SONY®

Multiformat Color Video Monitor

PVM-20L5*
PVM-14L5*

*19-inch/13-inch viewable area, measured diagonally

PVM-L Series

Professional broadcasting and production is increasingly a multi-format world — and Sony's new PVM-L5 Series Color Video Monitors allow you to handle multiple signal formats with uncompromising picture quality, input flexibility and cost-efficient operation.

The new 20-inch (19" viewable area, measured diagonally) and 14-inch (13" viewable area, measured diagonally) PVM-L5 Series Monitors feature a compact chassis design, enabling easy installation where rack space is limited. For versatility in digital video production, they also support a wide variety of signal formats: 480/60I, 575/50I, 480/60P, 575/50P, 1035/60I, 1080/60I, and 720/60P.

With high-performance HR Trinitron® picture tubes for resolution up to 800 TV lines and offering SMPTE-C phosphors, Sony's PVM-L5 Series monitors provide an ideal solution for your current and future needs. In a wide range of applications, including non-linear editing, production, post production and broadcasting, these compact monitors give you picture quality and operating convenience you can always count on.

PVM-14L5

PVM-20L5

Effective operational functions

◗ Selectable aspect ratio

By pressing a front panel button, the aspect ratio can be switched between 4:3 and 16:9 with 480/60I, 575/50I, 480/60P and 575/50P signals. Signals including 1035/60I, 1080/60I, and 720/60P are displayed in 16:9 aspect ratio.

◗ Switchable color temperature

Color temperature can be changed to D65, D93 or user preset (5000 K to 10000 K).

◗ Blue only mode

Noise on signal can be precisely evaluated. Chroma and phase adjustments can be easily made with the monochrome display in the Blue only.

◗ 4:3 Area marker

By displaying the 4:3 Area marker, operators can check the 4:3 aspect area of a 16:9 picture.

◗ Underscan function

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.

◗ H/V delay function

The H/V delay function allows viewing of the blanking area and sync/burst signal by displaying the horizontal and vertical intervals in the center of the screen.

◗ Auto/Manual degaussing

When the power is turned on, the CRT is automatically degaussed. This function can be delayed to prevent large power surges when turning on large groups of monitors. Degaussing can also be initiated by pressing the Manual Degauss button.

◗ Three-color tally

Three colors such as red, green and amber (red + green) can be selected for tally lamps.

Ease of operation

◗ Auto Chroma/Phase Setup

An Auto Chroma/Phase Setup mode facilitates the complex, delicate procedure of monitor adjustment. Using broadcast standard color bars as a reference, this function automatically calibrates chroma and phase. In computer-based editing systems, this feature is very convenient for aligning the color reproduction of video output signals.

◗ Parallel and RS-485 serial remote control

The PVM-L5 Series can be controlled via the 8-pin modular RJ45 connector (parallel remote), and also by BVM Series monitors that are capable of one integrated, multi-monitor control system via the D-sub 9-pin connector (RS-485 serial remote)*.
A BVM monitor is required to utilize this control.
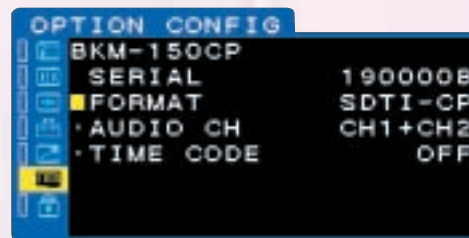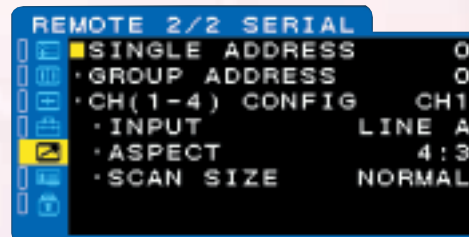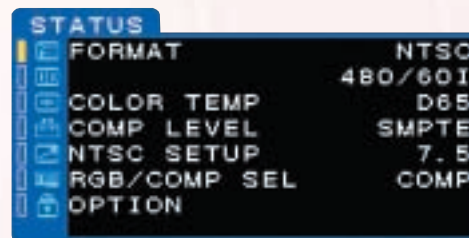
◗ Sub-control mode

In this mode, the adjustment range of the Contrast, Brightness, Aperture, Chroma and Phase controls can be shifted.

