

plura

b r o a d c a s t

Operating Instructions

Multi Format HD Broadcast Monitor

PBM-070 (7.0")

PBM-184 (8.4")

PBM-117 (17")

PBM-120 (20")

PBM-124 (24")

MVM-124 (24")

PBM-126 (26")

PBM-132 (32")

PBM-142 (42")

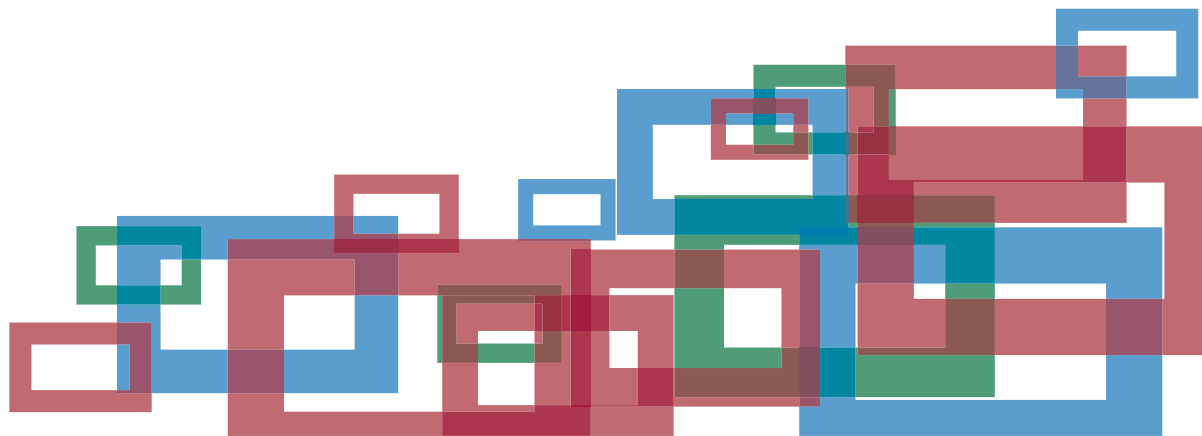
MVM-142 (42")

PBM-147 (47")

MVM-147 (47")

PBM-155 (55")

PBM-170 (70")



PBM-070 7 inch LCD Wide Screen



PBM-070

- 7" Multi-Format Digital Broadcast Monitor
- Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
- Cutting edge De-interlacing and Scaling Technology
- Fast Response Time for high motion video
- 800 x 480 (15:9) Native Resolution
- 300 cd High Brightness, 300:1 Contrast
- 130° Viewing Angle Display
- HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
- Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
- Analog & Embedded Audio Inputs, Internal Speaker
- Intelligent Connection for Alignment & Calibration (ICAC)
- Pixel to Pixel Mode, Tally, DC Operation
- Waveform Function, 16 CH Audio Metering Display, VITC
- Various Markers Display, Safe Area in HD & SD
- H/V delay, Blue only & Mono mode, Picture and Picture
- Closed Caption Decoding
- Underscan/ Overscan/ Normal / Zoom
- Programmable Front Pushbutton Controls
- Intuitive OSD Display
- Ethernet Port For Remote Control
- Programmable GPI control
- IR & RS232 Remote Control

OPTION: Rackmount, V-Mount, Hood, Carrying Case

PBM-184 8.4 inch LCD Screen



PBM-184

- 8.4" Multi-Format Digital Broadcast Monitor
- Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
- Cutting edge De-interlacing and Scaling Technology
- Fast Response Time for high motion video
- 1024 x 768 (4:3) Native Resolution
- 400 cd High Brightness, 400:1 Contrast
- 170° Viewing Angle Display
- HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
- Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
- Embedded Audio Inputs
- Intelligent Connection for Alignment & Calibration (ICAC)
- Pixel to Pixel Mode, Tally, DC Operation
- Waveform Function, 16 CH Audio Metering Display, VITC
- Various Markers Display, Safe Area in HD & SD
- H/V delay and Mono Controls, Picture and Picture
- Closed Caption Decoding
- Underscan/ Overscan/ Normal / Zoom
- Programmable Front Pushbutton Controls
- Intuitive OSD Display
- Ethernet Port For Remote Control
- Programmable GPI control
- IR & RS232 Remote Control

OPTION: Rackmount, Hood, V-Mount, Wallmount, Carrying Case

PBM-117 17 inch LCD Wide Screen

PBM-117



PBM-117D

- 17" Multi-Format Digital Broadcast Monitor
- Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
- Cutting edge De-interlacing and Scaling Technology
- Fast Response Time for high motion video
- 1366 x 768 (16:10) Native Resolution
- 450 cd High Brightness, 900:1 Contrast
- 178° Viewing Angle Display
- HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
- Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
- Analog & Embedded Audio Inputs, Internal Speaker
- Intelligent Connection for Alignment & Calibration (ICAC)
- Pixel to Pixel Mode, Tally, DC Operation
- Waveform Function, 16 CH Audio Metering Display, VITC
- Various Markers Display, Safe Area in HD & SD
- H/V delay and Mono Controls, Picture and Picture
- Closed Caption Decoding
- Underscan/ Overscan/ Normal / Zoom
- Programmable Front Pushbutton Controls
- Intuitive OSD Display
- Ethernet Port For Remote Control
- Programmable GPI control
- IR & RS232 Remote Control

PBM117D: Dual HD SDI YPbPr 4:2:2
Dual HD SDI YPbPr/RGB 4:4:4

OPTION: Rackmount, Hood, V-mount, Wallmount, Carrying Case

PBM-120 20 inch LCD Wide Screen

PBM-120



- 20" Multi-Format Digital Broadcast Monitor
- Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
- Cutting edge De-interlacing and Scaling Technology
- Fast Response Time for high motion video
- 1680x 1050 (16:10) Native Resolution
- 400 cd High Brightness, 600:1 Contrast
- 178° Viewing Angle Display
- HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
- Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
- Analog & Embedded Audio Inputs, Internal Speaker
- Intelligent Connection for Alignment & Calibration (ICAC)
- Pixel to Pixel Mode, Tally
- Waveform Function, 16 CH Audio Metering Display, VITC
- Various Markers Display, Safe Area in HD & SD
- H/V delay and Mono Controls, Picture and Picture
- Closed Caption Decoding
- Underscan/ Overscan/ Normal / Zoom
- Programmable Front Pushbutton Controls
- Intuitive OSD Display
- Ethernet Port For Remote Control
- Programmable GPI control
- IR & RS232 Remote Control

OPTION: Rackmount, Hood, Wallmount, Carrying Case

PBM-124 24 inch LCD Wide Screen



PBM-124

- 24" Multi-Format Digital Broadcast Monitor
- Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
- Cutting edge De-interlacing and Scaling Technology
- Fast Response Time for high motion video
- 1920 x 1200 (16:10) Native Resolution
- 400 cd High Brightness, 700:1 Contrast
- 178° Viewing Angle Display
- HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
- Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
- Analog & Embedded Audio Inputs, Internal Speaker
- Intelligent Connection for Alignment & Calibration (ICAC)
- Pixel to Pixel Mode, Tally
- Waveform Function, 16 CH Audio Metering Display, VITC
- Various Markers Display, Safe Area in HD & SD
- H/V delay and Mono Controls, Picture and Picture
- Closed Caption Decoding
- Underscan/ Overscan/ Normal / Zoom
- Programmable Front Pushbutton Controls
- Intuitive OSD Display
- Ethernet Port For Remote Control
- Programmable GPI control
- IR & RS232 Remote Control

