ColorEdge® CG220

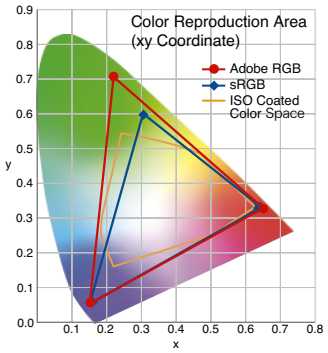
Color as it's meant to be

See all the colors of life

When you first experience the ColorEdge CG220, you will rethink all your assumptions about LCD monitors. Not only does it deliver colors that are stunningly rich and natural, but it is capable of displaying the Adobe RGB color space, so you see colors that you have literally never seen on an LCD monitor. From delicate cyans to deepest blues, as well as rich emeralds and magentas, every color looks just as it should and every detail is sharp, even in difficult shadow areas. With performance like this, there's no longer any reason to hesitate in making the switch to an LCD monitor.

Adobe RGB Coverage

Expanded Color Space Meets Professional Needs

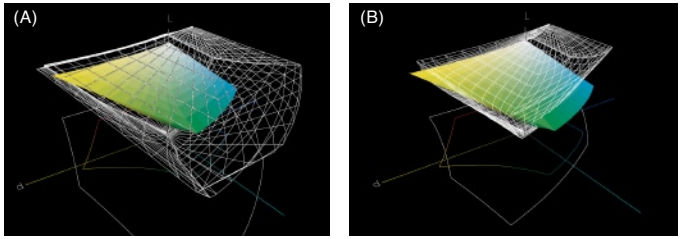


Graphics professionals are well aware that a totally digital workflow and the ability to do soft proofing results in higher efficiency and lower costs. Many also want to switch to space-saving LCD monitors, but are hesitant to do so because of concerns regarding the color accuracy required for professional color work. EIZO's solution is the ColorEdge CG220: an LCD monitor that covers the Adobe RGB color space. It thus encompasses not only the sRGB color space, widely supported by many computer monitors, operating systems and digital cameras, but also the ISO-coated and US web-coated CMYK color spaces used in printing. This ultra-high-performance monitor finally provides all the color reproduction capabilities graphics professionals have been seeking, in the compact LCD format.

Advantages Of Adobe RGB

In order to realize the advantages of soft proofing, a color management system for sharing accurate colors among photographers, graphic artists and printers is a necessity. The most efficient way to achieve this is for all parties to use a standardized color space with a wide range of colors. The ColorEdge CG220 now makes it possible to adopt the Adobe RGB extended color space, which has become the de facto standard for professional color processing. It ensures guaranteed color reproduction across all digital platforms, providing a color management environment that fully supports soft proofing, from the photography stage to final CMYK printing.

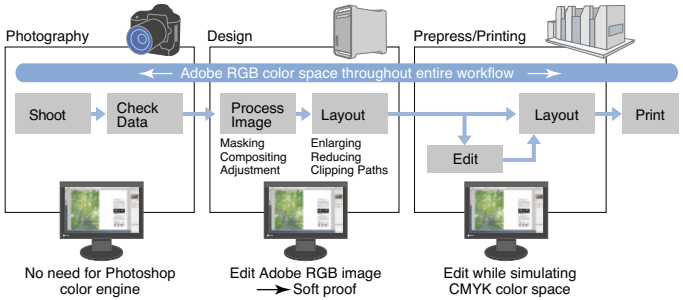
3D representation in CIE Lab of comparisons between ISO Coated and sRGB/Adobe RGB Color Spaces



(A) Adobe RGB (white wire frame) encompasses the ISO coated color space (multicolor solid).