◗ User preset memory

In addition to controls on the front panel, two user memories are available for menu control of two settings such as Brightness, Chroma, Phase, Contrast and Volume.

◗ On-screen menu

PVM-L5 Series monitors provide a variety of window-type on-screen menus for monitor adjustment/operation. The on-screen menu display can be selected in English, French, German, Spanish, Italian or Japanese.

```
STATUS
  FORMAT              NTSC
                   480/60I
  COLOR TEMP          D65
  COMP LEVEL        SMPTE
  NTSC SETUP          7.5
  RGB/COMP SEL       COMP
  OPTION
```

```
REMOTE 2/2 SERIAL
  ■SINGLE ADDRESS       O
  ·GROUP ADDRESS        O
  ·CH(1-4) CONFIG     CH1
   ·INPUT          LINE A
   ·ASPECT            4:3
   ·SCAN SIZE      NORMAL
```

```
OPTION CONFIG
  BKM-150CP
  SERIAL          190000B
  ■FORMAT         SDTI-CP
  ·AUDIO CH      CH1+CH2
  ·TIME CODE          OFF
```

Others

◗ Audio monitoring

A mono audio amplifier and loudspeaker are provided for audio monitoring.

◗ VLF (Very Low Frequency)

The PVM-L5 Series minimizes magnetic field emission.

◗ Worldwide power supply
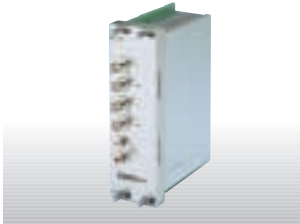
Applies to AC 100 to 240 V (50/60 Hz).

◗ Mountable in a 19-inch EIA standard rack

The PVM-20L5 can be mounted in a 19-inch EIA standard rack with the optional Slide Rail SLR-104 and the PVM-14L5 with the optional Mounting Bracket MB-521.
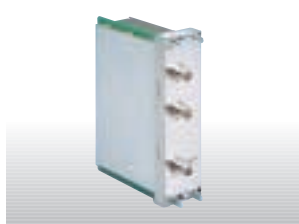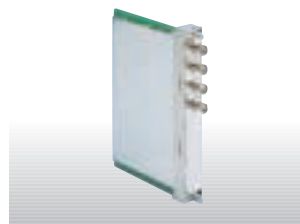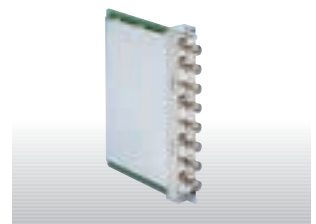
Rear Panel

Optional accessories

SDI with audio
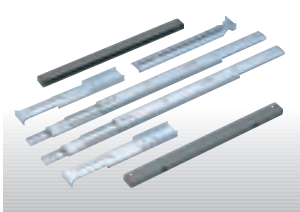Decoder Adaptor
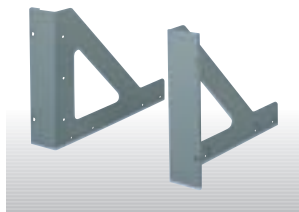BKM-150CP

HD SDI Input Adaptor
BKM-142HD

SDI 4:2:2 Decoder Adaptor
BKM-120D

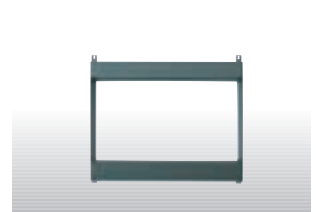Analog Component Input Adaptor
BKM-129X

Slide Rail
SLR-104

Mounting Bracket
MB-521

16:9 Mask
for 20-inch monitor
(PVM-20L5)
BKM-200M

16:9 Mask
for 14-inch monitor
(PVM-14L5)
BKM-140M

Supplied accessories

AC Power Cord (1)
Operation Manual (1)

Features

Input flexibility

▶ Multi-format signal support

PVM-L5 Series monitors are equipped with input connectors for composite, S-video (Y/C) and RGB/Y Pb Pr signals. In combination with optional input adaptors, they can also accept a wide range of digital signals, such as HD SDI as SMPTE 292M or SDI as SMPTE 259M. Adaptors for SDTI and i.LINK® are also available.

