

SONY®

PAL/NTSC/SECAM/NTSC_{4.43}

Colour Video Monitor

PVM-20M4E/20M2E
PVM-14M4E/14M2E



PVM-M Series

The Best Choice for High Performance Evaluation Monitors

Featuring one of the latest developments in Sony display technology, the HR Trinitron, the new PVM-M Series of monitors includes models with a resolution of 800TV lines.

With stunning picture performance, flexibility of signal connections, a full range of optional functions and ease of operation, these new Sony monitors are designed to meet the demands of a wide range of picture monitoring and evaluation applications.

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Superior Picture Performance

◆ High resolution

The newly developed HR Trinitron CRT enables the PVM-20M4E/14M4E 20/14-inch models to achieve the high resolution of 800TV lines. The PVM-20M2E/14M2E 20/14-inch models provide a 600TV line resolution, with a dark panel CRT for high contrast images.

Horizontal Resolution
800/600
L I N E S

◆ Accurate colour matching

EBU standard phosphor CRTs are incorporated in the PVM-20M4E/14M4E. The accuracy of colour reproduction achieved by these monitors makes them ideal for applications which require precise colour reproduction.

◆ Beam Current Feedback circuit

Because monitor white balance is prone to drift during continuous operation over a long period of time, PVM-M Series monitors are equipped with a beam current feedback circuit. This eliminates white balance drift and result in long-term stability of colour reproduction.

Input flexibility

◆ Versatile analogue signal inputs

PVM-M Series models are equipped with input connectors for component (Y/R-Y/B-Y), RGB, Y/C and composite signals for system flexibility. Furthermore, for accurate reproduction, the component level can be adjusted according to the input system.

◆ Worldwide TV standards

The PVM-M Series accepts PAL, SECAM and NTSC signals. NTSC^{4.43} can also be reproduced.

◆ Component serial digital interface option

Inserting the optional serial digital interface kits BKM-101C (video) and BKM-102 (audio) into a monitor allows the PVM-M Series to accept ITU-R BT.656/SMPTE 259M component serial digital signals.

SDI

◆ External sync

The monitor can accept external sync signal for synchronization with other equipment. The external sync can be set so that it will automatically switch according to the input selected.

Specification



PVM-20M4E



PVM-14M4E



PVM-20M2E



PVM-14M2E

PVM-14M4E		
CRT	AG pitch	0.25mm
	phosphor	EBU
	CRT size	37.1cm (14-inch) diagonally
	Visible picture size	33.2cm (13-inch) diagonally
Resolution	800TV lines	
Colour system	PAL, NTSC, SECAM, NTSC _{4.43}	
Aperture correction	0 to +6dB	
Frequency response	LINE: 10.0 MHz (± 3 dB) *Y signal only	
Synchronization	AFC time constant 1.0mS	
Normal scan	7% over scan	
Under scan	5% under scan	
Linearity	H:	less than 4%
	V:	less than 4%
Convergence	centre:	0.4mm (typical)
	peripheral:	0.5mm (typical)
Raster size stability	H:	1.0%
	V:	1.5%
HV regulation	3.5%	
Colour temperature	D65, D93, USER (3200K to 10000K)	
Audio out	0.8W (distortion: less than 5%)	
Power consumption	90W (with SDI: 99W)	
AC input range	AC100 to 240V (50/60Hz)	
Operation temperature	0° to 35°C	
Storage temperature	-10° to 40°C	
Operating humidity	35 to 85% (no condensation)	
Storage humidity	0 to 90%	
Pressure	880 to 1060hPa	
Dimensions	346 x 340 x 431mm (w x h x d)	
	13 5/8 x 13 1/2 x 17 inches	
Mass	16.7kg (including SDI: 17.7kg)	
	36lb 13oz (38lb 16oz)	

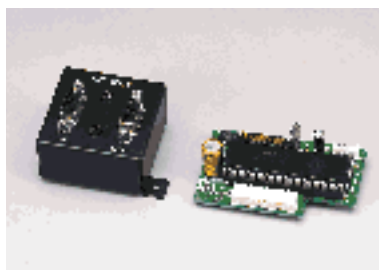
PVM-14M4E / PVM-14M2E / PVM-20M4E / PVM-20M2E	
Inputs / Outputs	LINE A/B
	1.0Vp-p ± 6 dB Loop-through BNC automatic 75 Ω termination
LINE C	Y: 1.0Vp-p ± 6 dB
	C: 0.3Vp-p ± 6 dB
	Loop-through Mini DIN 4-pin automatic 75 Ω termination
	75 Ω termination
RGB / Component (selectable)	R/R-Y: 0.7Vp-p ± 6 dB
	G: 0.7Vp-p ± 6 dB
	Sync on G: 0.3Vp-p ± 6 dB
	Y: 0.7Vp-p ± 6 dB
	B/B-Y: 0.7Vp-p ± 6 dB Loop-through BNC automatic 75 Ω termination
Ext. Sync	4Vp-p ± 6 dB, negative Loop-through BNC automatic 75 Ω termination
Safety Standards	TÜV IEC-950, CE (EMC, LVD)