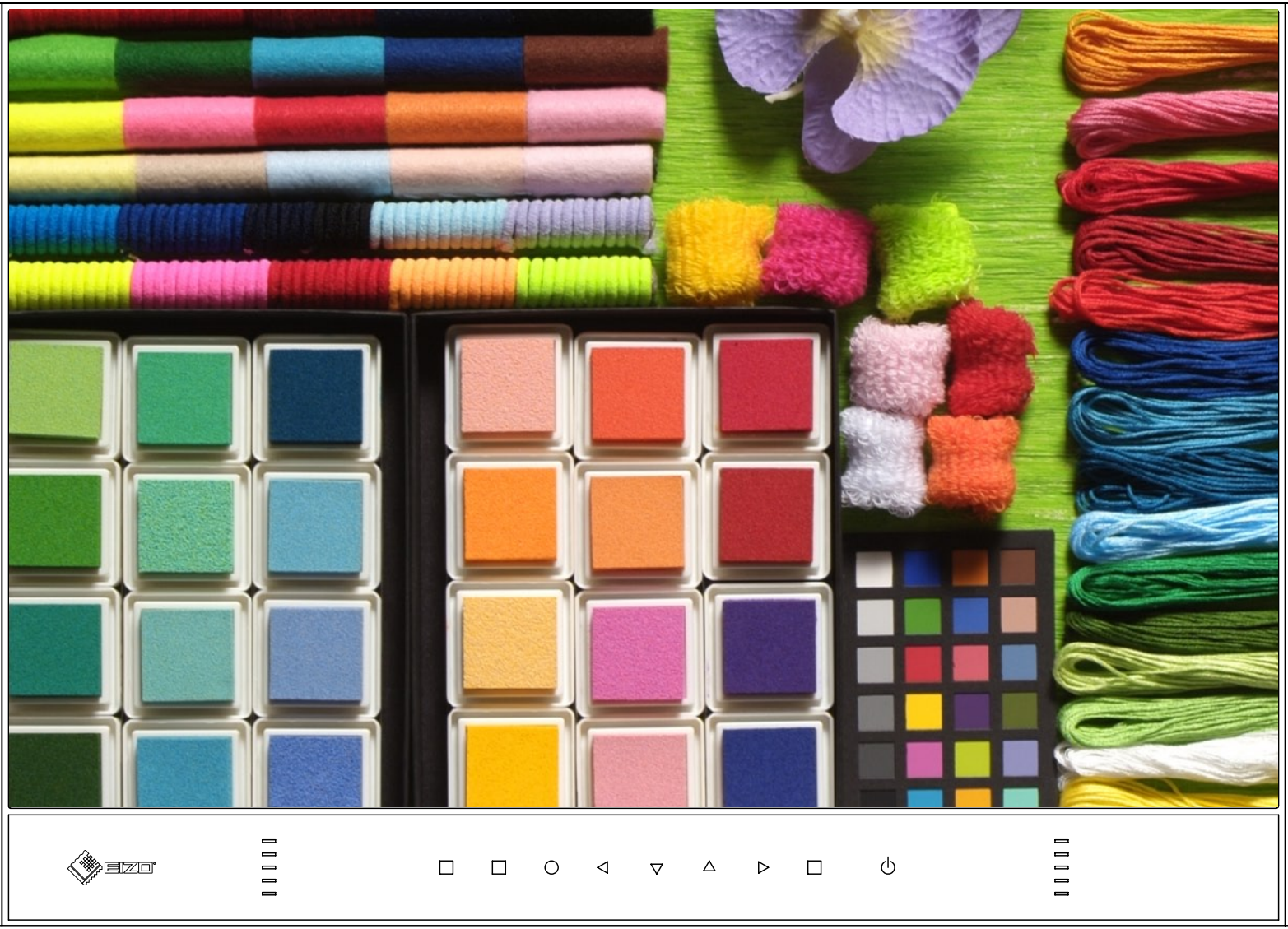
(B) sRGB (white wire frame) does not cover many of the green, cyan, and yellow areas of the ISO coated color space (multicolor solid).

Color Management



A common color space throughout the workflow lets you switch from hardcopy proofing to soft proofing.

By covering the Adobe RGB color space, the ColorEdge CG220 is not subject to influence from the OS color engine or software, and allows final color checks in Adobe RGB. This offers a great advantage over sRGB monitors, whose smaller palette is not capable of accurately reproducing colors in certain areas of the spectrum, notably emerald greens and cyans. Retouching images with these monitors requires numerous printouts to achieve accurate color matching. By enabling on-screen retouching and color confirmation, the ColorEdge CG220 makes your work faster, easier and more accurate.



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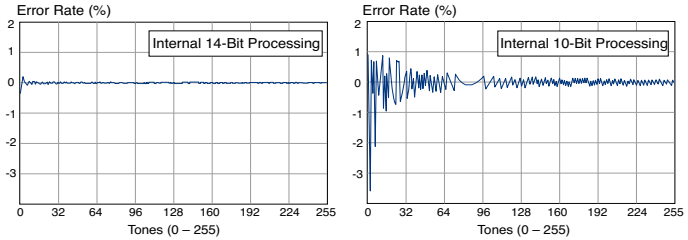
This photo is for illustrative purposes only. Actual display of color may vary depending on the monitor.

Precision Color Reproduction

14-Bit Processing

The ColorEdge CG220 incorporates a powerful new EIZO-developed ASIC (Application Specific Integrated Circuit) with 14-bit color processing capability (16 times more accurate than 10-bit). This allows a larger number of grayscale increments, for grayscale rendering that is on a par with high-end CRT monitors. The result is a much greater degree of color detail, especially in dark areas and shadows.