PBM-124D: Dual HD SDI YPbPr 4:2:2
Dual HD SDI YPbPr/RGB 4:4:4

MVM-124: Built-in multiviewer with 4 inputs HD/SDI & Analog autosensing - Live Web Streaming Capability

OPTION: Rackmount, Wallmount, Carrying Case



MVM-124



PBM-124D

PBM-126 26 inch LCD Wide Screen



PBM-126

- 26" Multi-Format Digital Broadcast Monitor
- Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
- Cutting edge De-interlacing and Scaling Technology
- Fast Response Time for high motion video
- 1920 x 1200 (16:10) Native Resolution
- 500 cd High Brightness, 800:1 Contrast
- 178° Viewing Angle Display
- HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
- Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
- Analog & Embedded Audio Inputs, Internal Speaker
- Intelligent Connection for Alignment & Calibration (ICAC)
- Pixel to Pixel Mode, Tally
- Waveform Function, 16 CH Audio Metering Display, VITC
- Various Markers Display, Safe Area in HD & SD
- H/V delay and Mono Controls, Picture and Picture
- Closed Caption Decoding
- Underscan/ Overscan/ Normal / Zoom
- Programmable Front Pushbutton Controls
- Intuitive OSD Display
- Ethernet Port For Remote Control
- Programmable GPI control
- IR & RS232 Remote Control

OPTION: Wallmount, Carrying Case

PBM-132 32 inch LCD Wide Screen



PBM-132

- 32" Multi-Format Digital Broadcast Monitor
 - Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
 - Cutting edge De-interlacing and Scaling Technology
 - Fast Response Time for high motion video
 - 1366 x 768 (16:9) Native Resolution
 - 500 cd High Brightness, 1000:1 Contrast
 - 178° Viewing Angle Display
 - HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
 - Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
 - Analog & Embedded Audio Inputs, Internal Speaker
 - Intelligent Connection for Alignment & Calibration (ICAC)
 - Pixel to Pixel Mode, Tally
 - Waveform Function, 16 CH Audio Metering Display, VITC
 - Various Markers Display, Safe Area in HD & SD
 - H/V delay and Mono Controls, Picture and Picture
 - Closed Caption Decoding
 - Underscan/ Overscan/ Normal / Zoom
 - Programmable Front Pushbutton Controls
 - Intuitive OSD Display
 - Ethernet Port For Remote Control
 - Programmable GPI control
 - IR & RS232 Remote Control
- OPTION:** Wallmount, Carrying Case

PBM-137 37 inch LCD Wide Screen



PBM-137

- 37" Multi-Format Digital Broadcast Monitor
 - Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
 - Cutting edge De-interlacing and Scaling Technology
 - Fast Response Time for high motion video
 - 1920 x 1080 (16:9) Native Resolution
 - 500 cd High Brightness, 800:1 Contrast
 - 178° Viewing Angle Display
 - HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
 - Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
 - Analog & Embedded Audio Inputs, Internal Speaker
 - Intelligent Connection for Alignment & Calibration (ICAC)
 - Pixel to Pixel Mode, Tally
 - Waveform Function, 16 CH Audio Metering Display, VITC
 - Various Markers Display, Safe Area in HD & SD
 - H/V delay and Mono Controls, Picture and Picture
 - Closed Caption Decoding
 - Underscan/ Overscan/ Normal / Zoom
 - Programmable Front Pushbutton Controls
 - Intuitive OSD Display
 - Ethernet Port For Remote Control
 - Programmable GPI control
 - IR & RS232 Remote Control
- OPTION:** Wallmount, Carrying Case

PBM-142 42 inch LCD Wide Screen



PBM-142



MVM-142

- 42" Multi-Format Digital Broadcast Monitor
- Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
- Cutting edge De-interlacing and Scaling Technology
- Fast Response Time for high motion video
- 1920 x 1080 (16:9) Native Resolution
- 500 cd High Brightness, 900:1 Contrast
- 178° Viewing Angle Display
- HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
- Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
- Analog & Embedded Audio Inputs, Internal Speaker
- Intelligent Connection for Alignment & Calibration (ICAC)
- Pixel to Pixel Mode, Tally
- Waveform Function, 16 CH Audio Metering Display, VITC
- Various Markers Display, Safe Area in HD & SD
- H/V delay and Mono Controls, Picture and Picture
- Closed Caption Decoding
- Underscan/ Overscan/ Normal / Zoom
- Programmable Front Pushbutton Controls
- Intuitive OSD Display
- Ethernet Port For Remote Control
- Programmable GPI control
- IR & RS232 Remote Control

MVM-142: Built-in multiviewer with 4 inputs HD/SDI & Analog autosensing - Live Web Streaming Capability

OPTION: Wallmount, Carrying Case

PBM-147 47 inch LCD Wide Screen



PBM-147



MVM-147

- 47" Multi-Format Digital Broadcast Monitor
- Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
- Cutting edge De-interlacing and Scaling Technology
- Fast Response Time for high motion video
- 1920 x 1080 (16:9) Native Resolution
- 500 cd High Brightness, 1000:1 Contrast
- 178° Viewing Angle Display
- HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
- Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
- Analog & Embedded Audio Inputs, Internal Speaker
- Intelligent Connection for Alignment & Calibration (ICAC)
- Pixel to Pixel Mode, Tally
- Waveform Function, 16 CH Audio Metering Display, VITC
- Various Markers Display, Safe Area in HD & SD
- H/V delay and Mono Controls, Picture and Picture
- Closed Caption Decoding
- Underscan/ Overscan/ Normal / Zoom
- Programmable Front Pushbutton Controls
- Intuitive OSD Display
- Ethernet Port For Remote Control
- Programmable GPI control
- IR & RS232 Remote Control

MVM-147: Built-in multiviewer with 4 inputs HD/SDI & Analog autosensing - Live Web Streaming Capability

OPTION: Wall mount, Carrying Case

PBM-155 55 inch LCD Wide Screen



PBM-155

- 55" Multi-Format Digital Broadcast Monitor
 - Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
 - Cutting edge De-interlacing and Scaling Technology
 - Fast Response Time for high motion video
 - 1920 x 1080 (16:9) Native Resolution
 - 500 cd High Brightness, 1200:1 Contrast
 - 178° Viewing Angle Display
 - HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
 - Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
 - Analog & Embedded Audio Inputs, Internal Speaker
 - Intelligent Connection for Alignment & Calibration (ICAC)
 - Pixel to Pixel Mode, Tally
 - Waveform Function, 16 CH Audio Metering Display, VITC
 - Various Markers Display, Safe Area in HD & SD
 - H/V delay and Mono Controls, Picture and Picture
 - Closed Caption Decoding
 - Underscan/ Overscan/ Normal / Zoom
 - Programmable Front Pushbutton Controls
 - Intuitive OSD Display
 - Ethernet Port For Remote Control
 - Programmable GPI control
 - IR & RS232 Remote Control
- OPTION:** Wallmount, Carrying Case

