BVM-F170

16.5-inch Full-HD Reference OLED Monitor

Overview

Broadcast reference monitor

For reference monitoring applications in the Broadcast industry, Sony's leading edge Organic Light-Emitting Diode (OLED) technology and signals processing technology ensures absolutely outstanding performance with the BVM-F170.

Affordable price
Super Top Emission technology enhances OLED's intrinsic benefits to deliver outstanding black performance, a quick response with virtually no motion blur, and a wide colour gamut. An all-new 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.

Accepts computer signals via HDMI
The BVM-F170 accepts various computer signals input up to 1920 x 1080 through its HDMI connector

Features

Superb Picture Performance

Sony TRIMASTER EL technology combines the ultimate performance of Sony OLED display with the highly sophisticated

TRIMASTER technology to provide the highest level of picture performance:

- Accurate Black Reproduction
- High purity and accurate colour reproduction
- Quick response with virtually no motion blur
- High Contrast Performance

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 Display Engine

High-precision signal processing engine has been developed to fulfil the reference monitor criteria and is optimized to maximize 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-E170 monitor can accept almost any SD or HD video format, both analogue and digital, and variable computer signals up to 1920 × 1080. In addition to the standard inputs, four option board slots are offered to configure this monitor according to different user needs.

Versatile video inputs

This monitor is equipped as standard with two 3G/HD/SD-SDI inputs, an HDMI (with HDCP) input and a Displayport* for future expansion. In addition, four option ports are available.
* DisplayPort input will be supported from monitor software

version 1.1 or later.

Four Slots for Optional Video Input Decoders

The monitor can accept up to four optional video input boards simultaneously. Available formats include analogue, composite, Y/C, components, RGB and digital 3G/HD/SD SDI.

3D signal analyzing functions (3D signal input, 2D display)

By installing the optional BKM-250TG 3G/HD-SDI input adaptor*, the BVM-E170 can support a variety of 3D signal analyzes. The 3D signals* are displayed in 2D mode.

- Difference display
- Checkerboard display
- L/R switch display
- Horopter check display
- Flip H display

* Requires the BKM-250TG 3G-SDI input adaptor (serial number 7200001 or later). 3D signals are not displayed in stereoscopic view.

Auto White Balance

The colour temperature and white balance of BVM-E and F Series monitors can be automatically adjusted by the Auto White Balance function using specified colour temperature probes, such as the Konica Minolta CA-210, CS-200, DK-Technologies PM5639/06, and X-Rite i1 (Eye-One) Pro.

High Quality I/P Conversion Technology

The BVM-E170 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-F170 display engine ensures a picture delay that is less than one field.

Panel Calibration
Every BVM-F170 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.

Colour Feedback System
Using a colour feedback system, the BVM-F170 monitor achieves the stability required for Broadcast critical monitoring applications.

Interlaced Display Mode
Faithfully reproduces interlaced signals, emulating CRT monitors.

Picture
Two images can be displayed Side by Side to provide users with enhanced operational flexibility.

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.

HD Frame Capture Mode
The HD Frame Capture function of the BVM-F Series allows a picture frame from the 3G-SDI and HD-SDI input to be captured and saved as a picture file on a Memory Stick™ media.

Separate Control unit with memory stick slot
A separate control unit BKM-16R is available for the BVM-F170. It is equipped with a Memory Stick socket enables users to download and save all monitor set-ups such as input channel configuration, control preset adjustments, white balance settings and maintenance parameters.

Centralised Monitor-Wall Control
Multiple monitors can be easily managed by a single control unit BKM-16R via an Ethernet connection.

Specifications

Picture Performance	
Panel	OLED panel
Picture Size (Diagonal)	419.7 mm 16 1/2 inches
Effective Picture Size (H x V)	365.8 x 205.7 mm 14 1/2 x 8 1/8 inches
Resolution (H x V)	1920 x 1080 pixels (Full HD)
Aspect	16:09
Pixel Efficiency	0.9999
Panel Drive	RGB 10-bit
Panel Frame Rate	48 Hz, 50 Hz, 60 Hz, 72 Hz, 75 Hz *1
Viewing Angle (Panel Specification)	89°/89°/89°/89° (typical) (up/down/left/right contrast > 10:1)
Normal Scan	0% scan
	Mapping the pixels of the signal to the panel to one-to-one mode, or

Native Scan	displaying an SD signal of nonsquare pixels (the number of H pixels of the signal system is 720 or 1440) or a 640 × 480 SD signal of HDMI video by scaling processing of doubling for the V direction and correct aspect ratiofor the H direction and also optimizing and sidplaying a picture by modifying the aperture coefficient value, filter coefficient value, etc.
Under Scan	3% under scan
Over Scan	Mask of 5% over scan portion in the normal scan
Color Temperature	D65, D93, User
Standard Luminance	100 cd/m2 (Preset1 to Preset5) 48 cd/m2 (Preset (D-Cine)) (100% white signal input)
Color Space (Color Gamut)	ITU-R BT.709, EBU, SMPTE-C, F170 Native *2
Warm-up Time	Approx. 30 minutes