PVM-14M2E	PVM-20M4E	PVM-20M2E
0.25mm	0.31mm	0.4mm
P-22	EBU	P-22
37.1cm (14-inch) diagonally	53.3cm (20-inch) diagonally	53.3cm (20-inch) diagonally
33.2cm (13-inch) diagonally	48.3cm (19-inch) diagonally	48.0cm (19-inch) diagonally
600TV lines	800TV lines	600TV lines
PAL, NTSC, SECAM, NTSC ^{4.43}	PAL, NTSC, SECAM, NTSC ^{4.43}	PAL, NTSC, SECAM, NTSC ^{4.43}
0 to +6dB	0 to +6dB	0 to +6dB
LINE: 10.0 MHz (±3dB) *Y signal only	LINE: 10.0 MHz (±3dB) *Y signal only	LINE: 10.0 MHz (±3dB) *Y signal only
RGB: 10.0 MHz (±3dB)	RGB: 10.0 MHz (±3dB)	RGB: 10.0 MHz (±3dB)
AFC time constant 1.0mS	AFC time constant 1.0mS	AFC time constant 1.0mS
7% over scan	7% over scan	7% over scan
5% under scan	5% under scan	5% under scan
H: less than 4%	H: less than 5%	H: less than 5%
V: less than 4%	V: less than 5%	V: less than 5%
centre: 0.4mm (typical)	centre: 0.5mm (typical)	centre: 0.6mm (typical)
peripheral: 0.5mm (typical)	peripheral: 0.7mm (typical)	peripheral: 1.0mm (typical)
H: 1.0%	H: 1.0%	H: 1.0%
V: 1.5%	V: 1.5%	V: 1.5%
3.5%	4.0%	4.0%
D65, D93, USER (3200K to 10000K)	D65, D93, USER (3200K to 10000K)	D65, D93, USER (3200K to 10000K)
0.8W (distortion: less than 5%)	0.8W (distortion: less than 5%)	0.8W (distortion: less than 5%)
90W (with SDI: 99W)	130W (with SDI: 140W)	120W (with SDI: 130W)
AC100 to 240V (50/60Hz)	AC100 to 240V (50/60Hz)	AC100 to 240V (50/60Hz)
0° to 35°C	0° to 35°C	0° to 35°C
-10° to 40°C	-10° to 40°C	-10° to 40°C
35 to 85% (no condensation)	35 to 85% (no condensation)	35 to 85% (no condensation)
0 to 90%	0 to 90%	0 to 90%
880 to 1060hPa	880 to 1060hPa	880 to 1060hPa
346 x 340 x 431mm (w x h x d)	450 x 458 x 503mm (w x h x d)	450 x 458 x 503mm (w x h x d)
13 5/8 x 13 1/2 x 17 inches	17 3/4 x 18 1/8 x 19 7/8 inches	17 3/4 x 18 1/8 x 19 7/8 inches
16.7kg (including SDI: 17.7kg)	30.0kg (including SDI: 31.0kg)	30.0kg (including SDI: 31.0kg)
35lb 4oz (39lb 10oz)	66lb 2oz (68lb 5oz)	66lb 2oz (68lb 5oz)

	PVM-14M4E	PVM-14M2E	PVM-20M4E	PVM-20M2E
Supplied accessories	20-pin remote cable / Tally label / AC cord / AC plug holder / Operation manual			
Optional accessories	BKM-101C (Component serial digital interface kit (video)) BKM-102 (Component serial digital interface kit (audio)) BKM-103 (Serial remote control kit for RS422) MB-502B (Rack mounting bracket) SLR-102 (Slide rail) TU-1040E (Tuner unit)		BKM-101C (Component serial digital interface kit (video)) BKM-102 (Component serial digital interface kit (audio)) BKM-103 (Serial remote control kit for RS422) SLR-103A (Slide rail) TU-1040E (Tuner unit)	



BKM-101C/102
Component serial digital interface kit
101C (video) / 102 (audio)



BKM-103
Serial remote control kit for RS422



TU-1040E Tuner unit

Effective Operational Functions

◆ 4:3/16:9 capability

By pressing a front panel button, the aspect ratio can be switched between 4:3 and 16:9.

◆ Switchable colour temperature

Colour temperature can be changed to D65, D93 or user preset (3200K to 10000K).

◆ Blue Only mode

Noise on signals can be precisely evaluated. Chroma/(Phase) adjustments can be easily made with the monochrome display in the Blue only mode.