PBM-170 70 inch LCD Wide Screen



PBM-170

- 70" Multi-Format Digital Broadcast Monitor
 - Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
 - Cutting edge De-interlacing and Scaling Technology
 - Fast Response Time for high motion video
 - 1920 x 1080 (16:9) Native Resolution
 - 600 cd High Brightness, 1500:1 Contrast
 - 178° Viewing Angle Display
 - HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
 - Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
 - Analog & Embedded Audio Inputs, Internal Speaker
 - Intelligent Connection for Alignment & Calibration (ICAC)
 - Pixel to Pixel Mode, Tally
 - Waveform Function, 16 CH Audio Metering Display, VITC
 - Various Markers Display, Safe Area in HD & SD
 - H/V delay and Mono Controls, Picture and Picture
 - Closed Caption Decoding
 - Underscan/ Overscan/ Normal / Zoom
 - Programmable Front Pushbutton Controls
 - Intuitive OSD Display
 - Ethernet Port For Remote Control
 - Programmable GPI control
 - IR & RS232 Remote Control
- OPTION:** Wallmount, Carrying Case

Important Safety Instructions

1. Please read this manual thoroughly before operating the monitor.
2. Unplug monitor from the wall outlet before cleaning the LCD screen. Do not use liquid cleaners or aerosol cleaners. Use ONLY a damp cloth provided.
3. Don't use any unauthorized accessories not recommended by the manufacturer as they may cause hazards.
4. Don't operate this monitor near damp or wet surfaces.
5. Use only the recommend manufacturer mounting hardware accessories. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the monitor and to protect it from overheating, these openings must not be blocked or covered.
6. This appliance should be operated only from the type of power source indicated on the marking label.

If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.

7. This appliance system is equipped with a 3-wire grounding type plug (a plug having a third (grounding) pin). This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your outlet. Do not ignore the safety purpose of the grounding plug.
8. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.
9. Do not allow anything to rest on the power cord.
10. Follow all warnings and instructions marked on the appliance.
11. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
12. Do not attempt to service this monitor without a qualified service personnel.

PORTABLE CART WARNING
(symbol provided by RETAC)



FCC Notice

This device complies with Part 15 of FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

To assure continued compliance, follow the attached installation instruction and do not make any unauthorized modifications.

Note:

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The user may find the booklet "Something About Interference" available from FCC local regional offices helpful.

Warning:

To assure continued FCC emission limit compliance, the user must use only shielded interface cables when connecting to host computer or peripheral devices. Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate this device.

Safety Precautions



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

THIS EQUIPEMNT MUST BE GROUNDED

To ensure safe operation, the three-pin plug must be inserted only into a standard three-pin power outlet which is effectively grounded through normal household wiring. Extension cords used with the equipment must have three cores and be correctly wired to provide connection to the ground. Wrongly wired extension cords are a major cause of fatalities. The fact that the equipment operates satisfactorily does not imply that the power outlet is grounded or that the installation is completely safe.

For your safety, if you are in any doubt about the effective grounding of the power outlet, please consult a qualified electrician.

CAUTION:

THE AC RECEPTACLE (MAINS SOCKET OUTLET) SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.

TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER CORD PLUG FROM THE AC RECEPTACLE.

WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, KEEP THIS EQUIPMENT AWAY FROM ALL LIQUIDS. USE AND STORE ONLY IN LOCATIONS WHICH ARE NOT EXPOSED TO THE RISK OF DRIPPING OR SPLASHING LIQUIDS, AND DO NOT PLACE ANY LIQUID CONTAINERS ON TOP OF THE EQUIPMENT.

CAUTION:

In order to maintain adequate ventilation, do not install or place this unit in a bookcase, built-in cabinet or any other confined space. To prevent risk of electric shock or fire hazard due to overheating, ensure that curtains and any other materials do not obstruct the ventilation.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

CAUTION:

This apparatus can be operated at a voltage in the range of 100-240 V AC.

Voltage other than 120V are not intended for U.S.A and Canada.

CAUTION:

Operation at a voltage other than 120V AC may require the use of a different AC plug. Please contact either a local service center for assistance in selecting an alternate AC plug.

Notice (U.S.A. only):

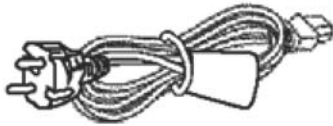
This product has a fluorescent lamp that contains a small amount of mercury. It also contains lead in some components. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org>.

Caution for AC Power Cord

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.
Appropriate AC Power Cord must be used in each local area.

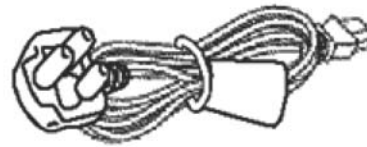
FOR CONTINENTAL EUROPE, ETC

Not for use in the U.K.



FOR U.K. ONLY

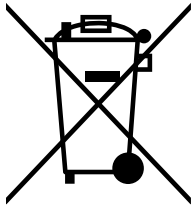
If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.



FOR U.S.A. and Canada



Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

CE NOTICE



This is Class B product. In a domestic environment this may cause radio interference in which case the user may be required to take adequate measures.

The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

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1. Outline

Plura HD Digital Monitor series is a Multi-Format HD Monitors with high core technology to display various kind of digital video input signals. It supports HD / SD-SDI autosensing, RGB, Component and Composite signals.

The Plura Series offers an elegant slim design with fast response time for smooth video streaming, high brightness, contrast ratio, wide viewing angles, accurate color reproduction and quality picture consistency that meets your HD Monitoring application.

The Plura series supports auto calibration mechanism using ICAC (Intelligent Connection for Alignment & Calibration) and sophisticated calibration tools to adjust and calibrate color temperatures and gamma settings.

MVM integrated multi-view monitors are built with Grade A TFT Panels and feature 1:1 pixel to pixel scaling, Intelligent connection for Alignment and Calibration and Adjustable Colorimetry and Gamma Correction.

The Built-in multi-viewer feature saves space, time and money. The Ethernet remote configuration software tool enables users to store & recall multiple conventional and user defined Layouts.

2. Main Features

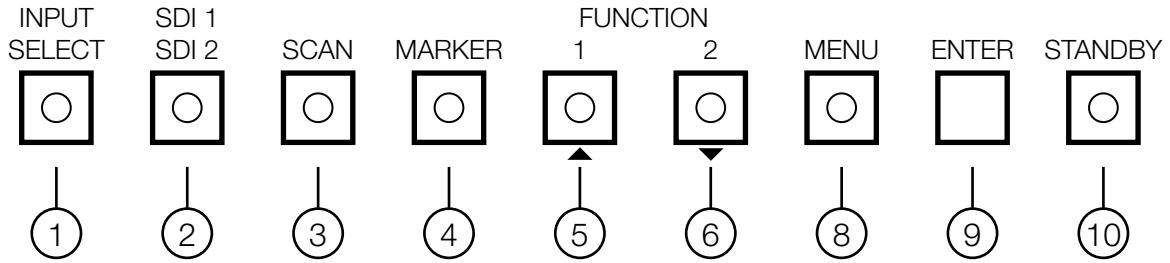
- Complies with EBU-2330 TECH, SMPTE-C and ITU-R BT.709 Standards
- Cutting edge De-interlacing and Scaling Technology
- Fast Response Time for high motion video
- 178° Viewing Angle Display
- HD/SD SDI, Composite, RGB, YUV, Y/C, UXGA and DVI Inputs
- Supports all HD/SD signal formats @ 50Hz and 60Hz respectively
- Analog & Embedded Audio Inputs, Internal Speaker
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- Pixel to Pixel Mode, Tally, DC Operation
- Waveform Function, 16 CH Audio Metering Display, VITC
- Various Markers Display, Safety Area in HD & SD
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- Closed Caption Decoding
- Underscan / Overscan / Normal / Zoom
- Programmable Front Pushbutton Controls
- Intuitive OSD Display
- Ethernet Port For Remote Control
- Programmable GPI control
- IR & RS232 Remote Control

