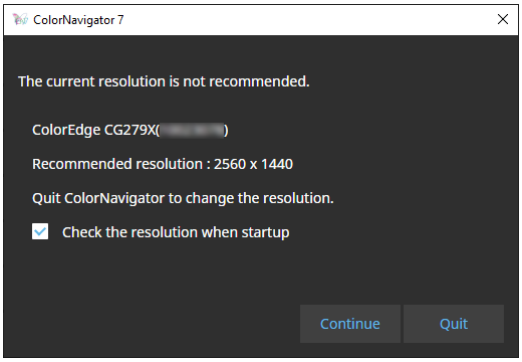
It is possible to display a warning message by checking the monitor's resolution when ColorNavigator 7 has started up if the resolution is different from the monitor's recommended resolution.

1. Open the Preferences screen.

2. Select “General” on the tool bar.

3. Select the checkbox for “Check the resolution when startup”.

Warning message



Clicking “Continue” allows you to use ColorNavigator 7 without changing the resolution.
To change the resolution, click the “Quit” button and change the resolution of the monitor, then restart ColorNavigator 7.

Attention

- If the resolution is changed without exiting ColorNavigator 7, ColorNavigator 7 may not operate correctly.

Note

- Even if the resolution differs from the recommended resolution of the monitor, it does not have an adverse effect on the ColorNavigator 7 operations. However, characters and lines may appear blurry.
- If the DPI setting has been changed for the computer, this message may be displayed.

5-4. Do Not Apply an ICC Profile

Check this option if you do not apply the ICC profile to the system.

1. Open the Preferences screen.

2. Select “General” on the tool bar.

3. Select the checkbox for “Do not apply an ICC Profile”.

5-5. Participating in the Quality Improvement Program

Please participate in the product improvement for ColorNavigator 7.
If you participate in the program, your product usage data will be automatically collected. Note that the collected data is anonymous and we will never collect information that may lead to your identity.

1. Open the Preferences screen.

2. Select “General” on the tool bar.

3. Select “Participate in the program to improve quality”.

5-6. Language Settings

● Setting the Display Language

1. Open the Preferences screen.

2. Select “Language” on the tool bar.

The Display Language Selection window will be displayed.

3. Select a language from the list and place the selected language to the top of the list by using or .

After setting the language, close the Preferences screen to update the display language.

Note

- The language display order can be specified by using your mouse (drag & drop).

● Adding a Display Language

Display languages can be added by importing the language pack (zip format).

1. Open the Preferences screen.

2. Select “Language” on the tool bar.

The Display Language Selection window will be displayed.

3. Click the “Add Language” button.

Select a language pack file and click the “Open” button.

The display language will be added.

5-7. Managing Validation Targets

Validation targets created by a user can be used for the monitor validation when they are loaded into ColorNavigator 7.

For the file format of validation targets, refer to the following item.

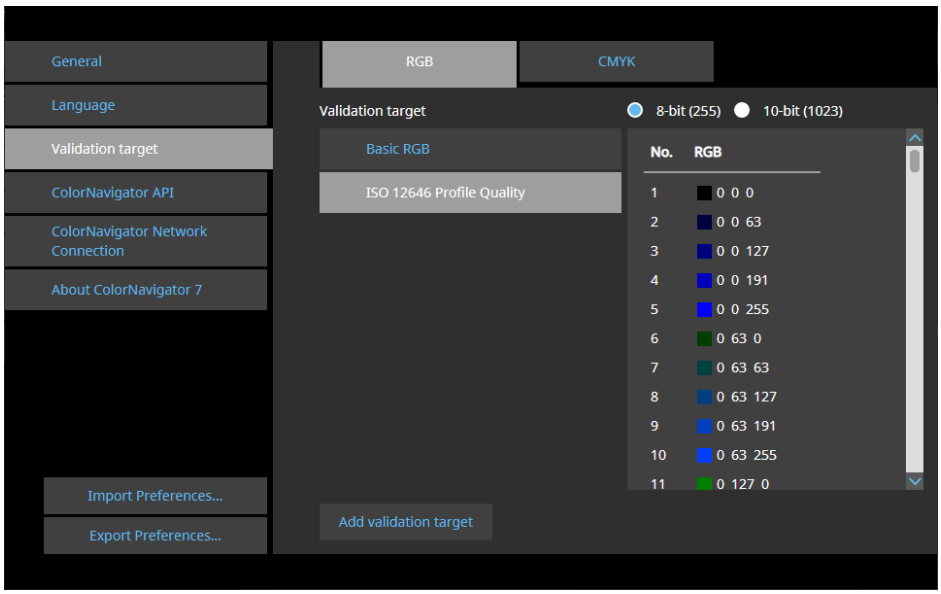
● Adding a Validation Target

For the file format of validation targets, refer to “File Formats of Validation Targets” (page 84).

1. Open the Preferences screen.

2. Click “Validation target” on the tool bar.

The Validation Target Management window will be displayed.



The following color patches are recorded with the default setting.