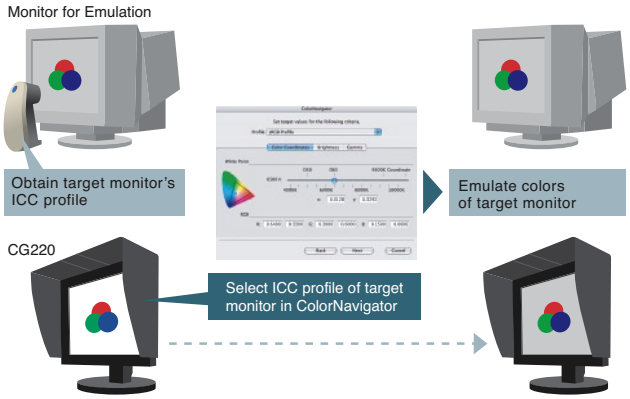
14-bit v. 10-bit processing



With 10-bit processing, the error rate is high in low tonal areas during calculation. With 14-bit processing, accuracy is significantly improved resulting in fewer conversion errors.

Emulation Function

To take full advantage of the 14-bit internal processing capabilities, EIZO has equipped the ColorEdge CG220 with an emulation function. Simply by obtaining the ICC profile of another monitor and using EIZO's ColorNavigator software, the ColorEdge CG220 can emulate its color characteristics. This is useful when another monitor is the standard monitor in a workflow, when different models are used in a multi-monitor setup, or for a remote proofing environment where the client, designer and printer want to be sure that their various monitors are displaying color the same way.



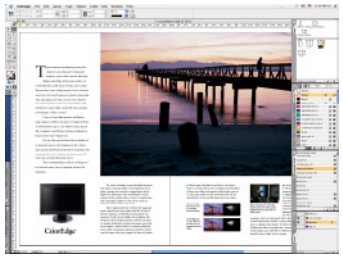
Factory Adjustment Of Gamma

Each ColorEdge CG220 monitor is adjusted at the factory to a gamma level of 2.2. This is accomplished by measuring the R, G and B gamma values from 0 to 255, then using the monitor's Look-Up Table (LUT) with its 1,021-tone palette to select the 256 most appropriate tones to achieve the 2.2 value.

The benefit of factory adjustment is that precise, non-fluctuating gamma values are necessary for the accurate display of colors. If colors are not based on specific values and cannot be adjusted, images will be displayed differently by different monitors. The ColorEdge CG220 provides both precision and consistency, so you can be sure that the final product will look exactly the way you want it to.

22.2-Inch Screen Supports 1920 × 1200 Resolution

The extra-wide 22.2-inch screen supports 1920 × 1200 resolution (16:10 aspect ratio), meaning that it can display a two-page A4 spread with no clipped edges. In an application such as Adobe® InDesign®, the tool palettes can be displayed at the same time without overlapping.



Conventional monitor: working space and tool palettes overlap.

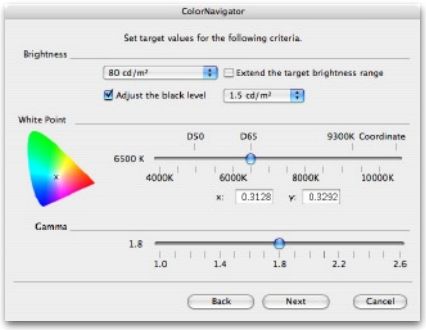
ColorEdge CG220: full working space and tool palettes are displayed simultaneously with no overlap.

High Brightness With No Loss Of Detail

With conventional LCD monitors, when the brightness is raised, small details in the image are lost, but the ColorEdge CG220 gives you the best of both worlds — high brightness and sharp detail. This remains true even when viewing from off-center, thanks to the LCD panel's 170° viewing angle and minimal color shift.

ColorNavigator Software

Unmatched Calibration Capabilities



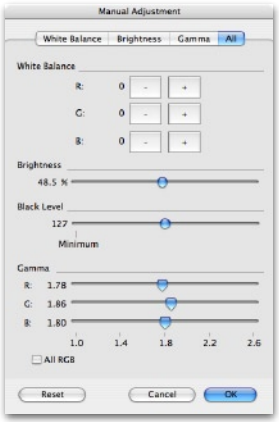
The EIZO-developed ColorNavigator software makes calibration both simple and accurate. Instead of having to judge colors and do time-consuming inputting, or having a specialist do it for you, all you need to do is input target values for brightness, white point and gamma. ColorNavigator directly utilizes the 10-bit Look-Up Table and automatically calibrates the monitor in less than 10 minutes. The ColorEdge CG220 incorporates the latest generation of this software, which gives you a number of other useful functions, some of which are as follows.