Optional Accessories:

- ND Filter (PBM-Models)
- Wall Mount
- Rack Mount (PBM-184/ PBM-117/ PBM-120/ PBM-124)
- V Mount (PBM-184/PBM-117) / HOOD (PBM-184/ PBM-117)
- Carrying Case

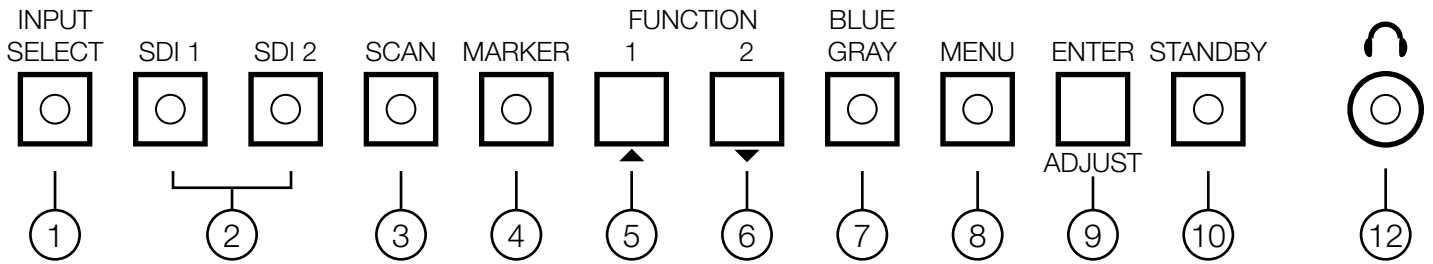
3. Controls

3-1. Front Panel



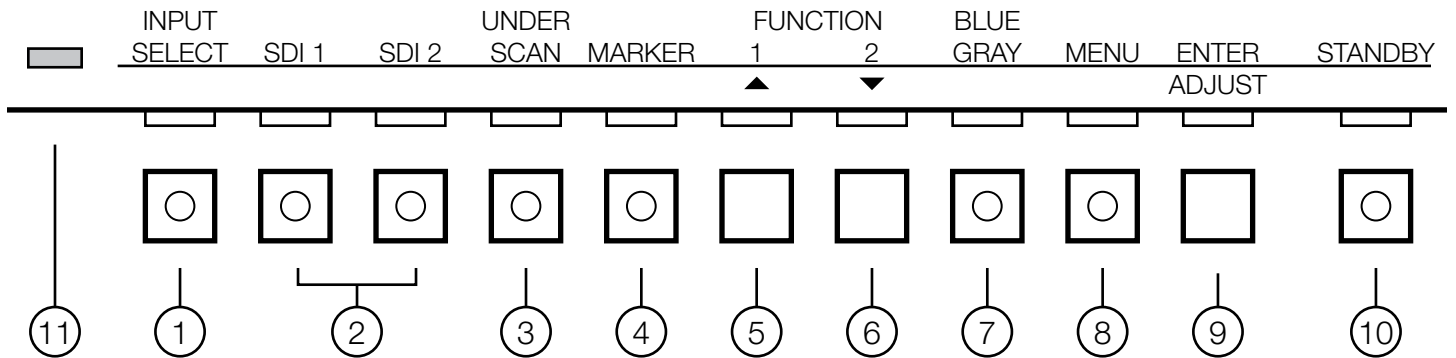
Front Panel

PBM-184



Front Panel


PBM-117, PBM-120, PBM-124, PBM-126

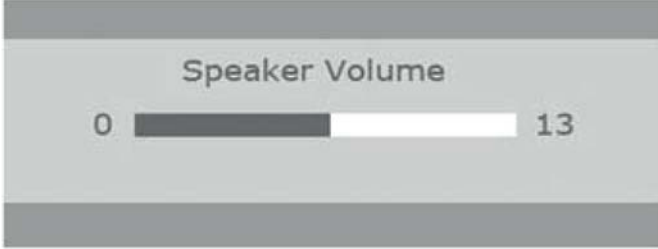


Front Panel

PBM-132, PBM-142, PBM-147, PBM-155

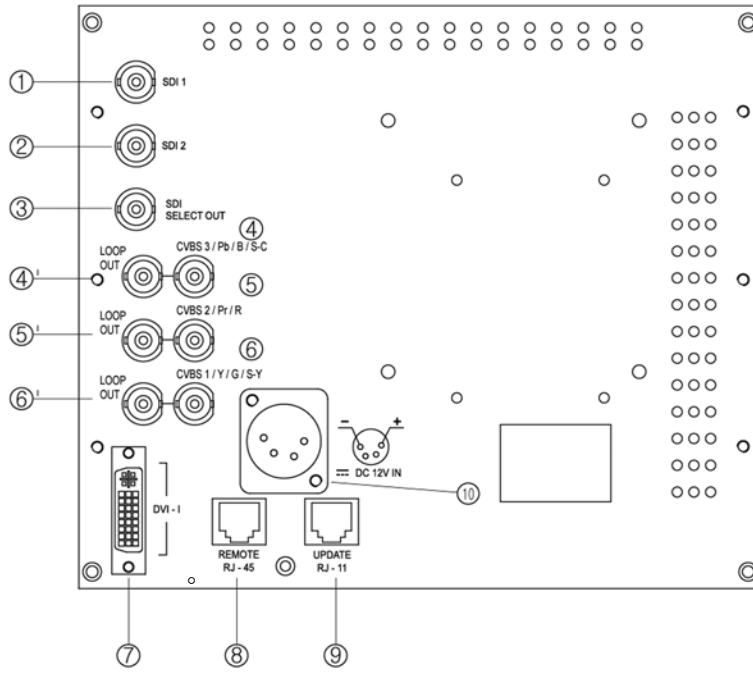
3. Controls continued

- ① **INPUT SELECT**
Selects Analog input; OSD menu is displayed with this.
- ② **SDI 1, SDI 2 INPUT SELECT**
Selects SDI CH1 or CH2 input.
- ③ **SCAN**
Selects Underscan, Zeroscan or Overscan Mode.
- ④ **MARKER**
When selecting this button, the Aspect Ratio Marker is displayed on screen.
If the input signals are DVI, RGB, PC-RGB or Y/C, Marker is not displayed.
- ⑤ **FUNCTION 1 (F1)**
Functions are assigned from the SYSTEM menu. They are operated by the F1, F2 Buttons. 
- ⑥ **FUNCTION 2 (F2)**
 - 1) When the OSD Menu is not active, F2 selects functions on the SYSTEM Menu.
 - 2) When the OSD Menu is active, F2 works as a DOWN (▼) Button.
- ⑦ **BLUE / GRAY**
 - 1) Each time this button is pressed, the display mode changes as follows:
 - 00 BLUE: Only the Blue signal is displayed on screen.
 - 00 GRAY: Color is off (monochrome); only Luminance is displayed.
 - 00 NORMAL: Normal display.
 - 2) When using the OSD Menu, this works as an UP (▲) Button.
 - 3) The GRAY (Mono) function operates in SDI1,2, CVBS1,2,3 and Y-Pb-Pr mode.
- ⑧ **MENU**
When pressing button, OSD menu is displayed.
- ⑨ **ENTER / ADJUST**
 - 1) The OSD Menu is set by using the Enter key. After setting a function, move to the next step: "Brightness" -> "Contrast" -> "Phase (Hue)" -> "Saturation" -> "Sharpness" -> "Speaker Volume"
 - 2) Except for Menu operation, each time the ADJUST button is pressed, the setting changes sequentially: a control bar is displayed on the screen bottom, and the UP (▲) and Down (▼) buttons can change the setting, and can be saved with the ENTER/ADJUST button.