Validation target	Validation type
Basic RGB	RGB
ISO 12646 Profile Quality	RGB
FOGRA28 ISOwebcoated (legacy)	CMYK
FOGRA29 ISOuncoated (legacy)	CMYK
FOGRA30 ISOuncoatedyellowish	CMYK
FOGRA39 ISOcoated_v2_300_eci	CMYK
FOGRA39 ISOcoated_v2_eci	CMYK
FOGRA40 SC_paper_eci	CMYK
FOGRA41 PSO_MFC_Paper_eci	CMYK
FOGRA42 PSO_SNP_Paper_eci	CMYK
FOGRA43 PSO_Coated_300_NPscreen_ISO12647_eci	CMYK
FOGRA43 PSO_Coated_NPscreen_ISO12647_eci	CMYK
FOGRA44 PSO_Uncoated_NPscreen_ISO12647_eci	CMYK
FOGRA45 PSO_LWC_Improved_eci	CMYK
FOGRA46 PSO_LWC_Standard_eci	CMYK
FOGRA47 PSO_Uncoated_ISO12647_eci	CMYK
FOGRA51 PSOcoated_v3	CMYK
FOGRA52 PSOuncoated_v3_FOGRA52	CMYK
ECI PSR_LWC_PLUS_V2_PT	CMYK
ECI PSR_LWC_STD_V2_PT	CMYK
ECI PSR_ST_PLUS_V2_PT	CMYK
ECI PSR_ST_STD_V2_PT	CMYK
ECI PSRgravureMF_PT	CMYK
IDEAlliance GRACoL2006_Coated1v2	CMYK
IDEAlliance SWOP2006_Coated3v2	CMYK
IDEAlliance SWOP2006_Coated5v2	CMYK
IFRA26 ISOnewspaper26v4	CMYK

3. Click the “Add validation target” button.

4. Select a validation target file and click the “Open” button.

The validation target file name loaded into the validation target list will be displayed. Clicking the file name displays the details of the loaded validation target.

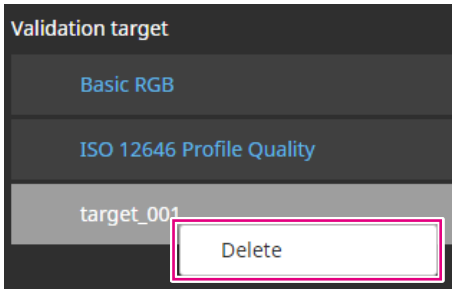
● Deleting a Validation Target

1. Open the Preferences screen.

2. Click “Validation target” on the tool bar.

The Validation Target Management window will be displayed.

3. Right-click the validation target and select “Delete” from the context menu.



The validation target will be deleted.

Attention

- The validation targets provided by ColorNavigator 7 cannot be deleted.
- To redisplay a deleted validation target, load the validation target.

● File Formats of Validation Targets

The file formats loadable with ColorNavigator 7 are listed below.

● RGB-Type Validation Target

- Test files in the comma-separated format. The extension is “csv”.
- On each line, the values are recorded in the order of red, green and blue from the left.
- Set the values of red, green and blue within the range specified below.
  - Decimals in the range between 0 and 1 or integers in the range between 0 and 255 or 0 and 1023.
  - In any range between 0.0 and 1.0, 0 and 255, 0 and 1023.
- Validation target file sample

```
0,0,0
0,0,255
0,255,0
0,255,255
255,0,0
255,0,255
255,255,0
255,255,255
```

Attention

- The same value range must be selected for red, green, and blue values from any of the ranges between 0 and 1, 0 and 255, or 0 and 1023. For example, if you enter a value 256 or higher when the other color patches are specified in the range between 0 and 255, all color patches turned out to be darker because they are interpreted in the color patch range between 0 and 1023.

CMYK-Type Validation Target

- A text file delimited by spaces or tabs. The extension is “txt”.
- Validation target file sample

```
BEGIN_DATA_FORMAT                                    ← 1
CMYK_C CMYK_M CMYK_Y CMYK_K LAB_L LAB_A LAB_B
END_DATA_FORMAT
BEGIN_DATA
0 0 0 0 100.00 0.00 0.00                             ← 2
0 0 0 100 16.91 0.04 0.53
0 0 100 0 93.70 -5.22 98.22
0 0 100 100 17.18 -3.88 10.17
0 100 0 0 50.84 77.40 -1.91
0 100 0 100 12.43 13.45 2.80
0 100 100 0 50.03 71.21 51.21
0 100 100 100 13.29 6.35 6.29
100 0 0 0 58.18 -38.73 -50.39
100 0 0 100 11.94 -7.07 -9.99
100 0 100 0 53.04 -69.67 28.11
100 0 100 100 13.22 -12.75 3.02
100 100 0 0 25.87 20.55 -46.91
100 100 0 100 9.49 6.30 -4.03
100 100 100 0 24.76 0.10 0.61
100 100 100 100 10.80 -0.61 1.91
END_DATA
```

No.	Description
1	• Specify the order of the CMYK elements and L*a*b* elements between BEGIN_DATA_FORMAT and END_DATA_FORMAT.*1 • When creating a validation target file, specify the contents of the sample as is.
2	• Specify CMYK elements and L*a*b* elements in the following range. - CMYK: Integer value from 0 to 100 - L*: Numerical value from 0 to 100 (decimal also acceptable) - a*b*: Numerical value from -128 to 128 (decimal also acceptable) • Include CMYK (0 0 0 0) values.