▶ Versatile analog signal inputs

The PVM-L5 Series are equipped with input connectors for component (Y/R-Y/B-Y and Y Pb Pr), RGB, Y/C and composite signals to provide system flexibility. For accuracy in reproduction, the component level can even be adjusted according to the input system — whether it's SMPTE or Betacam® format.

▶ NTSC/PAL operation

PVM-L5 Series monitors accept PAL and NTSC composite signals, using automatic detection.

▶ Versatile signal interface option

With an optional adaptor inserted into the option slot of the rear panel, PVM-L5 Series monitors accept direct input from a wide variety of signal formats.

SDI with Audio Adaptor

BKM-150CP
- SDI input with audio decoding
- SDTI-CP MPEG-2 4:2:2 P@ML decoding

HD SDI Input Adaptor

BKM-142HD
- HD SDI signal input (x 2)/monitor output (x 1)
- Acceptable HD SDI signals: 1080/50I, 1035/60I, 1080/60I, 720/60P

SDI 4:2:2 Decoder Adaptor

BKM-120D
- D-1 SDI signal input (x 2)/D-1 SDI signal output with active loop-through (x 2)

Analog Component Input Adaptor

BKM-129X
- Analog component (Y/R-Y/B-Y, RGB) with loop-through (x 1, automatic 75 Ω termination)/EXT SYNC with loop-through BNC (x 1, automatic 75 Ω termination)

IEEE1394 iLink® Input Adaptor

BKM-155DV
- 4 wire iLink high speed video input with audio decoding

New compact design

▶ Compact chassis

The compact chassis design of PVM-L5 Series monitors enables easy installation where rack space is limited. When compared to conventional PVM-M Series monitors, the PVM-20L5 can be mounted using one less rack space (9 rack unit height) and the PVM-14L5 using two less spaces (6 rack unit height).

▶ External sync

The PVM-L5 Series can accept external sync signal for synchronization with other equipment. The external sync can be activated so that it will automatically switch according to the input selected.

Excellent picture performance

▶ High resolution

The HR Trinitron® CRT enables the PVM-L5 Series to achieve a high resolution of 800 TV lines.

▶ Accurate color matching

SMPTE-C standard phosphor CRTs are incorporated in the PVM-20L5 and PVM-14L5. The accuracy of color reproduction achieved by these monitors makes them ideal for applications that require precise on-screen color.

▶ Beam current feedback circuit

Because monitor white balance is prone to drift during continuous operation over a long period of time, the PVM-L5 Series are equipped with a beam current feedback circuit that eliminates white balance drift and maintains long-term color stability.

▶ Illuminated controls

LED-lit sheet keys located on the sides of the front panel allow the PVM-L5 Series to be easily operated in low-light production environments. The LED indicators can be turned off or adjusted in brightness by five steps according to light conditions and operator preference.