Calibration Parameters

Brightness		30 cd/m² – 200 cd/m²* (5 cd/m² increments) Possible to set to the monitor's maximum and minimum values.
	Black Level	0.5 cd/m² – 3.5 cd/m² (0.1 cd/m² increments) Possible to set to the monitor's minimum value.
White Point	**Color Temperature**	4000 K – 10000 K (100 K increments)
	Color Coordinates	X Value, Y Value

** Depending on LCD panel performance, it may not be possible to set the brightness to the maximum value (200 cd/m²).*

Post-Calibration Color Adjustment

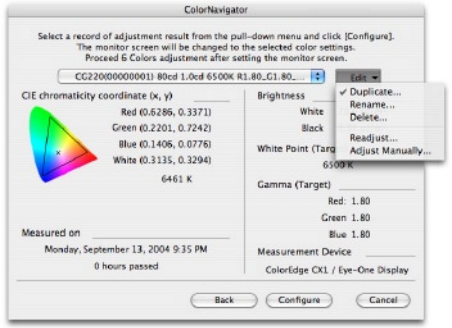


Sometimes due to variations in output from different printers or the special requirements of a project, it is necessary to fine-tune an otherwise perfectly calibrated monitor to match target colors. ColorNavigator lets you easily adjust hue and saturation for all six colors (red, green, blue, cyan, magenta and yellow), as well as white balance, brightness, black level and gamma, to achieve the closest possible visual match.

Color Profile Generation

ColorNavigator can save up to 20 different calibration profiles. Any of these can be used for setting the monitor or for generating a ColorSync or ICM color profile for the computer's operating system. For example, if you use one monitor for both web design and printing, you can save a different calibration profile for each task, then call up each profile as you need it.

Convenient Calibration Profile Management



ColorNavigator also makes it easy to keep track of calibration profiles. When you want to adjust a profile in order to match your monitor to other equipment such as printers or lightboxes, you can use the Duplicate function to make a copy of it, then adjust the duplicate profile and give it a new name. Naturally, you can make as many duplicates, and thus adjusted profiles, as desired.

Recalibration Reminder

After initial calibration, a monitor needs to be recalibrated at regular intervals to maintain color accuracy. ColorNavigator includes a recalibration reminder that will appear after a certain number of user-determined hours. When the monitor is first calibrated, the date and time are saved. After the time you set has elapsed, an LED on the front panel lights up, and a reminder message appears the next time ColorNavigator starts up. If you prefer to calibrate according to the amount of change that has occurred, you can measure the color difference (Delta-E) between the original target points and the actual current points at any time.

0.5 Delta-E Difference

The combination of the monitor's 10-bit look-up table, ColorNavigator software, and a calibration device (see page 12 for details) produces extremely accurate colors with a very low Delta-E difference of less than 0.5.

**Delta-E is the color difference between the target white point and the monitor's white point.*

Additional Features

Ergonomic Design

The monitor swivels smoothly through 70°, tilts 33° and moves up and down over a 100 mm range. The panel can be removed for mounting.

Touch Sensitive Switches

The front panel features highly sensitive electrostatic “touch” switches. Ports and modes are listed on the panel and LEDs indicate which port and mode is in use. The LEDs can be set to low, middle or high luminance, or can be turned off entirely.

Monitor Hood Supplied

The ColorEdge CG220 comes supplied with a monitor hood for glare reduction. The inside of the hood is coated with an anti-reflective material. A panel on the top cover slides open so the hood does not need to be removed in order to use a calibration device.

Screen Cleaner Kit

Keep your screen free from dust and finger-prints with this screen cleaner kit. Includes pump spray and cloth.

Five-Year Warranty

EIZO and its authorized distributors offer a five-year limited warranty for the ColorEdge CG220.

SWOP Certification

The ColorEdge CG220 is part of the SWOP-certified Remote Director — a monitor-based proofing system from Integrated Color Solutions, Inc. SWOP certification means graphics professionals can use this system in place of hardcopy proofs and perform all color checks on screen.

Accessories

ColorEdge CX1

Color Calibrator

This compact colorimeter easily attaches to the screen and works with ColorNavigator software to take full advantage of the hardware capabilities of ColorEdge monitors.