*1 The meaning of each element is as follows:

Item	Description
CMYK_C	Cyan
CMYK_M	Magenta
CMYK_Y	Yellow
CMYK_K	Black
LAB_L	L*
LAB_A	a*
LAB_B	b*

5-8. Enabling the ColorNavigator API

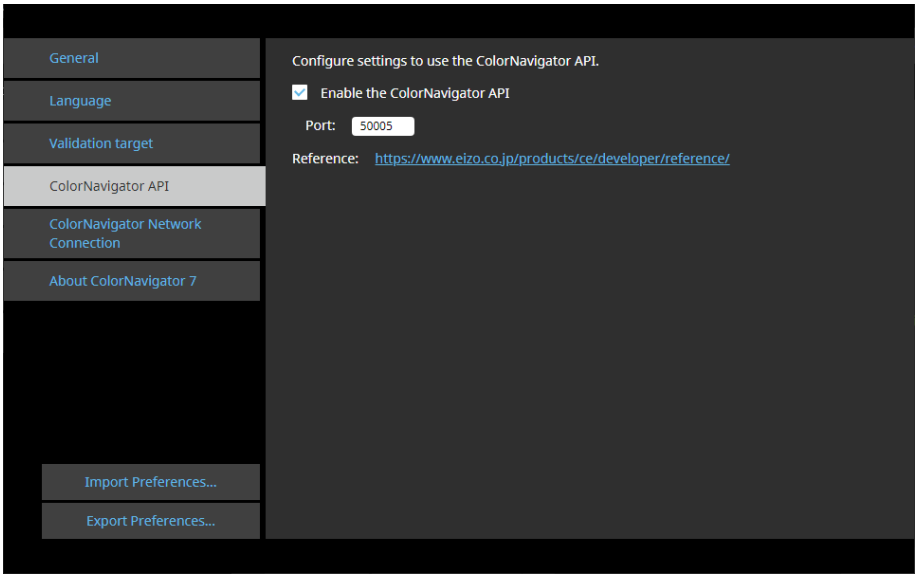
Enable/disable the ColorNavigator API and set the port number.

For details on the API, see our web site:
www.eizoglobal.com/products/coloredge/developer/reference/

1. Open the Preferences screen.

2. Select “ColorNavigator API” on the tool bar.

3. Check “Enable the ColorNavigator API” and set the port number (default setting: 50005).



Attention

- To use the ColorNavigator API, ColorNavigator Agent must be enabled. Select “General” in the toolbar and check the “Use ColorNavigator Agent” check box.

5-9. ColorNavigator Network Connection

Load a connection file provided from ColorNavigator Network and configure the settings for controlling monitors from ColorNavigator Network.

Attention

- Configure the settings of ColorNavigator Network as instructed by your system administrator.

Note

- For more information about monitors that can be managed by ColorNavigator Network, refer to the User's Manual of ColorNavigator Network.
- To use ColorNavigator Network, ColorNavigator Agent must be enabled. See “5-1. ColorNavigator Agent Settings” (page 77) for details.

1. Open the Preferences screen.

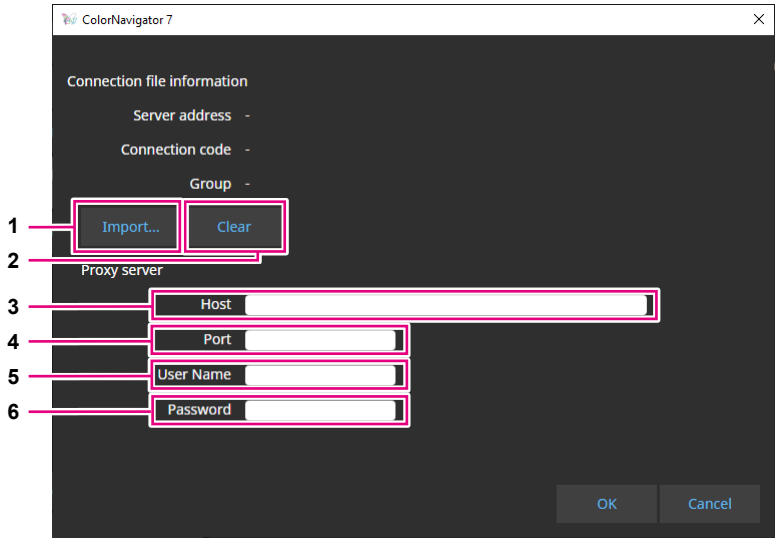
2. Select “ColorNavigator Network Connection” on the tool bar.

The ColorNavigator Network Connection window will be displayed.

