SONY®

BROADCAST AND PROFESSIONAL MONITORS

BVM Series

OPTION

SONY

SONY   MEMORY CARD   MONO   APT   COMB   F1   F2   ADDRESS   UP   MENU

SHIFT   16 : 9   SYNC   BLUE ONLY   R   G   B   F3   F4   SAFE AREA   DOWN   ENTER

NTSC area

Unmatched Flexibility and Expandability Guaranteed with Precise, Stable Performance

Innovative design is the key to the outstanding flexibility of
the new BVM Series monitors from Sony.
Models which are divided into separate display and control units
provide major improvements in both systemization and flexibility
and are complemented by units of classic, stand-alone construction.

These BVM Series monitors are also operationally flexible
in that they are readily customized to customer needs.
Desired functions are implemented with a wide range of optional decoder adapters
which simply slot directly into the monitor rear panel.

◆BVM-14F5U

◆BVM-14F1U

◆BVM-20F1U

The monitors are also packed with advanced features to enhance system operation: a new Auto Alignment system for automatic monitor set-up, monitor memory card for storage and transfer of user and monitor data. Features for future use and ease of set-up are all combined into this exciting range of monitors.

BVM Series monitors provide precise reproduction of video signals with a resolution of over 1000TV lines in the highest grade monitor and close tolerance SMPTE-C phosphors found in the entire line-up of the new BVM Series monitors. The superior levels of performance are made possible by the use of new CRTs that are designed by Sony and manufactured in its own production facilities to the most exacting quality control standards.

The BVM Series—a true revolution in high performance video monitoring
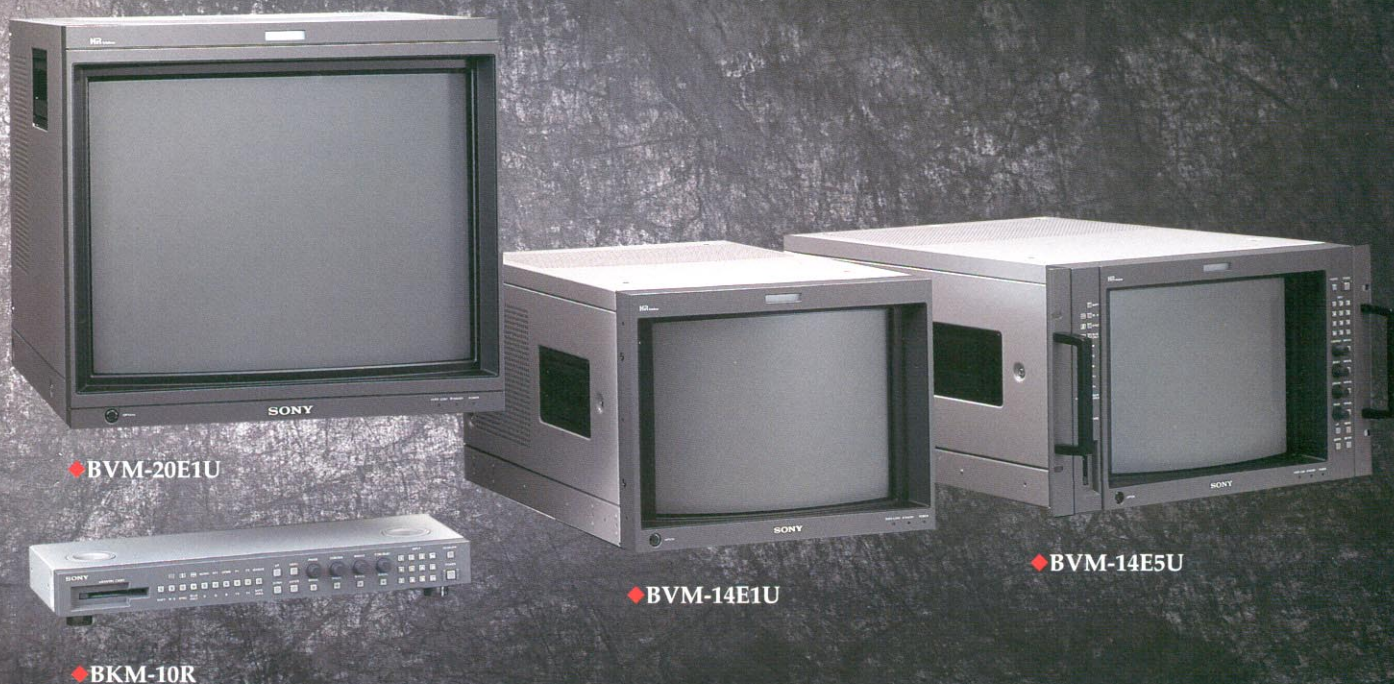
◆BVM-20E1U

