BVM-E251

24.5-inch TRIMASTER EL™
OLED critical reference
monitor with wide viewing
angle supports 4K production

Overview

24.5-inch TRIMASTER EL™ reference monitor, with 2nd Gen OLED. Dramatically improved viewing angle for critical picture evaluation in the studio and on-set

For professional applications such as colour grading, high-end editing, broadcasting and scientific research, Sony's leading edge Organic Light-Emitting Diode (OLED) technology and signals processing technology ensures absolutely outstanding performance with the BVM-E251. The colour shift depending on the viewing angle has reduced to less than half compared the 1st generation OLED panel. It allows several people to evaluate the image with extreme accuracy at the same time, increasing the monitor's versatility in top end monitoring solutions.

24.5-inch TRIMASTER EL™ reference monitor with second generation OLED offers dramatically improved viewing angle for critical picture evaluation in the studio and on location

For professional applications such as colour grading, high-end editing, broadcasting and scientific research, Sony's leading edge Organic Light-Emitting Diode (OLED) technology and signals processing technology ensures absolutely outstanding performance with the BVM-E251. The colour shift depending on the viewing angle has reduced to less than half compared the first generation

OLED panel. It allows several people to evaluate the image with extreme accuracy at the same time, increasing the monitor's versatility in top end monitoring situations.

State-of-the-art product

Super Top Emission technology enhances OLED's intrinsic benefits to deliver outstanding black performance, a quick response time with virtually no motion blur and a wide colour gamut. A 12-bit output digital signal processing engine provides a nonlinear cubic conversion colour-management system that delivers precise colour reproduction, stunning picture uniformity, smoother-than-ever gamma performance and picture quality consistency.

Flicker free mode

The TRIMASTER EL OLED panel's superb quick response and scan-driving performance deliver stunning picture quality with virtually no motion blur. However, there is a possibility that flicker is just visible especially when a lower frequency signal is displayed (24p, 24PsF, and 50i). To remove visible flicker, the BVM-E251 is equipped with Flicker-free mode.

DC operation with DC low power indicator*

The BVM-E251 can be DC operated and features a DC low power indicator. This feature gives more flexibility and mobility to users who want the larger size screen for the on-set application.
* Requires v1.1 update.

ITU-R BT.2020 support for 4K production

The BVM-E251 conforms to ITU-R BT.709 colour space. Responding to an increase of the demand of using an HD monitor in a 4K production, BVM-E251 also supports the

ITU-R BT.2020 colour space and transfer matrix.

Accepts computer signals via HDMI with RGB/YCC full range support*

The BVM-E251 accepts various computer signals input up to 1920 x 1080 through its HDMI connector. It also accepts Digital Cinema 2048 x 1080 signals. The monitor supports the HDMI specification for RGB/YCC full range.
* Requires v1.1 update.

Features

Superb picture performance
Sony TRIMASTER EL™ technology combines the ultimate performance of the Sony OLED display with the highly sophisticated TRIMASTER™ technology to provide the highest level of picture performance:
Wide viewing angle
Accurate black reproduction
High purity and accurate colour reproduction
Quick response time with virtually no motion blur
Very high contrast ratio

Flicker-free mode
The TRIMASTER EL OLED panel's superb quick response and scan-driving performance deliver stunning picture quality with virtually no motion blur. However, there is a possibility that flicker is just visible especially when a lower frequency signal is displayed (24p, 24PsF, and 50i). To remove visible flicker, the BVM-E251 is equipped with Flicker-free mode.

Super Top Emission™ technology
Sony's Super Top Emission™ technology has a micro-cavity structure which incorporates colour filters. The micro-cavity structure uses an optical resonance effect to enhance colour purity and improve light-emission

efficiency. In addition, the colour filter of each RGB further enhances the colour purity of emitted light and reduces ambient light reflection.

Ultimate Sony display engine
The monitor's high-precision signal processing engine has been developed to fulfil the reference monitor criteria and is optimized to maximize the OLED panel performance. This engine incorporates 12-bit output accuracy at each process and provides both a high quality I/P conversion algorithm and a highly accurate colour management system.

Multi-format signal support
The BVM-E251 monitor can accept almost any SD or HD video format, such as analogue composite video, HDMI and SDI, and variable computer signals through HDMI. The monitor supports the HDMI specification for RGB/YCC full range*.
* Requires v1.1 update.