3. Select the checkbox for “Enable connection to ColorNavigator Network”.

4. Click the “Edit” button.

5. Set the network connection information.



No.	Item	Description
1	Import	Imports a connection file.
2	Clear	Clears the connection file settings.
3	Host	Enter the address of the proxy server of the system.
4	Port	Enter the port number of the proxy server of the system.
5	User Name	Enter the user name for the proxy server of the system when user authentication is required.
6	Password	Enter the password for the proxy server of the system when user authentication is required.

6. Once the settings are complete, click the “OK” button.

The network connection information will be saved.

Chapter 6 Other Functions

6-1. Displaying Test Patterns

This function displays test patterns for visually checking the adjustment status. It allows you to check if the gray scale images do not contain any color tone and the tone curve (gamma) is displayed correctly.

Attention

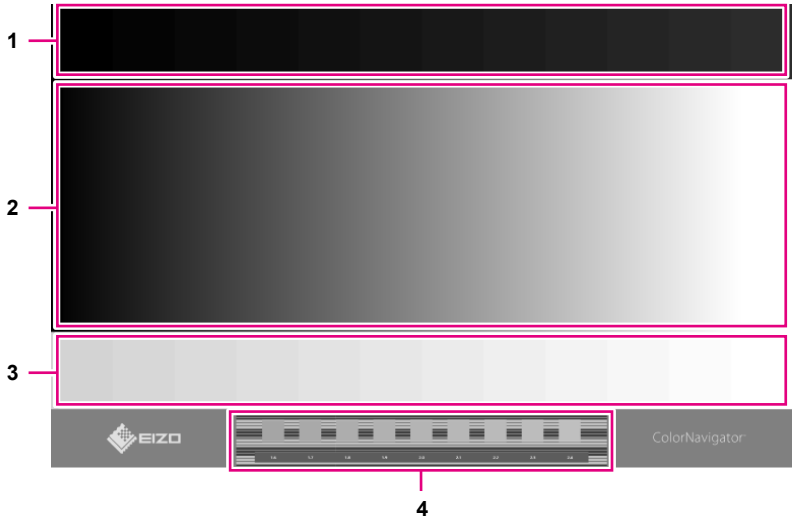
- Check that the monitor is used at the recommended resolution when verifying the tone curve. For details on the recommended monitor resolution, see the User's Manual of your monitor.
- Without using the monitor at the recommended resolution, the following problems may occur with the test patterns.
  - Gradient banding cannot be seen easily
  - Gradient collapse cannot be seen easily
- Depending on the monitor and OS settings, test patterns may be displayed on only the right or left side of the screen. This will not affect adjustment or validation of the monitor.

1. Open the main window.

2. Click the “Tools” menu and select “Test pattern” from the pull-down menu.

The test pattern will be displayed on the entire screen.

To exit the display, click your mouse on the test pattern.



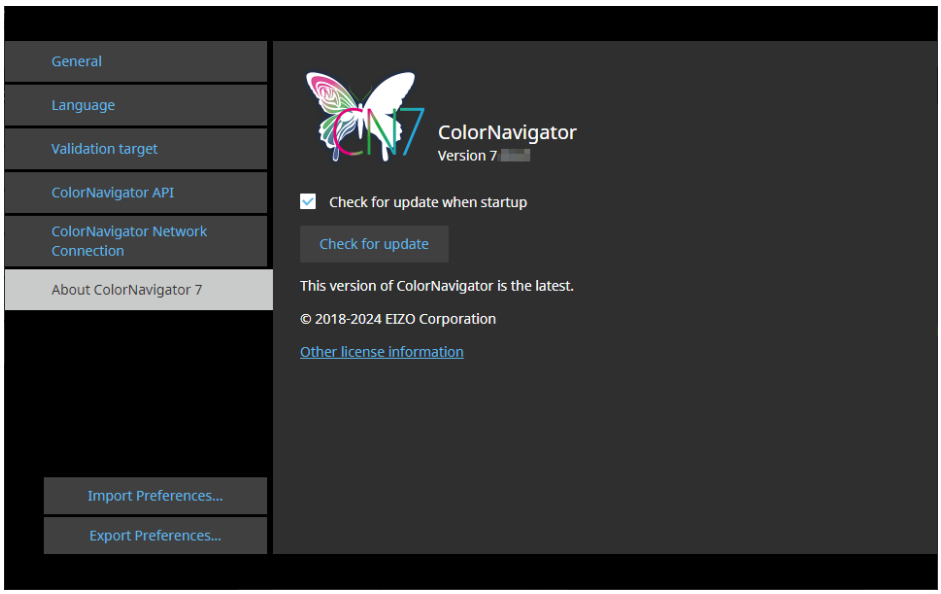
No.	Description
1	• Low gradation area Displays the low gradation patch. Used for checking the low gradation details.
2	• Gray scale area Displays the gray scale gradation (between 0 and 255 with 256-gradation) at equal intervals. Used for checking the gamma and gray balance.
3	• High gradation area Displays the high gradation patch. Used for checking the details of high gradation.
4	• Gamma checking area Finds the gray patch part that has the smallest difference from the stripe part. The numerical value displayed below the gray patch part is the gamma value closest to the current display.