◆BKM-10R

◆BVM-14E1U

◆BVM-14E5U

SUPERB PICTURE
REPRODUCTION

- Newly developed HR Trinitron® assures high resolution

20-inch display units*

BVM-20E1U	Super grade 1	More than 1000TV lines
BVM-20F1U	Grade 1	900TV lines

14-inch display units*

BVM-14E1U	Super grade 1	900TV lines
BVM-14F1U	Grade 1	800TV lines

14-inch stand-alone monitors

BVM-14E5U	Super grade 1	900TV lines
BVM-14F5U	Grade 1	800TV lines

*Display units are controlled with the control unit BKM-10R or BKM-11R.

- SMPTE-C standard phosphors
- Sony manufactured CRTs provide superb uniformity of performance
- Highly stable color temperature from beam current feedback circuitry

SYSTEM
FLEXIBILITY

- New operating concept from divided type construction with separate display and control units


BVM-20E1U

Control unit BKM-10R

- Can be used as a conventional display combining separate type display with the BKM-10R control unit and the BKM-32H control unit attachment kit.

BVM-20E1U

- Desired functions achieved by inserting optional decoder adapters directly into the rear panel
- Memory card BKM-12Y available as an option for easy monitor set-up and Sony Interactive Status Reporting (ISR) System.
- RS-485 serial remote control and parallel remote control capability
- Supported by the Sony Interactive Status Reporting (ISR) system for remote monitor diagnosis
- Mountable into an EIA standard rack

◆ Remote control over multiple display units

Monitor 1   Monitor 2   Monitor 3
RS-485

Contorol unit BKM-10R
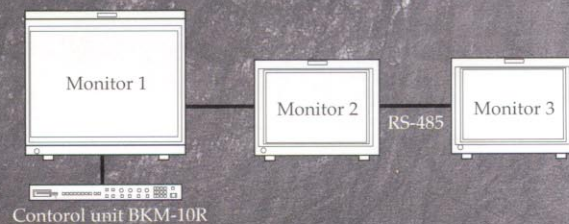
A maximum of 32 monitors can be controlled via RS-485 which enable mutual communication between the monitors and one BKM-10R control unit.

		DIGITAL DECODER		ADAPTER
		SDI 4:2:2	SDI Multi	SDI expansion
		BKM-20D	BKM-21D	BKM-22X
Type of decoder		Digital	Digital	—
SDI (Serial Digital Input)	D1 525/625	🟢	🟢	🟠
	D2 NTSC	🟠	🟢	🟠
	D2 PAL	🟠	🟢	🟠
Analog Input	Composite NTSC	🟠	🟢	🟠
	Composite PAL	🟠	🟢	🟠
	Composite PAL-M	🟠	🟢	🟠
	Composite SECAM	🟠	🟠	🟠
	Y/R-Y/B-Y 525/625	🟢	🟢	🟢
	RGB 525/625	🟢	🟢	🟢
	Y/C NTSC	—	—	—
	Y/C PAL	—	—	—
	Y/C PAL-M	—	—	—
Number of input for DIGITAL		3	3	3
Number of input for ANALOG		3	3	3