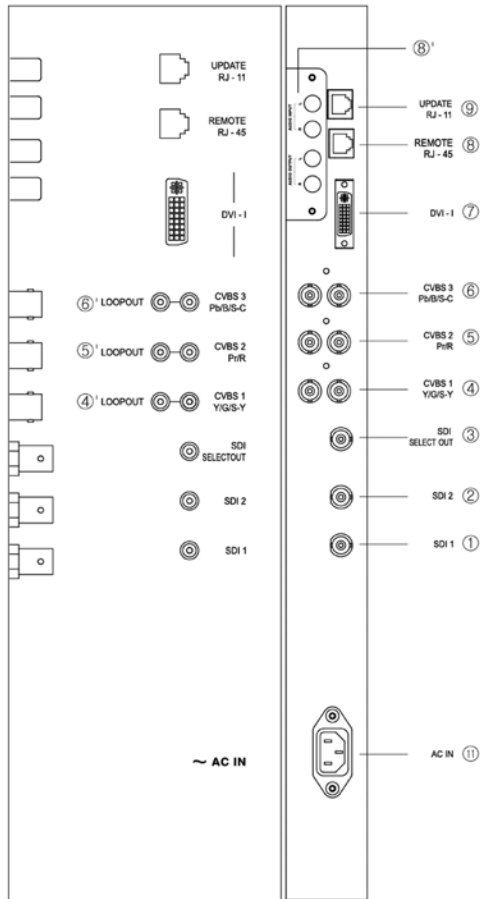
A screenshot of the OSD menu showing the 'Speaker Volume' setting. The text 'Speaker Volume' is centered at the top. Below it is a horizontal progress bar with a dark gray fill. The number '0' is on the left and '13' is on the right. The progress bar is approximately 30% full.

Note: Speaker Volume, Hue, Saturation and Sharpness may not be supported by all options.
- ⑩ **STANDBY**
This button turns off the display and puts the monitor into a low-power state.
- ⑪ **IR REMOTE RECEIVER (PBM-132,142,147,155)**
This is for PBM-132 to PBM-155 products.

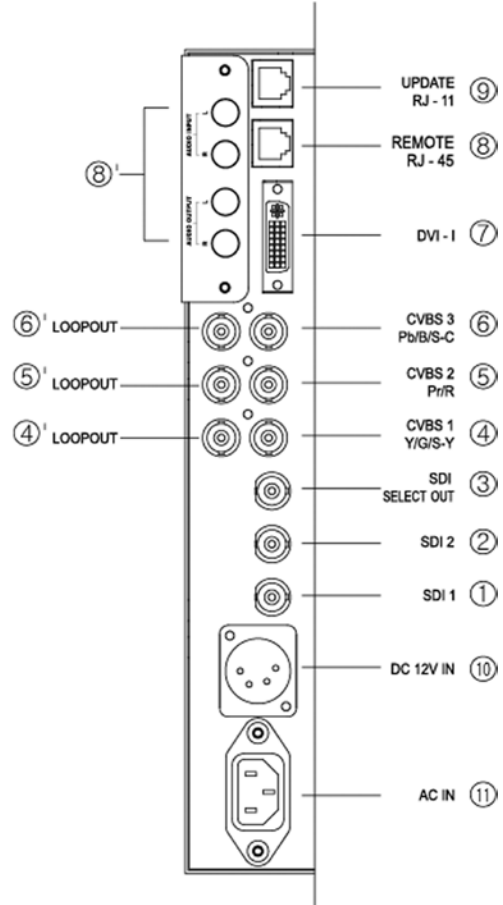
3-2. Rear Panel



Rear (PBM-184)



Rear/Side (PBM-120-170)



Side (PBM-117)

① ②

SDI 1, SDI 2 Input Terminal (BNC)

These connectors are for HD/SD-SDI input signals and support SMPTE standard and 16ch audio signals.

③

SDI SELECTOUT Terminal (BNC)

Output terminal for HD/SD-SDI signals.

There is NO output (Active Select Output) when the monitor is off. 

④ ⑤ ⑥

CVBS (Composite) 1,2,3 / Y-Pb-Pr / RGB / Y/C Input Terminal (BNC)

This is the Analog input terminal. Three types of input signal are supported:

- 1) Composite 1,2,3.
- 2) Component YUV (Y,Pb,Pr) and R,G,B.
- 3) S-Video (Y/C) signal.

④' ⑤' ⑥'

LOOPOUT Terminal (BNC)

Loop output terminal of Analog input signal. If you do not need the Loop output, select "Analog Loop: NO" in the OSD menu.

⑦

DVI-I / PC-RGB Input Terminal (DVI-I Jack)

Terminal for DVI digital signal input. When using a DVI to VGA adapter, it is possible to input a PC-RGB (VGA) signal.

⑧

REMOTE Terminal, RJ-45 Jack-Through (RJ-45) Terminal

Terminal for controlling the monitor by an external control. (Make/Trig type)

⑧'

Audio Input/Output Terminal

Input/Output terminal for the external Audio and Embedded Audio signal.

⑨

UPDATE Terminal (RJ-11 Jack)

Terminal for upgrading the monitor software.

⑩

DC INPUT Terminal (PBM-184, PBM-117)

Use for supplying 12V DC power (12V~17V).

⑪

AC INPUT Terminal

AC power cable connector.



Use only the power cord designated to ensure the Safety and EMC regulation for the specific country of use.



Do not use AC and DC power together. This may cause a product failure or fire.

3. Controls continued

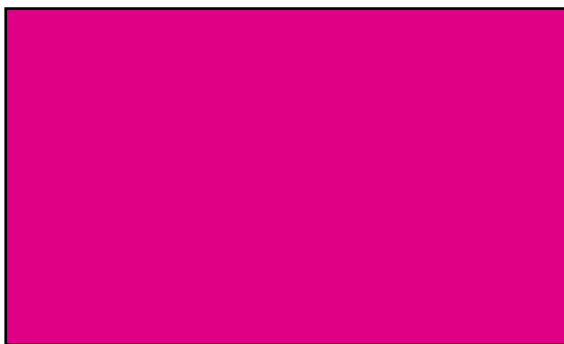
3-3. Tally & Audio

1. Tally

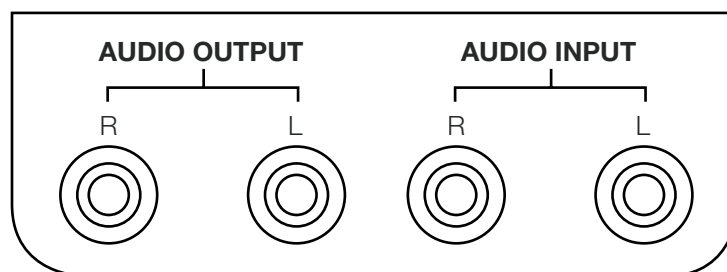


Three Tally Colors are supported and selected by external contact terminal

2. Audio Input Module



The Analog Audio In/Out module.
(Not available for 8.4")



Analog Audio L/R Input Terminal (RCA Phone)

The external audio signal is available through the speaker by a Menu setting.