Input

	BNC (x2) Input impedance: 75 Ω

SDI Input	unbalanced Sampling frequency 3G-SDI: - Y/Cb/Cr (4:2:2): 148.5 MHz/74.25 MHz/74.25 MHz - Y/Cb/Cr (4:4:4): 148.5 MHz/148.5 MHz/148.5 MHz - G/B/R (4:4:4): 148.5 MHz/148.5 MHz/148.5 MHz HD-SDI: - Y/Cb/Cr (4:2:2): 74.25 MHz/37.125 MHz/37.125 MHz SD-SDI: - Y/Cb/Cr (4:2:2): 13.5 MHz/6.75 MHz/6.75 MHz Quantization 3G-SDI: 10bit/sample, 12 bit/sample HD-SDI: 10bit/sample SD-SDI: 10bit/sample
HDMI Input	HDMI (x1) (HDCP correspondence, Deep Color correspondence)
DisplayPort	DisplayPort connector (x1) *3
Option Port	Four (4) ports
Parallel Remote	D-sub 9-pin (female) (x1)
	RJ-45 (x1) (Ethernet, 10BASE-

Serial Remote (LAN)	T/100BASE-TX)
DC Input	XLR-type 3-pin (male) (x1), 24V DC (output impedance 0.05 Ω or less)

Output

SDI Output	BNC (x1) (monitor output) *4 Output signal amplitude: 800 mVp-p±10% Output impedance: 75 Ω unbalanced Transmission distance 3G-SDI: 70 m max. *5 HD-SDI: 100 m max. *5 SD-SDI: 200 m max. *6
DC 5 V Output	Circle 4-pin (female) (x1)

General

Power Requirements	100 V to 240 V AC, 1.2 A to 0.7 A, 50/60 Hz 24V to 28V DC, 4.5A to 3.9 A
	Approx. 110 W (AC power supply), 100 W (DC power supply) (max.) Approx. 60 W (AC power

Power Consumption	supply), 60 W (DC power supply) (average power consumption in the default status)
Inrush Current	(1) Maximum possible inrush current at initial switch-on (Voltage changes caused by manual switching): 55 A peak, 15 A r.m.s. (240V AC) (2) Inrush current after a mains interruption of five seconds (Voltage changes caused at zero-crossing): 36 A peak, 7 A r.m.s. (240V AC)
Operating Temperature	0°C to 35°C (Recommended: 20°C to 30°C) 32°F to 95°F (Recommended: 68°F to 86°F)
Operating Humidity	0% to 90% (no condensation)
Storage/Transport Temperature	-20°C to +60°C -4°F to +140°F

Storage/Transport Humidity	0% to 90%
Operating/Storage/Transport Pressure	700 hPa to 1060 hPa
Dimensions (W x H x D) *7	436.0 x 282.4 (266.4)*5 x 214.7 mm 17 1/4 x 11 1/4 (10 1/2)*5 x 8 1/2 inches
Mass	Approx. 8.6 kg Approx. 18 lb 15 oz
Supplied Accessories	AC power cord (1) AC plug holder (1) Rack mount bracket (Left, right, each 1) Rack mount attachement screws (4) Operation Manual (Japanese, English, each 1) CD-ROM (1) Using the CD-ROM Manual (1)
	BKM-16R Monitor Control Unit BKM-39H Controller Attachment Stand BKM-37H Controller Attachment Stand

Optional Accessories	SMF-700 Monitor Interface Cable BKM-220D SDI 4:2:2 Input Adaptor (with serial number 2100001 or higher) BKM-227W NTSC/PAL Input Adaptor BKM-229X Analog Component Input Adaptor (with serial number 2200001or higher) BKM-243HS HD/D1-SDI Input Adaptor (with serial number 2108355 or higher) BKM-244CC HD/SD-SDI Closed Caption Adaptor BKM-250TG 3G/HD/SD-SDI Input Adaptor (with serial number 7300001or higher)

Notes

[*1] 48 Hz, 60 Hz and 72 Hz are also compatible with a frame rate of 1/1.001.

[*2] The BVM-F170 individual chromacity points. The widest color space setting of the signal is

Note	reproduced by the BVM-F170. R (x=0.681, y=0.319)/G (x=0.189, y=0.724)/B (x= 0.141, y= 0.051) (typical) [*3] The DisplayPort input is available from V1.1. [*4] The signal from the monitor output connector does not satisfy the online signal specifications. [*5] When using 5C-FB coaxial cables (Fujikura or equivalent). [*6] When using 5C-2V coaxial cables (Fujikura or equivalent). [*7] The values for dimensions are approximate.

Gallery