OTHER OPTIONAL ACCESSORIES

CONTROL UNIT		MEMORY CARD	AUTO SET-UP PROBE	16:9
BKM-10R	BKM-11R	BKM-12Y	BKM-14L	BKM-33H20

BVM-20E1U/20F1U

BVM-14E1U/14F1U

BVM-14E5U/14F5U

* Available when used with BKM-10R

* Available when used with BKM-10R
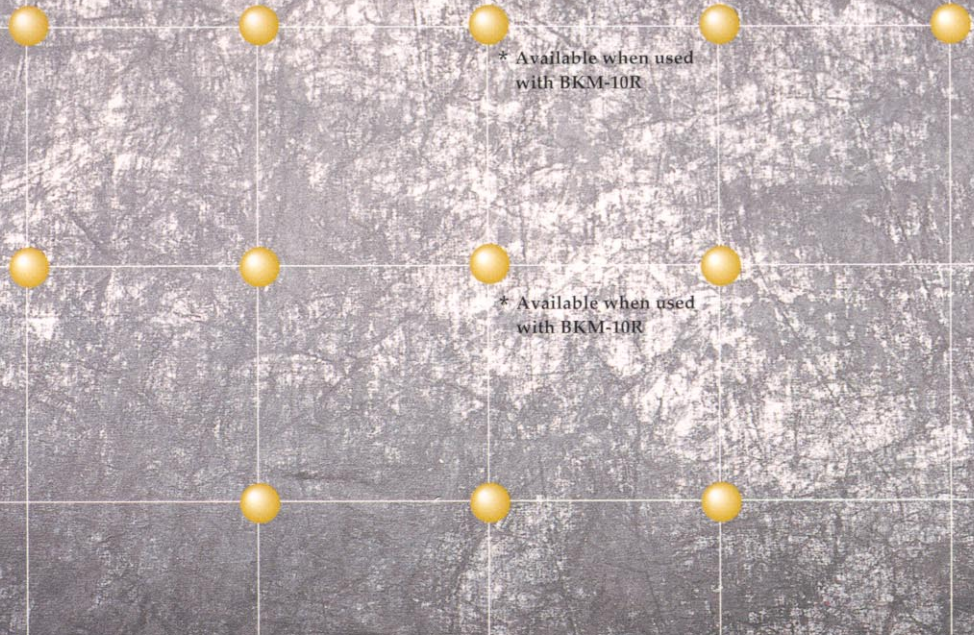
	ANALOG DECODER				ADAPTER
	NTSC	PAL	PAL-M	3 standard	Analog expansion
	BKM-24N	BKM-25P	BKM-26M	BKM-27T	BKM-28X
	Precision Analog	Precision Analog	Precision Analog	Analog	—
	—	—	—	—	—
	—	—	—	—	—
	—	—	—	—	—
	●	●	●	●	●
	●	●	●	●	●
	●	●	●	●	●
	●	●	●	●	●
	●	●	●	●	●
	●	●	●	●	●
	●	●	●	●	●
	●	●	●	●	●
	●	●	●	●	●
	—	—	—	—	—
	6	6	6	6	6

● Signals can be reproduced with this adapter.   ● Signals can be reproduced when combined with an appropriate decoder.

MASK	19-inch RACK MOUNT KIT			CONTROL UNIT ATTACHMENT KIT
BKM-33H14	BKM-30E20	BKM-31E14	BKM-30E14	BKM-32H

Control cable
RCC-5G/10G/30G
(9-pin cable for RS-485/422 serial remote control)
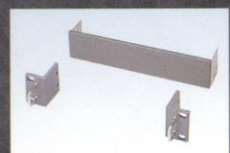
19-inch rack mount kit for BKM-10R
MB-510

DECODER
ADAPTERS

All inputs—other than the analog component (Y/R-Y/B-Y)/RGB inputs included as standards—can be customized to meet specific applications by fitting appropriate slot-in type modules. These decoder adapters—common throughout all models—are designed to be directly fitted into the rear panel, making board exchange quick and simple.

CONVENIENT OPERATING
FEATURES

- Built-in auto alignment system for easy set-up
- Precise color temperature adjustment with an optional auto setup probe BKM-14L or a color analyzer via RS-232C interface (i.e. Minolta CA-100, Graseby SLS-9400, Philips PM-5639 and Thoma TF-6)

```
         CA-100
COL1
  D65
 ■D93

X                    0.313
Y                    0.329
LOWLIGHT ( 20IRE)    2.7
HIGHLIGHT(100IRE)    100
START
```

- On-screen menu for adjustment and operation

```
INPUT CONFIGURATION  ↑↓
CH01
 ■FORMAT...       ANA AUTO
  SLOT NO           SLOT3
  INPUT NO              1
  YC SEP     3 LINES COMB
  SYNC  MODE          INT
  SCREEN MODE... 4:3-NORM
  SAFE AREA           OFF
       SCALE...        80
  APERTURE            OFF
       VALUE          100
```

```
     STATUS (3/3)       ↑↓
SLOT1 CONTROL
SLOT2 SDI 4:2:2/4FSC
■SLOT3 NTSC DECODER
SLOT4 TRI-STANDARD
SLOT5 ANALOG EXPANSION
SLOT6 VIDEO AMP
SLOT7 DEFLECTION
SLOT8 EMPTY
SLOT9 POWER SUPPLY
```

- Auto setup capability of chroma, phase, setup level and white balance
- Aspect ratio switchable between 4:3 and 16:9, with a widescreen mask available as an option