Analog Audio L/R Output Terminal (RCA Phone)

Terminal for output of De-embedded Analog Audio signal from SDI.
The 16ch Audio Signal output is available by a Menu setting.

3. Controls continued

3-4. Function Buttons for FUNCTION 1 and FUNCTION 2

Used to confirm the operating status. Some functions are not supported, depending on the installed options.

Functions:

1. H/V Delay (on/off)
2. BLUE/GRAY
3. Audio Display (on/off)
4. Pixel to Pixel (on/off)
5. Anamorphic (on/off)
6. PaP (on/off)
7. Waveform Display (on/off)
8. Time Code Display (on/off)
9. SD Aspect (16:9, 4:3)
10. 1:1 Scan
11. Audio Mute (on/off)

The FUNCTION 1 and FUNCTION 2 buttons (F1, F2) cannot be assigned the same functions.

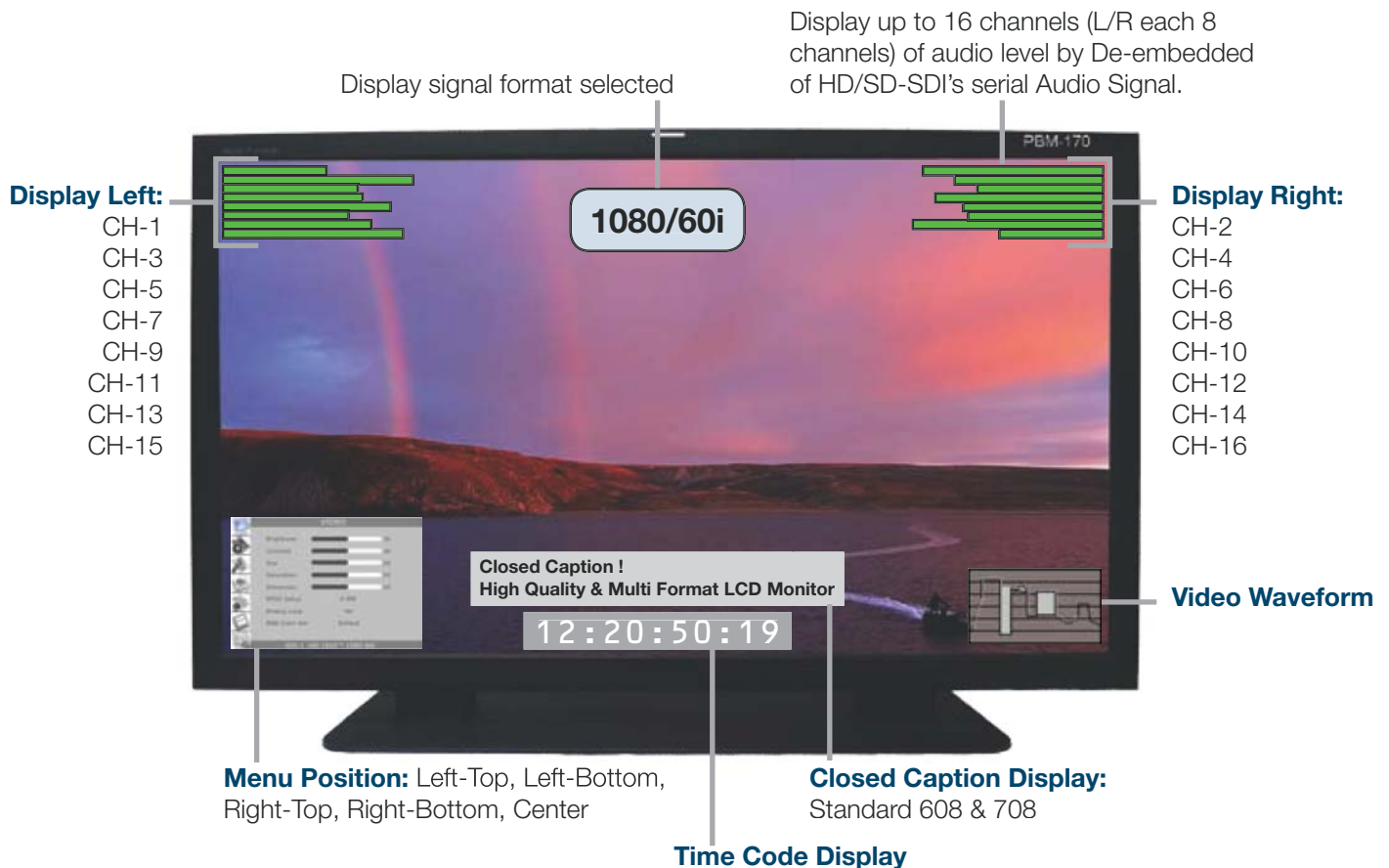
Note:

When the input modes are DVI, PC-RGB, YPbPr or RGB, the following functions are not available:

- 1) H/V Delay
- 2) GRAY (MONO)
- 3) MARKER

4. Display Status

Used to confirm the operating status. Some functions are not supported, depending on the installed options.



4. Display Status continued

1. Audio Level Display Mode (PBM-184/117/120/124/126/132/137/142/147/155)

Set “on/off” and “position” from the Audio Level Display Menu.

ON: Left (even channel), Right (odd channel); OFF: Hide Level Bar.

Display Position: Position audio display at the top or bottom of the screen.

2. Waveform Monitor Display, Vectroscope (PBM-184/117/120/124/126/132/137/142/147/155)

Set “on/off” and “position” from the Waveform Display, Vectroscope Menu.

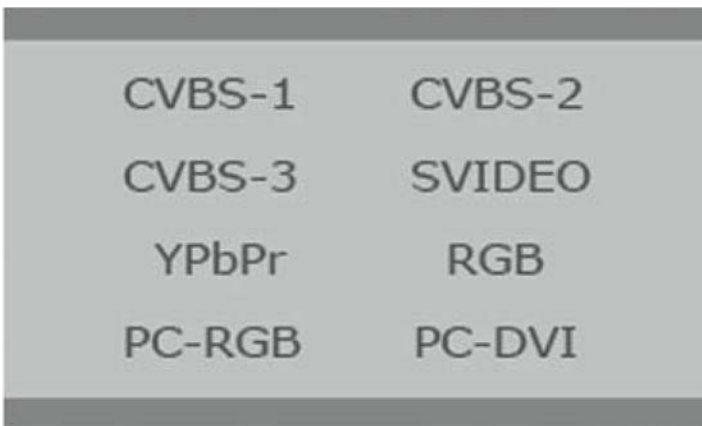
Display Position: Position audio display at the top or bottom of the screen.

3. Time Code Display (PBM-184/117/120/124/126/132/137/142/147/155)

Set “on/off” and “position” from the Time Code Display Menu.

Display Position: Position the Time Code Display at the middle of the screen.

5. Input Select Menu



OSD window for INPUT Select Button.

Move the menu position by using UP (▲), DOWN (▼) and INPUT button. Switch to another menu or mode by pressing ENTER button.