◆ Underscan, H/V delay capability

When the Underscan mode is selected, the entire active picture area is displayed. This makes it possible to view the entire image to check picture edges. The H/V delay function allows viewing of the blanking area and sync/burst signal by displaying the horizontal and vertical intervals in the centre of the screen.

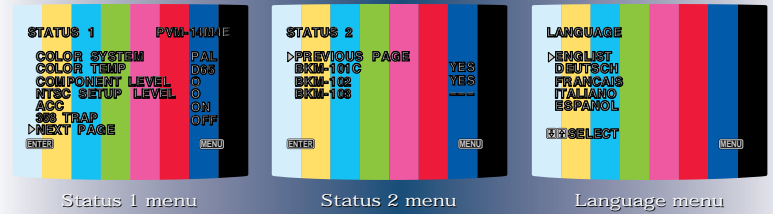
◆ Automatic Colour Control (ACC) OFF mode

The Automatic Colour Control function can be turned off for accurate colour signal evaluation.

◆ Auto/Manual Degaussing

When the power is turned on, the CRT is automatically degaussed. Degaussing can also be initiated by pressing the Manual Degauss button.

temperature, etc. and whether any optional board is installed or not can be checked. The on-screen menu display can be selected to English, French, German, Spanish or Italian.



Ease of Operation

◆ Auto Chroma/(Phase) Setup

An Auto Chroma/(Phase) Setup mode facilitates the complex, delicate procedure of monitor adjustment. Using broadcast standard colour bars as a reference, this function automatically calibrates chroma and phase. This is very convenient with computer-based editing systems to align the colour reproduction of the video output signals.

◆ On-screen menu

The PVM-M Series provide a variety of on-screen menus for monitor adjustment/operation. One example of these is the STATUS menu, where parameters such as colour system, colour

◆ Remote/Tally

Parallel remote control and Tally can be operated via a 20-pin connector.

◆ Serial Remote Control option

The monitor can be serially remote controlled by installing the optional BKM-103 RS-422 serial remote control kit.

◆ Sub-control mode

In this mode, the adjustment range of the Contrast, Brightness, Chroma and Phase controls can be shifted. A particular level can be set for the centre click position of each control so that multiple monitors to all be set to the same reference level.

◆ User preset memory

As well as controls on the front panel, a user memory is available for Brightness, Chroma, Phase, Contrast, Aperture and Volume control settings in the menu mode.

Others

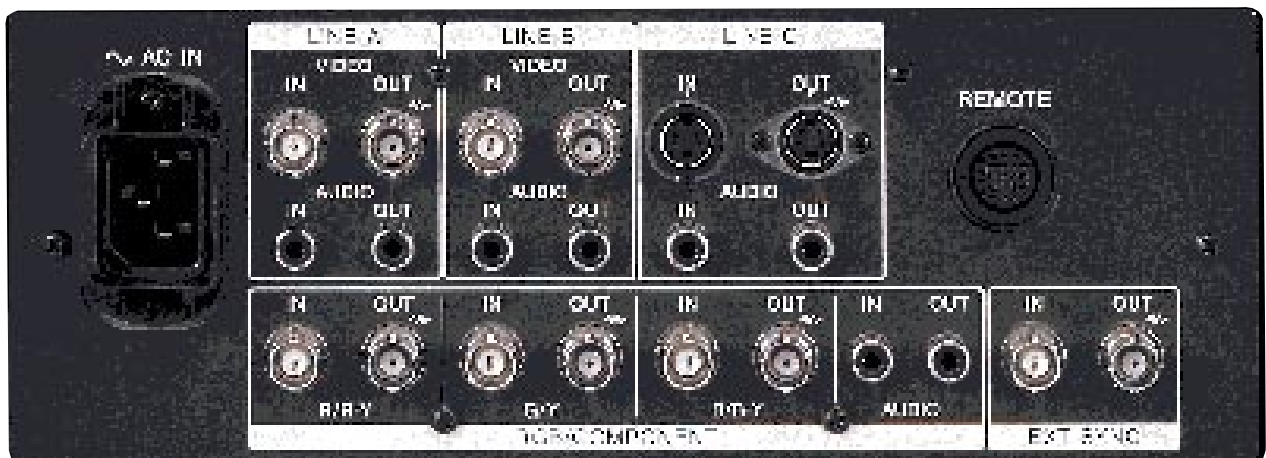
◆ VLF (Very Low Frequency)

PVM-20M4E/14M4E minimizes magnetic field emission.

◆ Mountable in a 19-inch EIA standard rack

PVM-20M4E/20M2E can be mounted in a 19-inch EIA standard rack with the optional slide rail kit SLR-103A.

PVM-14M4E/14M2E can be mounted in a 19-inch EIA standard rack with the optional rack mounting bracket MB-502B and slide rail kit SLR-102.



Rear Panel Connector Section

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