6-2. Displaying the version information.

1. Open the Preferences screen.

2. Select “About ColorNavigator 7” on the tool bar.

The version information will be displayed.



Note

- If a newer version of your current ColorNavigator 7 is available, update can be executed. The computer in use must be connected to the Internet in order to perform updates. See “6-3. Checking for Software Updates” (page 90) for details.

6-3. Checking for Software Updates

Check for the updates of ColorNavigator 7 on the Internet. If a newer version than the current one is available, you can update your ColorNavigator 7 to the newer version.

Attention

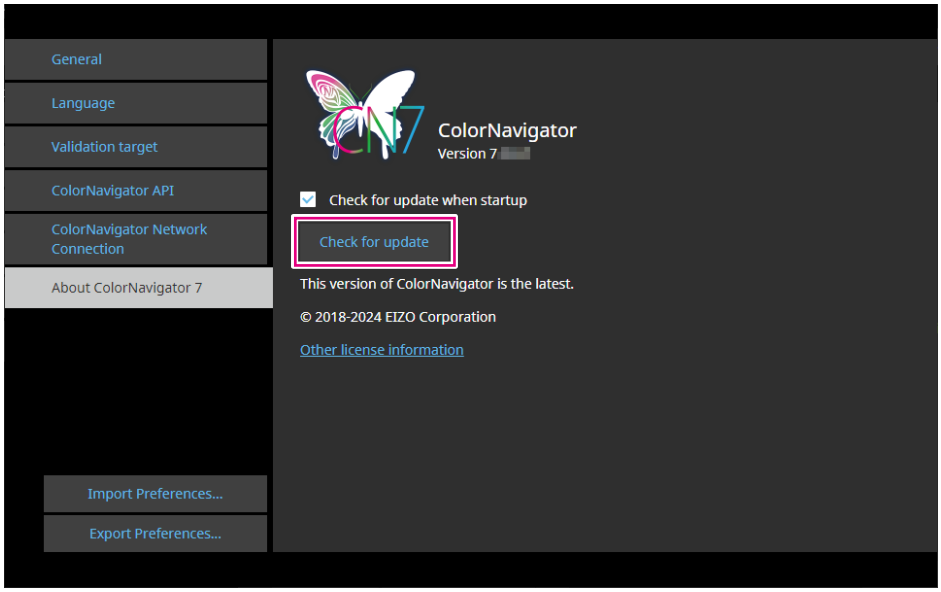
- The computer in use must be connected to the Internet in order to perform updates.

1. Open the Preferences screen.

2. Select “About ColorNavigator 7” on the tool bar.

3. Click the “Check for update” button.

The latest version and “Update now” button will be displayed if an update is available.



Select the “Check for update when startup” checkbox to see if updates are available when starting up ColorNavigator 7.

If updates are available, an update notification message will appear in ColorNavigator Agent.

6-4. Checking the License Information

The license information of the library used by ColorNavigator 7 is displayed.

1. Open the Preferences screen.

2. Select “About ColorNavigator 7” on the tool bar.

3. Click “Other license information”.

The license information will be displayed.

6-5. Displaying the System Information

This menu displays the detailed information of your computer and monitor environments.

1. Open the main window.

2. Click the “Tools” menu and select “System Information” from the pull-down menu.

The system information will be displayed. If you click “Output to a file”, you can save the system information in zip format.

Chapter 7 Troubleshooting

Problem	Possible cause and remedy
1. I cannot find the User's Manual.	• Click to display a PDF file of the User's Manual.
2. I want to calibrate regularly.	• Select “Management Policy” from the “Monitor settings” menu, and set the management policy. See “3-9. Calibrating the Monitor Periodically” (page 49) for details.
3. I cannot edit or delete a target.	• The target is locked. Click and unlock it.
4. I do not see “Match with preset targets” or “Preset target”.	• These functions are not shown as they cannot be used with CS230 and CS2410.
5. I cannot change the color mode.	• There are limitations in characters and the number of characters that can be used for color mode names. • The characters that can be used are alphanumeric characters, hyphen “-”, round brackets “()”, underscore “_”, and spaces (all half size). • If “Set color mode name” is checked at the edit window of a color mode, the option “Rename” will not be shown.
6. There are items that cannot be manually adjusted.	• Manually adjustable content will vary by the monitor you use or the displayed color mode type, as well as the target. • When the color mode type is Standard (STD), only the brightness and white point can be adjusted manually. To perform 6-colors adjustments, switch the color mode type to Advanced (ADV) (Refer to “Changing the Color Mode Type” (page 54)) and perform manual adjustments after calibration. • To adjust the gamma (EOTF) or color gamut when the color mode type is set to Standard (STD), edit the settings on the main window.
7. A message stating “Not optimized for Mac.” is displayed.	• There is no problem with the operation of this software. Click “OK” to use as is.
8. A message stating “Requesting access to control System Events” is displayed. (Mac only)	• This is the processing necessary to start up the software at system startup. Since it is required for enabling the resident function (ColorNavigator Agent) of ColorNavigator 7, click “OK”. Clicking “OK” will not have any serious effects on the system.