- Composite signal (CVBS1,2,3) uses the same inputs as YPbPr and RGB input signals.
- Composite and Y/C (S-VIDEO) signals are not recognized in YPbPr mode.



When changing the input signal, there is a possibility that the signal will not be detected, or the mode indication may be incorrect, or the screen size may be displayed incorrectly.

6. Control and Use of OSD Menu

1. Press "MENU" button for OSD Display .
2. Press "ENTER" button after menu selection by using UP (▲) / DOWN (▼) buttons.
3. Adjust status on the selected item with ENTER and UP (▲) / DOWN (▼) buttons.
4. Move to previous menu by using MENU button.
5. Close the OSD screen by holding MENU continuously.



If there is no input signal or no detected signal, the menu might be erased.



If you set the menu with an unstable signal status, it may cause an error.

OSD Menu Icons



6-1. Video



- **Brightness**

- **Contrast**

- **Hue**

- **Saturation**

- **Sharpness**

- **RGB Color Set**

Controls RGB Level in YPbPr, RGB and PC-RGB input mode. Select Default or User Adjust.

NTSC Setup

Select 0 IRE or 7.5 IRE. 7.5 IRE is used in NTSC or YUV mode.

Analog Loop

This function is only available on products with the Loop Terminal. Set up On/Off impedance of Analog Loop output terminals.

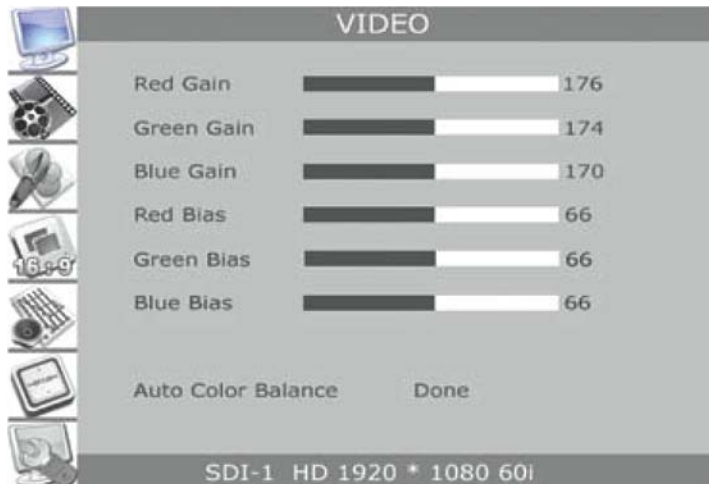
Yes: using Loop output. **No:** Not using Loop output.



When Loop terminal is not used, select Analog Loop 'No'.

6. Control and Use of OSD Menu continued

6-1-1. Video (RGB, YPbPr)



This function allows RGB Color Adjustment when using YPbPr, RGB or PC-RGB input mode.

- Red Gain
- Green Gain
- Blue Gain
- Red Bias
- Green Bias
- Blue Bias

Auto Color Balance sets Gain Bias of RGB automatically.

* Factory default is the standard value for RGB Gain and Bias.

6-2. Display



Sets screen size mode or display status.

- **SD Aspect**
Set screen mode to 16:9 or 4:3.
- **1:1 Scan**
ON: Operate display at input Pixel size in SD mode.
OFF: Scale display to LCD size in SD mode.
- **Anamorphic**
Resize display to Anamorphic screen (2.35:1) on 720/50P or 59.94P mode.

PaP Main

Select input of left (main) screen in from PaP (Picture-and-Picture) mode. Any input signal can be selected (SDI1,2, CVBS1,2,3, S-VIDEO, YPbPr, RGB, PC-RGB, DVI).

PaP Sub

Select input of right (sub) screen from PaP mode. Menu switches to input mode automatically when selecting main screen. Main and sub-screen cannot select the same signal and type simultaneously.

Waveform Display & Vectroscope: (PBM-184/117/120/124/126/132/142/147/155)

Display Video waveform of the HD/SD-SDI input signal on the screen. Select display position: Left Upper, Right Upper, Left Bottom, Right Bottom

Time Code Display: (PBM-184/117/120/124/126/132/142/147/155)

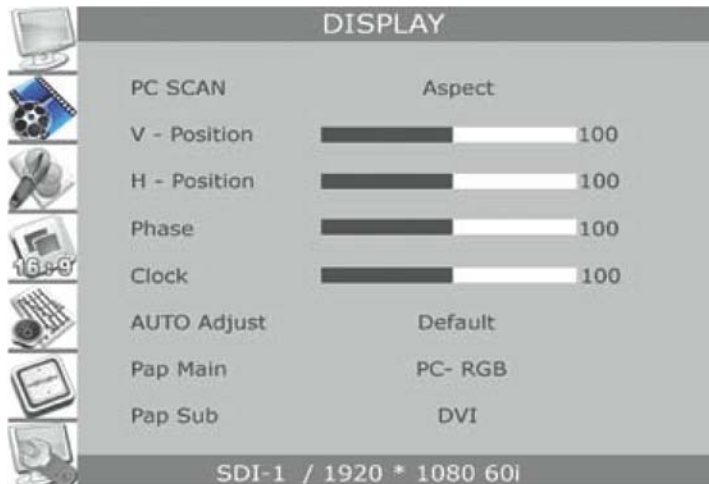
Display Time Code from VITC of HD/SD-SDI input signal. Select display position: Upper, Lower.

Pixel to Pixel

Display video at 1920x1080 without scaling down. The active display can be set to Left Upper, Right Upper, Left Bottom, Right Bottom and Center. (Available on 8.4", 17" and 19" product only.)

6. Control and Use of OSD Menu continued

6-2-1. Display (PC-RGB)



This is displayed when PC-RGB signal is selected.

- **PC SCAN**
Set output status as Fill or Aspect mode.
- **V. Position**
Adjust vertical position of screen for PC mode input.
- **H. Position**
Adjust horizontal position of screen for PC mode input.
- **Phase**
Adjust digital sampling phase of SC of input signal (VGA mode).

Clock

Used to adjust digital sample clock in PC-RGB mode.(VGA)

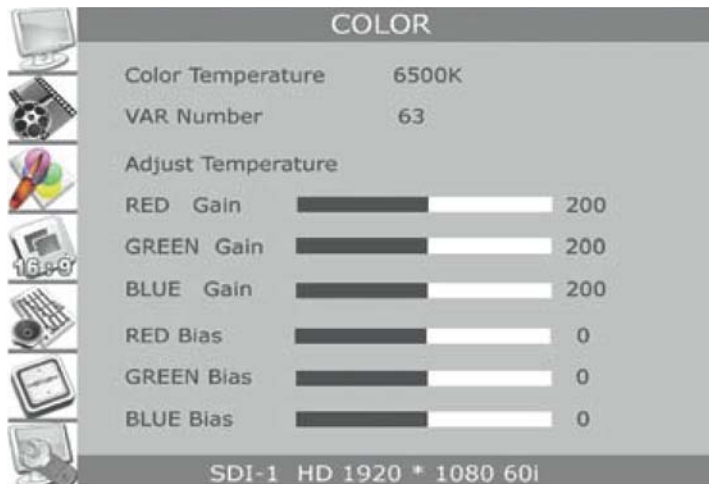
AUTO Adjust

Used to adjust the best display position automatically in PC-RGB mode.(VGA)

PaP Main, PaP Sub (Option)

Select input of right (Main) / left (Sub) screen in PaP mode.