GretagMacbeth Eye-One Series Compatibility

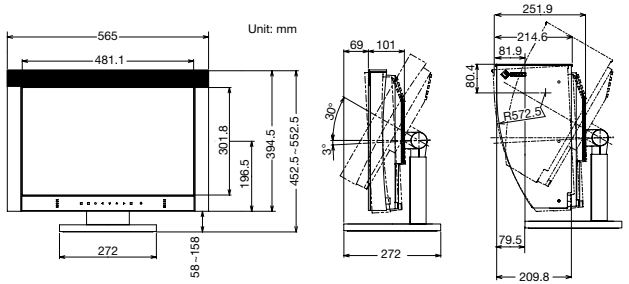
ColorNavigator is compatible with the following GretagMacbeth Eye-One products:

Eye-One Monitor
Eye-One Publish
Eye-One Photo
Eye-One Beamer
Eye-One Publish with DC
Eye-One Photo with DC
Eye-One Display / Eye-One Display 2
Eye-One Pro*
Eye-One Pro with i1 Match*

** These models have been discontinued.*

For more information on Eye-One products, visit www.i1color.com

Dimensions



Specifications

ColorEdge® CG220

Panel	**Panel Size and Type**		56.4 cm (22.2") TFT color LCD panel
	Viewing Angles (H, V)		170°, 170° (at contrast ratio of 10:1)
	Brightness / Contrast		200 cd/m² / 400:1
	Response Time		37 ms (typical)
	Native Resolution		1920 × 1200
	Active Display Size (H × V)		478 × 299 mm
	Viewable Image Size		Diagonal: 563 mm
	Pixel Pitch		0.294 × 0.294 mm
	Display Colors		16.77 million from a palette of 1.06 billion
Cabinet Color			Black
Dot Clock			Analog: 202.5 MHz, Digital: 162 MHz
Scanning Frequency (H, V)		**Analog**	31 – 94 kHz, 49 – 86 Hz
		Digital	31 – 76 kHz, 59 – 61 Hz (VGA Text: 69 – 71 Hz)
Input Signals			Analog: RGB Analog, Digital: DVI Standard 1.0
Input Terminals			DVI-I 29 pin × 2 (switchable)
USB Port / Standard			1 upstream, 2 downstream / USB Standard Rev. 2.0
Plug & Play			VESA DDC 2B
Power	**Power Requirements**		AC 100 – 120 V, 200 – 240 V: 50 / 60 Hz
	Power Consumption		90 W (typical)
	Power Save Mode		Less than 2 W
Physical Specifications	**Height Adjustment Range**		100 mm
	Tilt / Swivel / Pivot		30° Up, 3° Down / 35° Right, 35° Left / –
	Dimensions (W × H × D)		With Stand: 565 × 452.5 – 552.5 × 272 mm
			Without Stand: 565 × 394.5 × 101 mm
	Net Weight		With Stand: 14.5 kg, Without Stand: 10.4 kg
Auto Brightness Functions			Auto Brightness Stabilization
Auto Adjustment Functions			Auto Adjustment, Range Adjustment
Display Mode Options			Fine Contrast (sRGB, Custom, Calibration, Emulation)

ScreenManager OSD Adjustment Functions	**Screen Adjustment**		Clock, Phase, Position, Resolution, Signal Filter, Screen Size (full screen, enlarge, normal), Smoothing (5 stages), Border Intensity
	Color Adjustment		Range Adjustment (RGB) Independent 6-Color Control, Gamma, Temperature (14 stages: in 500 K increments from 4000 K – 10000 K including 9300 K), Saturation, Hue, Gain, Reset
	Power Save Settings	**Analog**	PowerManager (VESA DPMS), Off Timer
		Digital	PowerManager (DVI DMPM), Off Timer
	Other Settings		Signal Settings, Input Priority, Product Information (product name, serial number, resolution, operating time), OSD Menu Settings, Adjustment Lock, Languages (English, French, German, Italian, Japanese, Spanish, Swedish), Reset
Certifications and Standards			c-Tick, CE, CB, UL (cTÜVus), CSA (cTÜVus), FCC-B, Canadian ICES-003-B, TÜV/S, VCCI-B, EPA ENERGY STAR®, EIZO Eco Products 2004, SWOP
Supplied Accessories			AC power cord, signal cables (DVI-D – DVI-D, DVI-I – D-Sub mini 15 pin), USB cable, setup guide, EIZO LCD Utility Disk (ColorNavigator software, HTML user's manual, ICC Profile), adjustment certificate, screen cleaner kit, monitor hood, quick reference, warranty registration card
Warranty			Five Years*

** The usage time is limited to 30,000 hours or less, and the warranty period of the LCD panel and backlight is limited to three years from the date of purchase.*
With current LCD technology, a panel may contain a limited number of missing or flickering pixels.

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