Chapter 8 Error Messages

Error Messages	Possible cause and remedy
1. Update check error	• Check that your computer is connected to the Internet. • Check that the proxy setting of the OS is correct. For the details, please consult your system administrator.
2. Cannot detect the light booth	• Check that the light booth is connected to the computer via USB. • Check that the connected light booth is supported. • Refer to “4-5. Adjusting the Light Booth” (page 62).
3. Could not set the Emulation LUT to the monitor	• Uncalibrated targets cannot be used for the Emulation LUT setting. - Set the Emulation LUT for calibrated targets. - For uncalibrated targets, complete calibration before setting the Emulation LUT. • Cancel the Emulation LUT in the other color mode (Advanced) and try again. • Refer to “4-8. Emulation” (page 72).
4. Failed to create the emulation data	• There is an error in the format of the 3D-LUT file. Try selecting a different 3D-LUT file.
5. Failed to calibrate the monitor	• Failed to perform calibration or manual adjustment. Start over the calibration after several minutes or change the target and perform calibration again.
6. Language pack reading error	• Failed to read the language pack. Check the data of the language pack. • Refer to “5-6. Language Settings” (page 81).
7. Failed to execute validation	• Perform validation again.
8. Correlation error	• Failed to correlate. Check the following, and click “Proceed” to perform correlation again. - Is the measurement device properly attached to the measurement window? - Initialize the measurement device again and perform correlation.
9. Screen Error	• Restart the software and retry operation. A critical error has occurred. Restart the software and retry operation. • Set “Video Mirroring” function to disable before starting up ColorNavigator. In order to provide a proper color management, the mirroring function (a function to display the same content on multiple monitors) is disabled. • When multiple monitors are connected, each monitor should display an independent screen. Displaying the same screen on each monitor or across multiple monitors prevents adjustment using the ColorNavigator software. For details of how to change the settings, see the User’s Manual of the graphics board. • Windows display calibration is enabled. Turn off the Window's display adjustment function for ColorNavigator to perform the adjustments properly. (Refer to “Turning Off the Display Adjustment Function of Windows” (page 97).)

Error Messages	Possible cause and remedy
10. Connection error	• Failed to connect to ColorNavigator Network. Check the network status and settings for connection file and proxy server. • For the details of the network, please consult your system administrator. • Refer to “5-9. ColorNavigator Network Connection” (page 87).
11. ColorNavigator settings must be performed in a different environment because some of the calibration information cannot be collected.	• If any of the following cases applies, the ICC profile will be updated every time calibration is performed. - “Use ICC profile before manual adjustment” is selected for “ICC profile creation with manual adjustment” under “General” - “ICC profile detail settings” in the Preferences dialog - “Use a specified ICC profile” is selected for “ICC Profile policy” in the Edit Target window • Refer to “5-2. ICC Profile Detail Settings” (page 79).
12. Measurement Error	• Failed to perform measurement. Quit the operation, check the USB connection of the measurement device, then retry the operation. • It failed because the measurement device is not attached to the measurement window. Check that the measurement device is firmly attached to the measurement window, then click “Proceed”.
13. Failed to detect the measurement device / Failed to detect measurement device	• The measurement device may not be properly connected via USB. Check the USB connection of the measurement device. • Some measurement devices are not automatically detected. Uncheck the “Display automatically detected device” checkbox first and select your device. • The measurement device driver may not be properly installed. Try installing ColorNavigator 7 again. Installing it again will not destroy the software data. • Certain functions may not be supported by some measurement devices. Check that your measurement device supports the functions you intend to use. For details, see our web site: www.eizoglobal.com • Measurement Device-Specific Check Items - i1Display 3, i1Display Pro, i1Display Pro Plus, ColorChecker Display Pro, ColorChecker Display Plus, i1Studio, ColorChecker Studio (Windows) Display “Services” and stop “X-Rite Device Services Manager”. Using the Windows file search function, enter “Services” or “services.msc”. “Services” will be displayed. - i1Display 3, i1Display Pro, i1Display Pro Plus, i1Studio Exit i1Profiler / i1Profiler Tray or i1 Studio / i1 Studio Tray. - ColorChecker Display Pro, ColorChecker Display Plus, ColorChecker Studio Close ccProfiler / ccProfiler Tray or ccStudio / ccStudio Tray. - Calibrite Display Pro HL, Display Plus HL Quit Calibrite PROFILER. - CS-2000, CS-2000A, CS-200, CA-310, CA-410, CS-3000, CS-3000HDR, CS-2000Plus The measurement device driver may not be properly installed. Drivers for these measurement devices are not installed by the installation of ColorNavigator 7. Please install the drivers manually. For details of the drivers, contact their manufacturers.
14. Download Error	• Check that your computer is connected to the Internet. • Check that the proxy setting is correct. For the details, please consult your system administrator.
15. Adjustment Error	• Failed to calibrate the monitor. Check the following, and click “Proceed” to calibrate again. - Is the measurement device properly attached to the measurement window? - Initialize the measurement device again and perform calibration.