Specifications

General		PVM-20L5	PVM-14L5
CRT	CRT type	20-inch HR Trinitron	14-inch HR Trinitron
	AG pitch	0.31 mm	0.25 mm
	Phosphor	SMPTE-C	SMPTE-C
	Effective picture size (4:3)	388.4 (W) x 292.6 (H) mm, 484.8 (Diagonal) mm	267.5 (W) x 200.6 (H) mm, 331.6 (Diagonal) mm
	Effective picture size (16:9)	388.4 (W) x 228 (H) mm, 443 (Diagonal) mm	267.5 (W) x 150.5 (H) mm, 306.9 (Diagonal) mm
Resolution (4:3/16:9)		800 TV lines (4:3)/600 TV lines (16:9)	
Color system		NTSC, PAL	
Aperture correction		OFF: 0 dB, ON: 2 to 6 dB	
Frequency response		LINE: 10.0 MHz +0 dB/-3 dB, Y signal only, RGB: 10.0 MHz to 24.0 MHz +0 dB/-3 dB	
Synchronization		AFC time constant 1.0 ms	
Scanning frequency		15.625 kHz to 45 kHz (For more details, please refer to the Acceptable Formats table)	
Normal scan		7% overscan	
Underscan		5% underscan	
Linearity	Horizontal	Less than 5%	Less than 4%
	Vertical	Less than 5%	Less than 4%
Convergence	Center	0.5 mm (Typical)	0.4 mm (Typical)
	Peripheral	0.7 mm (Typical)	0.5 mm (Typical)
Raster size stability	Horizontal	1.0%	
	Vertical	1.5%	
HV regulation		4.0%	3.5%
Color temperature		D65/D93/User adjustable	
Power requirements		AC 100 to 240 V, 50/60 Hz	
Power consumption (Typical/with options)		1.3 to 0.6 A/1.4 to 0.7 A, 130 W/140 W	1.1 to 0.5 A/1.2 to 0.6 A, 110 W/120 W
Dimensions (W x H x D)		Approx. 17 $7/8$ x 16 $3/8$ x 19 $3/4$ inches (452 x 414 x 500 mm)	Approx. 13 $5/8$ x 11 $1/8$ x 16 $3/4$ inches (346 x 280 x 424 mm)
Weight		Approx. 68 lb 5 oz (31 kg)	Approx. 37 lb 8 oz (17 kg)
Input/Output			
Line A	Composite	Loop-through BNC, 1.0 Vp-p +3 dB/-6 dB, sync negative, automatic 75 Ω termination	
	Y/C*	Loop-through Mini Din 4-pin, automatic 75 Ω termination	
	Y	1.0 Vp-p, sync negative	
	C	0.286 Vp-p (NTSC), 0.3 Vp-p (PAL)	
	Audio	Phono jack, -5 dBu 47 kΩ or higher	
Line B	Composite	Loop-through BNC, 1.0 Vp-p, sync negative, automatic 75 Ω termination	
	Audio	Phono jack, -5 dBu 47 kΩ or higher	
RGB/Component		Loop-through BNC automatic 75 Ω termination	
	G/Y	0.7 Vp-p +3 dB/-6 dB	
	Sync on G	0.3 Vp-p	
	B/B-Y	0.7 Vp-p +3 dB/-6 dB	
	R/R-Y	0.7 Vp-p +3 dB/-6 dB	
	Audio	Phono jack, -5 dBu 47 kΩ or higher	
Ext. sync		Loop-through BNC automatic 75 Ω termination 4.0 Vp-p ±6 dB, sync negative, usable tri-level sync signal 0.6 Vp-p ±6 dB	
Option slot		1	
	Audio	Phono jack x 2, -5 dBu 47 kΩ or higher	
Remote	Parallel remote	Modular 8-pin (Assignable)	
	Serial remote	D-sub 9-pin (RS-485)	
Audio output		0.8 W (Distortion: Less than 5%)	
Safety regulations		UL-1950/CSA-950, DHHS/DNHW, FCC Class A/IC Class A	
Operating conditions	Operating temperature	0 to +35˚ C (+41 to +104˚ F)	
	Storage temperature	-10 to +40˚ C (-4 to +140˚ F)	
	Operating humidity	30 to 85% (No condensation)	

* The Y/C input has priority over the Composite input.

Acceptable Formats

System	Horizontal scanning frequency (kHz)	Total lines per frame	Active lines per frame	Vertical scannning frequency (Hz)	Aspect ratio
480/60I (NTSC)	15.734	525	483	60	16:9/4:3
575/50I (PAL)	17.625	625	575	50	16:9/4:3
480/60P	31.469	525	483	60	16:9/4:3
576/50P	31.250	625	576	50	16:9/4:3
1035/60I	33.750	1125	1035	60	16:9
1080/60I	33.750	1125	1080	60	16:9
720/60P	45.000	750	720	60	16:9

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