

# BVM-E170

16.5-inch Full-HD Reference OLED Monitor



## Overview

### Professional applications

For professional applications such as camera control, on-set shooting, high-end editing, broadcasting and scientific research, Sony's leading edge Organic Light Emitting Diode (OLED) technology and signals processing expertise ensures absolutely outstanding performance with the BVM-E170.

State-of-the-art product

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-E170 accepts various computer signals input up to 1920 x 1080 through its HDMI connector. It is also equipped with Digital Cinema features.

## 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.

## Specifications

| Picture Performance                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Panel                               | OLED panel                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Picture Size (Diagonal)             | 419.7 mm<br>16 1/2 inches                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Effective Picture Size (H x V)      | 365.8 x 205.7 mm<br>14 1/2 x 8 1/8 inches                                                                                                                                                                                                                                                                                                                                                                                                        |
| Resolution (H x V)                  | 1920 x 1080 pixels (Full HD)                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Aspect                              | 16:9                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Native Scan                         | Mapping the pixels of the signal to the panel to one-to-one mode, or 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 ratio for the H direction and also optimizing and displaying 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                   | D55, D61, D65, D93, D-Cine *2 , User                                                                                                                                                                                                                                                                                                                                                                                                             |

## Picture Performance

|                           |                                                                                                                   |
|---------------------------|-------------------------------------------------------------------------------------------------------------------|
| Standard Luminance        | 100 cd/m <sup>2</sup> (Preset1 to Preset5)<br>48 cd/m <sup>2</sup> (Preset (D-Cine))<br>(100% white signal input) |
| Color Space (Color Gamut) | ITU-R BT.709, EBU, SMPTE-C, D-Cine *3 , E170 Native *4 , S-GAMUT *5                                               |
| Warm-up Time              | Approx. 30 minutes                                                                                                |

## Input

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SDI Input           | BNC (x2) Input impedance: 75 $\Omega$ unbalanced<br>Sampling frequency<br>3G-SDI:<br>- Y/Cb/Cr (4:2:2): 148.5 MHz/74.25 MHz/74.25 MHz<br>- Y/Cb/Cr (4:4:4): 148.5 MHz/148.5 MHz/148.5 MHz<br>- G/B/R (4:4:4): 148.5 MHz/148.5 MHz/148.5 MHz<br>HD-SDI:<br>- Y/Cb/Cr (4:2:2): 74.25 MHz/37.125 MHz/37.125 MHz<br>SD-SDI:<br>- Y/Cb/Cr (4:2:2): 13.5 MHz/6.75 MHz/6.75 MHz<br>Quantization<br>3G-SDI: 10bit/sample, 12 bit/sample<br>HD-SDI: 10bit/sample<br>SD-SDI: 10bit/sample |
| HDMI Input          | HDMI (x1) (HDCP correspondence, Deep Color correspondence)                                                                                                                                                                                                                                                                                                                                                                                                                      |
| DisplayPort         | DisplayPort connector (x1) *6                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Option Port         | Four (4) ports                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Parallel Remote     | D-sub 9-pin (female) (x1)                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Serial Remote (LAN) | RJ-45 (x1) (Ethernet, 10BASE-T/100BASE-TX)                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| DC Input            | XLR-type 3-pin (male) (x1), 24V DC (output impedance 0.05 $\Omega$ or less)                                                                                                                                                                                                                                                                                                                                                                                                     |

## Output

|               |                                                                                                                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SDI Output    | BNC (x1) (monitor output) *7<br>Output signal amplitude: 800 mVp-p $\pm$ 10%<br>Output impedance: 75 $\Omega$ unbalanced<br>Transmission distance<br>3G-SDI: 70 m max. *8<br>HD-SDI: 100 m max. *8<br>SD-SDI: 200 m max. *9 |
| DC 5 V Output | Circle 4-pin (female) (x1)                                                                                                                                                                                                  |

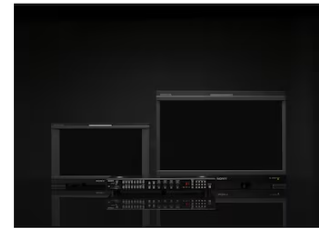
## General

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Requirements                   | 100 V to 240 V AC, 1.2 A to 0.7 A, 50/60 Hz<br>24V to 28V DC, 4.5A to 3.9 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Power Consumption                    | Approx. 110 W (AC power supply), 100 W (DC power supply) (max.)<br>Approx. 60 W (AC power 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)<br>(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)<br>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<br>-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) *10           | 436.0 x 282.4 (266.4)*5 x 214.7 mm<br>17 1/4 x 11 1/4 (10 1/2)*5 x 8 1/2 inches                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Mass                                 | Approx. 8.6 kg<br>Approx. 18 lb 15 oz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Supplied Accessories                 | AC power cord (1)<br>AC plug holder (1)<br>Rack mount bracket (Left, right, each 1)<br>Rack mount attachment screws (4)<br>Operation Manual (Japanese, English, each 1)<br>CD-ROM (1)<br>Using the CD-ROM Manual (1)                                                                                                                                                                                                                                                                                                                                   |
| Optional Accessories                 | BKM-16R Monitor Control Unit<br>BKM-39H Controller Attachment Stand<br>BKM-37H Controller Attachment Stand<br>SMF-700 Monitor Interface Cable<br>BKM-220D SDI 4:2:2 Input Adaptor (with serial number 2100001 or higher)<br>BKM-227W NTSC/PAL Input Adaptor<br>BKM-229X Analog Component Input Adaptor (with serial number 2200001 or higher)<br>BKM-243HS HD/D1-SDI Input Adaptor (with serial number 2108355 or higher)<br>BKM-244CC HD/SD-SDI Closed Caption Adaptor<br>BKM-250TG 3G/HD/SD-SDI Input Adaptor (with serial number 7300001 or higher) |

## Notes

|      |                                                                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note | *[1] 48 Hz, 60 Hz and 72 Hz are also compatible with a frame rate of 1/1.001.                                                                                                                                      |
| Note | *[2] D-Cine: x = 0.314, y = 0.351                                                                                                                                                                                  |
| Note | *[3] Chromaticity point of SMPTE RP 431-2 is not covered in full.                                                                                                                                                  |
| Note | *[4] The BVM-E170 individual chromaticity points. The widest color space setting of the signal is reproduced by the BVM-E170. R (x = 0.681, y = 0.319)/G (x = 0.189, y = 0.724)/B (x = 0.141, y = 0.051) (typical) |
| Note | *[5] For displaying the color gamut of the wide color space mode S-GAMUT, which is available for the F23 or F35 Digital Cinematography Camera.                                                                     |
| Note | *[6] The DisplayPort input is available from V1.1.                                                                                                                                                                 |
| Note | *[7] The signal from the monitor output connector does not satisfy the online signal specifications.                                                                                                               |
| Note | *[8] When using 5C-FB coaxial cables (Fujikura or equivalent).                                                                                                                                                     |
| Note | *[9] When using 5C-2V coaxial cables (Fujikura or equivalent).                                                                                                                                                     |
| Note | *[10] The values for dimensions are approximate.                                                                                                                                                                   |

# Gallery





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