Error Messages	Possible cause and remedy
16. Failed to adjust the light booth.	• Failed to adjust the light booth. • Check that the light booth is connected to the computer via USB. • Change the target and retry adjustment. • Refer to “4-5. Adjusting the Light Booth” (page 62).
17. Communication Error (Monitor)	• The USB connection with the monitor was lost while ColorNavigator 7 is operating. Exit ColorNavigator 7. Check that the monitor and computer are properly connected with a USB cable, then restart ColorNavigator 7 and retry the operation.
18. Communication Error (measurement device)	• The USB connection with the measurement device may be lost. Make sure that the measurement device is securely connected via USB.
19. The number of windows opened has reached the maximum limit,	• Close unnecessary windows.
20. File Error	• An error occurred during file operation. • You are trying to load an invalid validation target file (CMYK type). Check the contents of the validation target file. (Refer to “5-7. Managing Validation Targets” (page 82).) • The emulation LUT file is invalid. Check to see if the contents of the 3D-LUT file are correct. • ColorNavigator 7 is trying to load a file that has the same name as the registered validation target. Rename the file.
21. File Error (ColorNavigator Network Connection)	• Failed to import the “Connection file” that has records of the connection settings to ColorNavigator Network. The connection file may be invalid. Obtain a connection file from your administrator and import it again.
22. Invalid file format	• Check that you have specified a correct file.
23. Failed to save file.	• With the current user privilege, you may not be allowed to save a file in the folder you specified. Change the destination folder to save to or check the user privilege.
24. Failed to read the file	• The file name is too long. Change the file name to be no more than 128 characters and read it again. • Check that the specified file exists, and the access permission of the specified file.
25. Unexpected error	• Unexpected error has occurred. Exit ColorNavigator 7 and retry the operation. • If this continues to occur, please consult EIZO Maintenance Center.
26. ICC profile setting error	• Failed to set an ICC profile for the system. Retry the operation. • Set another location to save the profile and retry the operation. • Refer to “5-2. ICC Profile Detail Settings” (page 79).
27. Could not save the ICC profile	• Failed to save ICC profile. Retry the operation. • Set another location to save the profile and retry the operation. • Refer to “5-2. ICC Profile Detail Settings” (page 79). • When running an application such as a PDF viewer that can lock the ICC profile, quit the application.
28. Target value error	• Failed to set a target. Try setting a different target. • Failed to create a target from the ICC profile. Select a different ICC profile.

Error Messages	Possible cause and remedy
29. Failed to import the target	• Check that you are importing a correct file. • An improper character string was added to the file to be imported. Export the target again, and then import it. • The target with emulation set cannot be imported in the monitor that is the import destination. Import a target with emulation disabled. • An HDR-compatible target cannot be imported into a monitor that is not compatible with HDR. • The import destination monitor does not support imports of targets with the “Optimize for Limited (109% White)” enabled. • The import destination monitor does not support imports of targets with “D65 (CRT)” configured for the white point. • The monitor for which import was attempted does not support the import of targets with PQ Option set to “Auto”. • It is not possible to import targets of the color mode type Standard (STD) if they were exported with ColorNavigator 7.0.9 or earlier.
30. Cannot apply the target	• The name of the color mode set in the target to be applied is being used for another color mode. Change one of the color mode names to avoid duplicate names.
31. Cannot operate the monitor	• Quick Color Match or another software is using the USB connection of the monitor. Quit the software that is using the USB connection.
32. Failed to read Cube file	• Check the following regarding LUT sizes: - Specify LUT_1D_SIZE or LUT_3D_SIZE. - For 1D-LUT, set one value between 2 and 65536 in LUT_1D_SIZE. - For 3D-LUT, set one value between 2 and 65 in LUT_3D_SIZE. - The LUT size and the number of entries in the table must match. • Either LUT_1D_SIZE or LUT_3D_SIZE has been specified more than once. Please specify just once. • A value outside the LUT range has been specified. Please check the following points: - Only supported when DOMAIN_MIN is “0 0 0” and DOMAIN_MAX is “1 1 1”. - Only supported when LUT_1D_INPUT_RANGE and LUT_3D_INPUT_RANGE are “0 1”. • Not supported for LUT_IN_VIDEO_RANGE and LUT_OUT_VIDEO_RANGE. • This file format is not supported. Please check the following points: - Enter either 1D-LUT or 3D-LUT data. - Specify table data within the range of 0 to 1 for the three RGB values. Example: 0.1 0.1 0.1
33. ICC profile creation error	• The ICC profile could not be saved. If excessive manual adjustments are made and the values are not within the ICC profile standard, the ICC profile may not be created. Please redo the manual adjustment.
34. Connection error (invalid connection file)	• Download the connection file again and redo the operation.
35. Connection error (Gateway)	• Failed to connect to ColorNavigator Network. Check the network status and ColorNavigator Gateway settings.