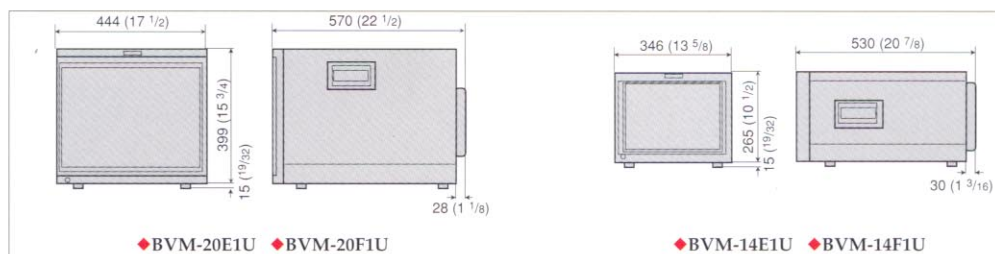**BKM-33H14 attached to BVM-14E5U**

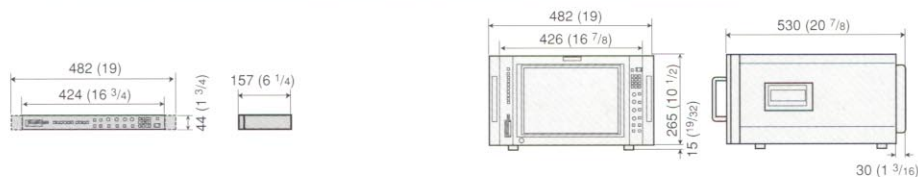**BKM-33H14 attached to BVM-14E1U**

BKM-33H20 attached to BVM-20E1U

SPECIFICATIONS

	20-inch (display units)			General	
	BVM-20E1U	**BVM-20F1U**			
General				**General**	
System	525 lines 60 fields or 625 lines 50 fields interlace			System	
Power requirements	AC 100 to 240V, 50/60Hz			Power requirements	
Power consumption	200W (max.), 2.0 to 1.7A/1.0 to 0.9A			Power consumption	
Dimensions	444 (W) x 414 (H) x 570 (D)mm (17 1/2 x 16 3/8 x 22 1/2 inches)			Dimensions	
Mass	37kg (81 lb 9 oz)			Mass	
CRT performance				**CRT performance**	
CRT type	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.25mm, 90° deflection, Ø30.6 in-line gun Center resolution more than 1000TV lines	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.30mm, 90° deflection, Ø30.6 in-line gun Center resolution 900TV lines		CRT type	
Screen size	Diagonal: 482mm (19 inches) Width: 386mm (15 1/4 inches) Height: 291mm (11 1/2 inches)			Screen size	
Color temperature	PRESET: Factory adjusted for D65 white MANUAL control is also available, allowing alternative setting of color temperature			Color temperature	
Preset brightness	100cd/m² (30ft-L) (when a 1Vp-p 100% white signal is input)			Preset brightness	
Input performance				**Input performance**	
Inputs	Loop-through BNC (x3)			Inputs	
RGB · R/B	0.7Vp-p ±6dB, high impedance			RGB · R/B	
RGB · G	1.0Vp-p ±6dB, sync negative, high impedance			RGB · G	
Analog component · Y	1.0Vp-p ±6dB, high impedance			Analog component · Y	
Analog component · R-Y/B-Y	0.7Vp-p ±6dB, high impedance			Analog component · R-Y/B-Y	
External sync	Loop-through BNC (x1) 0.3 to 8Vp-p negative, high impedance			External sync	
Return loss	More than 46dB (7MHz when 75Ω terminated)			Return loss	
Remote control inputs	Remote 1: Loop-through D-sub 9-pin (for RS-485 serial remote control) Remote 2: D-sub 9-pin			Remote control inputs	
ISR	D-sub 9-pin			ISR	
Video signal performance				**Video signal performance**	
Differential gain	Within 2% for luminance from 0 to 100cd/m² (0 to 30ft-L)			Differential gain	
Differential phase	Within 2° for luminance from 0 to 100cd/m² (0 to 30ft-L)			Differential phase	
Frequency response	100Hz to 10MHz ±1dB			Frequency response	
DC restoration	Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL			DC restoration	
Synchronization				**Synchronization**	
AFC time	Fast mode: 0.5ms Normal mode: 2ms			AFC time	
Horizontal hold	±500Hz (when AFC 0.5ms)			Horizontal hold	
Retrace time	Horizontal: Normal; within 1ms, Underscan; within 0.8ms Vertical: within 10µs			Retrace time	
Raster and picture performance				**Raster and picture performance**	
Normal scan	5% over scan of the effective picture area			Normal scan	
Underscan	3% underscan of the effective picture area			Underscan	
Stability of raster size	1% of picture height for a 10 to 90% APL change when 100% peak white is set to 100cd/m² (30ft-L) brightness			Stability of raster size	
Linearity	Within 0.5% within circle centerd on the screen with a diameter equal to the vertical height, 1% at any other point			Linearity	
Convergence	Within 0.4mm within circle centerd on the screen with a diameter equal to the vertical height, 0.7mm at any other point			Convergence	
Operating conditions				**Operating conditions**	
Operating temperature range	0 to 40°C (32 to 104°F) Optimum operating range 20 to 30°C (68 to 86°F)			Operating temperature range	
Humidity	0 to 90% non-condensing			Humidity	
Altitude	Approx. 3,050m (10,000ft)			Altitude	