Auto White Balance function
The colour temperature and white balance of BVM Series monitors can be automatically adjusted by the Auto White Balance function using specified colour temperature probes, such as
Konica Minolta: CA-210, CA-310, CS-200
DK-Technologies: PM5639/06
X-Rite: i1 (Eye-One) Pro and i1Pro2
Photo Research: PR-655, PR-670
Klein: K-10
Jeti: Specbos 1211

High quality I/P conversion technology
The BVM-E251 monitor uses a sophisticated I/P conversion technique that keeps artefacts that are often

seen in flat panel displays to a minimum, such as edge jaggedness, conversion errors, etc

Low video delay
The BVM-E251 display engine ensures a picture delay that is less than one field.

Panel calibration
Every BVM-E251 monitor is carefully calibrated at the factory on an individual basis, providing a high level of accuracy and stability for characteristics such as gamma and uniformity.

Interlaced display mode
Faithfully reproduces interlaced signals, emulating CRT monitors.

Picture & Picture mode
The unique Picture & Picture function of the BVM-E251 allows simultaneous display of two input signals on the monitor's screen. This function is extremely convenient for making instant adjustments to two input sources. Four modes are available to provide users with enhanced operational flexibility: Side by Side, Wipe, Butterfly and Blending.

Pixel zoom mode
A selected area of the displayed picture can be enlarged on a pixel basis, up to eight times in size both vertically and horizontally.

Gamut Error Display function
BVM-E171 incorporates a Gamut Error Display function that detects irregular signal input.

S-Log3 (SDR) and S-Log2 (SDR) EOTF
BVM-E251 incorporates EOTF tables to reproduce images

captured using S-Log3(SDR) and S-Log2(SDR). These are techniques used in Sony's digital cinematography cameras that allows the full latitude of the camera sensor to be maintained throughout the production chain.

2K picture resolution
The 2048 Image Slide function of the BVM-E251 allows 2K resolution (2048 x 1080 pixels) images to be mapped, pixel-to-pixel, on the Full HD (1920 x 1080 pixels) panel without picture degradation. The monitor is equipped with a slide function that allows the display of missing pixels in native mode from the left and right part of the picture.

Scan Switch function
The Scan Switch function allows switching between under scan (-3%), normal scan (0%), and over scan (5%).

Native Scan (pixel-to-pixel display)
The Native Scan function is a unique display mode that reproduces images without changing the input signal's pixel count.

HD Frame Capture function
The HD Frame Capture function of the BVM Series allows a picture frame from the 3G-SDI and HD-SDI input to be captured and saved as a picture file on a USB memory media (via the BKM-17R). This picture file can be used as a reference for various purposes, for example, for picture-tone adjustments between past images and for camera-framing adjustments.

Separate control unit with USB memory slot
A separate BKM-17R monitor control unit is available for the BVM-E251. It is equipped with a USB Memory slot enables users to download and save all monitor set-ups

such as input channel configuration, control preset adjustments, white balance settings and maintenance parameters. This is useful for multiple monitor systems, allowing the transfer of one monitor's setup and adjustment data to another. This data can also be transferred via the BVM's Ethernet connection.

Centralised monitor-wall control
The BVM Series monitors and the BKM-17R are equipped with an Ethernet port, allowing remote control of display parameters across a standard Ethernet connection. One BKM-17R Monitor Control Unit can control up to 32 BVM monitors.

DC operation with DC low power indicator*
The BVM-E251 can be DC operated and features a DC low power indicator. This feature gives more flexibility and mobility to users who want the larger size screen for the on-set application.
* Requires v1.1 update.

Character Off button
To facilitate parameter adjustments, the On-Screen Menu indication can be taken off the screen, while in Menu mode. The On-Screen Menu indication can be toggled on or off with a simple press of a button on the BKM-17R's front panel.

+12dB Chroma UP function
A Chroma UP button located on the front panel of the BKM-17R allows the chroma level to be boosted by +12dB. This is a convenient feature for adjusting camera white balance with a higher degree of accuracy.

Marker settings
BVM Series monitors can display various markers, including an aspect marker, safe area marker and centre

marker. In addition to this flexible selection of marker types, detailed display settings of each marker are offered. For example, the colour, brightness, horizontal/vertical position and width of aspect markers can all be controlled, while the height and width of safe area markers can be adjusted.

Aspect switch
The aspect ratio can be switched between 4:3, 16:9, 2.39: 1 and 1.896:1 depending on the input signal.