Turning Off the Display Adjustment Function of Windows

Note

- A user account with “Administrator” privileges is required.
- The example is an image of Windows 10.

1. Open “Color Management”.

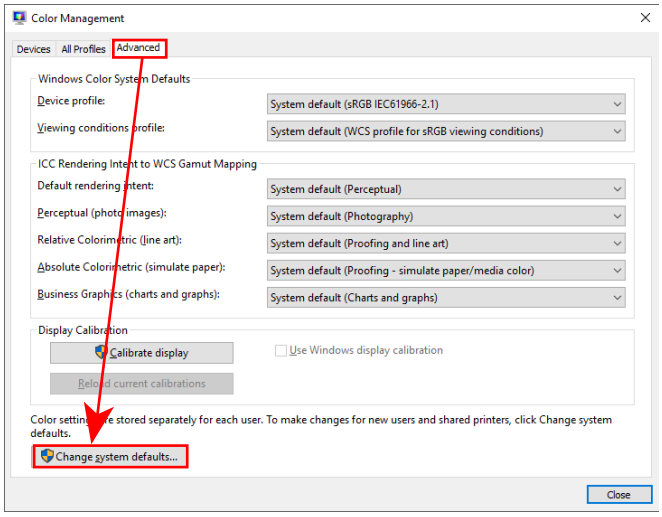
Note

- Using the Windows file search function, enter “Color Management” or “colorcpl” to perform a search, and then click the item displayed in “Best match”. The “Color Management” window will be displayed.

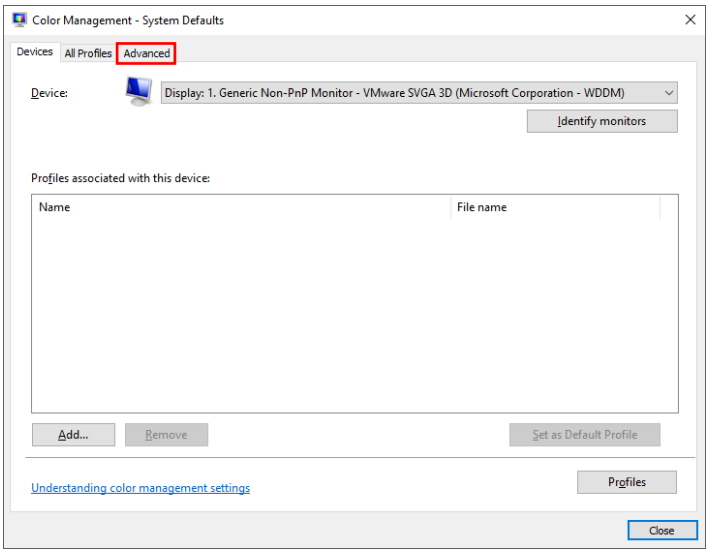
1. On the Desktop, right-click your mouse in the area where no icon is placed.
2. Click “Display settings” on the displayed menu.
   The Display window will be displayed.
3. Scroll the screen and click “Advanced display settings”. Then, click “Display adapter properties for Display 1”.
   The “Display adapter properties” window will be displayed.
4. In the “Display adapter properties” window, select the “Color Management” tab and then click the “Color Management...” button.
   The “Color Management” window will be displayed.

2. Click the “Advanced” tab in the “Color Management” window and then click “Change system defaults...”.

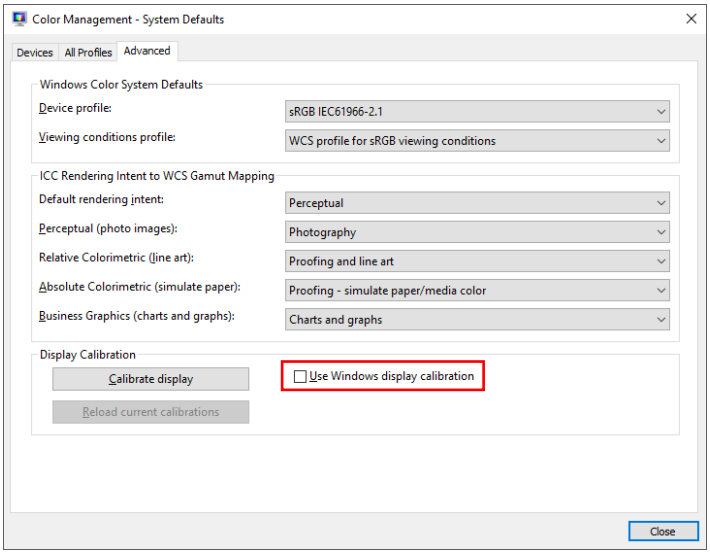
The “Color Management - System Defaults” window will be displayed.



3. **Click the “Advanced” tab in the “Color Management - System Defaults” window.**



4. **Uncheck the “Use Windows display calibration” checkbox.**



5. **Click “Close”.**

The “Color Management - System Defaults” window will be closed.

6. **Click “Close” on the “Color Management” window.**

The “Color Management” window will be closed.

7. **The “Display adapter properties” window will be closed.**

8. **Close the “Display” window.**

Appendix

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