DIMENSIONS

444 (17 1/2)   570 (22 1/2)   399 (15 3/4)   15 (19/32)   28 (1 1/8)

◆BVM-20E1U ◆BVM-20F1U

346 (13 5/8)   530 (20 7/8)   265 (10 1/2)   15 (19/32)   30 (1 3/16)

◆BVM-14E1U ◆BVM-14F1U

14-inch (display units)		14-inch (stand-alone monitors)	
BVM-14E1U	**BVM-14F1U**	**BVM-14E5U**	**BVM-14F5U**
525 lines 60 fields or 625 lines 50 fields interlace			
AC 100 to 240V, 50/60Hz			
145W (max.), 1.5 to 1.2A/0.7 to 0.6A		175W (max.), 1.8 to 1.5A/0.8 to 0.7A	
346 (W) x 280 (H) x 530 (D)mm (13 $^5/_8$ x 11 $^1/_8$ x 20 $^7/_8$ inches)		482 (W) x 280 (H) x 530 (D)mm (19 x 11 $^1/_8$ x 20 $^7/_8$ inches)	
23kg (50 lb 11 oz)		26kg (57 lb)	
HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.22mm, 90° deflection, Ø29.4 in-line gun Center resolution 900TV lines	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.25mm, 90° deflection, Ø29.4 in-line gun Center resolution 800TV lines	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.22mm, 90° deflection, Ø29.4 in-line gun Center resolution 900TV lines	HR Trinitron CRT with SMPTE-C phosphors AG pitch: 0.25mm, 90° deflection, Ø29.4 in-line gun Center resolution 800TV lines
Diagonal: 332mm (13 $^1/_8$ inches) Width: 268mm (10 $^5/_8$ inches) Height: 201mm (8 inches)			
PRESET: Factory adjusted for D65 white MANUAL control is also available, allowing alternative setting of color temperature			
100cd/m^2 (30ft-L) (when a 1Vp-p 100% white signal is input)			
Loop-through BNC (x3)			
0.7Vp-p ±6dB, high impedance			
1.0Vp-p ±6dB, sync negative, high impedance			
1.0Vp-p±6dB, high impedance			
0.7Vp-p±6dB, high impedance			
Loop-through BNC (x1) 0.3 to 8Vp-p negative, high impedance			
More than 46dB (7MHz when 75Ω terminated)			
Remote 1: Loop-through D-sub 9-pin (for RS-485 serial remote control) Remote 2: D-sub 9-pin			
D-sub 9-pin			
Within 2% for luminance from 0 to 100cd/m^2 (0 to 30ft-L)			
Within 2° for luminance from 0 to 100cd/m^2 (0 to 30ft-L)			
100Hz to 10MHz ±1dB			
Back porch type, back porch level: within 1% of peak luminance, 10 to 90% APL			
Fast mode: 0.5ms Normal mode: 2ms			
±500Hz (when AFC 0.5ms)			
Horizontal: Normal; within 1ms, Underscan; within 0.8ms Vertical: within 10µs			
5% over scan of the effective picture area			
3% underscan of the effective picture area			
1% of picture height for a 10 to 90% APL change when 100% peak white is set to 100cd/m^2 (30ft-L) brightness			
Within 0.5% within circle centerd on the screen with a diameter equal to the vertical height, 1% at any other point			
Within 0.3mm within circle centerd on the screen with a diameter equal to the vertical height, 0.6mm at any other point			
0 to 40°C (32 to 104°F) Optimum operating range 20 to 30°C (68 to 86°F)			
0 to 90% non-condensing			
Approx. 3,050m (10,000ft)			

482 (19)
424 (16 $^3/_4$)
44 (1 $^3/_4$)
157 (6 $^1/_4$)

482 (19)
426 (16 $^7/_8$)
530 (20 $^7/_8$)
265 (10 $^1/_2$)
15 ($^{19}/_{32}$)
30 (1 $^3/_{16}$)

Unit: mm (inch)

◆BKM-10R

◆BVM-14E5U ◆BVM-14F5U