Wide variety of functions
The user has a wide variety of over 40 functions to choose from. Each of these can be assigned to any of the 16 function buttons (F1 to F16) on the BKM-17R. Press ENTER to display the F1 to F8 (or F9 to F16) button assignment on screen.

Status display
Simply assign STATUS to one of the function buttons (F1 to F16) on the BKM-17R. The user can instantly grasp the whole monitor status and configurations without having to search through menus.

Copy function for monitor setup and adjustment data
The optional BKM-17R Monitor Control Unit includes a USB Memory slot to save and load monitor configuration and adjustment settings. This is useful for multiple monitor systems, allowing the transfer of one monitor's setup and adjustment data to another. This data can also be transferred via the BVM's Ethernet connection.

Specifications	Picture Performance	
	Panel	OLED panel

Picture size (diagonal)	623.4 mm (24 5/8 inches)
Effective picture size (H x V)	543.4 x 305.6 mm (21 1/2 x 12 1/8 inches)
Resolution (H x V)	1920 x 1080 pixels (Full HD)
Aspect	16:9
Pixel efficiency	99.99%
Panel drive	RGB 10-bit
Panel frame rate	48 Hz / 50 Hz / 60 Hz (48 Hz and 60 Hz are also compatible with 1/1.001 frame rates)
Viewing angle (panel specification)	89°/89°/89°/89° (typical) (up/down/left/right contrast >10:1)
Standard luminance	100 cd/m2 (preset1 to preset5 at EOTF 2.4) 48 cd/m2 (preset (DCI)) (1.0 Vp-p reference signal, 100% white signal input)
Colour temperature	D55, D61, D65, D93, DCI*1, DCI XYZ and user 1-5 (5,000 k to 10,000 k adjustable)
Colour space (colour gamut)	ITU-R BT.2020*2, ITU-R BT.709, EBU, SMPTE-C, DCI-P3*2, BVM-E251 Native*3, S-Gamut/S-Gamut3*2, S-Gamut3.cine*2

Transmission Matrix	ITU-R BT.2020 (Non-constant luminance is supported), ITU-R BT.709, ITU-R BT.601, SMPTE 240M
EOTF	2.2, 2.4, 2.6, CRT, S-Log3(SDR), S-Log2(SDR)

Input

SDI	BNC (x2)
HDMI	HDMI (x1) (HDCP correspondence, deep colour correspondence)
Composite Video	BNC (x1)
Parallel remote	RJ-45 modular connector 8-pin (x1) (Pin-assignable)
Serial remote (LAN)	Ethernet (10BASE-T/100BASE-TX), RJ-45 (x1
DC Input	XLR (x1)

Output

SDI	BNC (x2)
Composite Video	BNC (x1)
DC 12V out	Circle 4-pin (female) (x1)

General

	AC 100 V to 240 V, 1.2 A to

Power requirement	0.6 A, 50/60 Hz, DC 24 V to 28 V, 4.5 A to 3.9 A
Power consumption	Approx. 117 W (AC power supply) (max.) Approx. 55 W (AC power supply) (average power consumption in the default status)
Dimensions (W x H x D)	(W x H x D) 576.0 x 424.0(408.0)* x 148.0 mm (22 3/4 x 16 3/4(16 1/16)* x 5 7/8 inches) * Height without legs
Mass	Approx. 10.3 kg (22 lb11 oz)
Supplied accessories	AC power cord (1), AC plug holder (1), Before Using This Unit (Japanese, English 1), HDMI cable holder(1)

Notes

*1	DCI: x=0.314 y=0.351
*2	The BVM-E251 does not support the ITU-R BT.2020, DCI-P3, S-Gamut/S-Gamut3 and S-Gamut3.cine colour space in full.
*3	The BVM-E251 individual chromaticity points. The widest colour space setting of the signal is reproduced by

Related products

PVM-X550

55-inch 4K TRIMASTER EL™ OLED high grade picture monitor

BVM-E171

16.5-inch TRIMASTER EL™ OLED critical reference monitor with wide viewing angle supports 4K production

BVM-X300 V2

30-inch 4K TRIMASTER EL™ OLED critical reference monitor

PVM-A250 v2.0

25-inch TRIMASTER EL™ OLED high grade picture monitor

PVM-A170 v2.0

17-inch TRIMASTER EL™ OLED high grade picture monitor

BVM-E251

24.5-inch TRIMASTER EL™ OLED critical reference monitor with wide viewing angle supports 4K production

Gallery