6-3. Color



- **Color Temperature**
Sets the color temperature (white balance) on screen among USER, 3200°K, 5400°K, 6500°K, 9300°K, and VAR.
- **VAR Number**
Selectable in steps from 1 to 63 from 3000°K to 9300°K.
- **USER**
Adjust RGB Level and color temperature.
- **R,G,B Gain**
Control each R, G, B Gain in USER mode.
- **R,G,B Bias**
Control each R, G, B Bias in USER mode.

* Use professional calibrator (not included) to adjust Color Temperature (White Balance) to precise adjustment.

* Color matrix Parameters use ITU Standard color. EBU color is set assuming parameters for an LCD panel; the best color is produced according to the standard for SDTV (ITU-R/BT.601) and HDTV (ITU-R/BT.709).

6. Control and Use of OSD Menu continued

6-4. Marker



MARKER & OSD	
Marker 16:9	15 : 9
Safety Area 16:9	90%
Safety Area 4:3	90%
Center Marker	OFF
Marker Color	White
Status.Menu Display Time	10
Status/Menu Blend	2
Menu Position	Right Top
Analog Closed Caption	CC1

• Marker 16:9

Set the type of marker when the aspect ratio setting is 16:9.

Type of Marker

4:3,15:9,14:9,13:9, 1.85:1, 2.35:1, OFF

• Safe Area 16:9

Select the size of the Safe Area in 16:9 HD screen: 95%, 93%, 90%, 88%, 85%, 80%, OFF

• Safe Area 4:3

Select the range of the Safe Area in 4:3 SD mode: 95%, 93%, 90%, 88%, 85%, 80%, OFF

Center Marker

Select ON/OFF for center marker.

Marker Color

Select Marker color: White, Red, Green, Blue, Gray, Black.

Marker Back Color

Select Marker among Normal, Halftone or Black.

Status/Menu Display

Set time and menu information. Select one of 5, 10, 15, 20, 25, 30, 60 sec.

Status/Menu Blend

Set transparency of menus and indication windows on the screen.

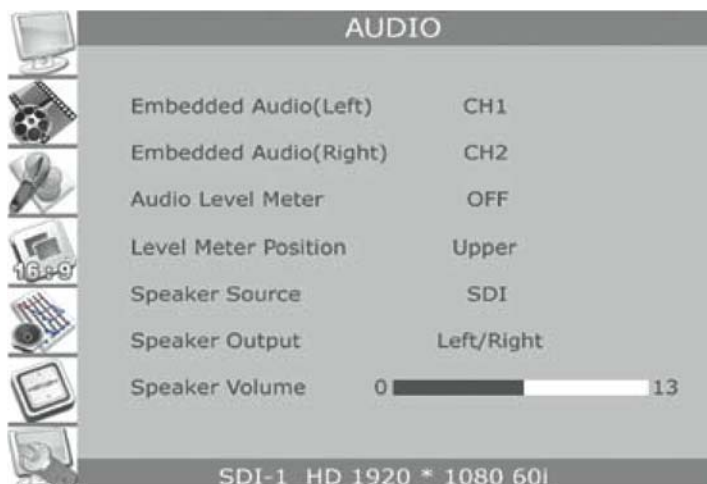
Menu Position


Select for Center, Left Top, Right Top, Left Bottom, Right Bottom.

Closed Caption Decoding

Select OFF, 608, 708.

6-5. Audio



AUDIO	
Embedded Audio(Left)	CH1
Embedded Audio(Right)	CH2
Audio Level Meter	OFF
Level Meter Position	Upper
Speaker Source	SDI
Speaker Output	Left/Right
Speaker Volume	0  13

• Embedded Audio (L: left)

Select Digital Audio (L) output from 1 to 16 channels when using SDI input.

• Embedded Audio (R: right)

Select Digital Audio (R) output from 1 to 16 channels when using SDI input.

• Audio Level Meter

Select ON/OFF for the function which can display the SDI Embedded Audio signal level on a Level Meter on the screen.

• Level Meter Position

Select position of Audio Level Meter as Upper/Lower screen.

Speaker Source

Select Speaker between Line (external input) and SDI (De-embedded).

Speaker Output

Select Speaker output status among L, R, L/R (stereo), MIX (L+R) and OFF.

Speaker Volume

Select Speaker output level.



When Loop terminal is not used, select Analog Loop 'No'.

6. Control and Use of OSD Menu continued

6-6. GPI Control



The screenshot shows the GPI CONTROL menu with the following settings:

Item	Value
GPI Control	On
GPI Port 1	SDI-1 Input
GPI Port 2	SDI-2 Input
GPI Port 3	CVBS1 Input
GPI Port 4	DVI Input
GPI Port 5	Tally Red
GPI Port 6	Tally Green
GPI Port 7	Key_Standby(Fixed)
Remote ID Number	0
Serial Remote	Off

SDI-1 HD 1920 * 1080 60i

- **GPI Control**

Select external control ON/OFF. It is not possible to control with Remote terminal when it is OFF.

- **GPI Port 1,2,3,4,5,6,7**

Assign each GPI Port of external Remote Control Terminal (RJ-45). Double function for each port is prohibited.



GPI Port 7 is fixed at Standby.

- **Remote ID Number**

Set the number when controlling IR remote controller (Option).

- **Serial Remote**

Select whether to use external Serial Port control or not.

Front Key and IR remote control will be unavailable when Serial Remote is ON.



To terminate Serial Remote status (Update, Remote ON), press Menu button for 3 sec.

6-7. System Configuration



The screenshot shows the SYSTEM Configuration menu with the following settings:

Item	Value
Function 1	PaP On/Off
Function 2	H/V Delay
Status/Menu Display	0
Status/Menu Blend	2
Setup Load	Factory Default
Setup Save	User 1
Firmware Version	1.00
Operating Time	150 Hour

SDI-1 HD 1920 * 1080 60i

- **Function 1,2**

Select the functions to be assigned to individual buttons F1 and F2.

- **Back Light**

Adjust brightness of LCD Panel.

- **Update Firmware**

Used to update system software.

Setup Load: This is used to make a group change of the function values which have been set.
Factory: To return to the factory default.

User 1,2,3: Menu setting is transferred to the Menu of 1,2,3 to be saved by user.

Setup Save: Save current menu setting into one of USER 1,2,3.

USER 1,2,3 can be recalled by Setup Load.

Firmware Version: System software version.

Operating Time: Product operating time.



To terminate Update Firmware status, press Menu button for 3 sec.

7. How to use Program Update Port

Program Update Port (RJ-11)

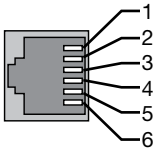
This is for upgrading firmware program, Color Temperature, Gamma and Color Measure. It also can be used for controlling multiple monitors by using exclusive control program on your PC.



Please consult with authorized technician for update program or display adjustment.



In case program path is wrong or disconnected, a Failure message will be displayed on information window.
For detailed information, please consult with the Service Center.



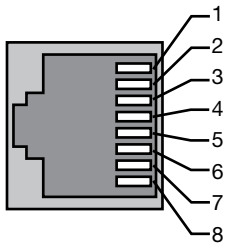
Update (RJ-11)

Update Terminal Assignment			
1 PIN	NC	4 PIN	GND
2 PIN	RX+	5 PIN	TX+
3 PIN	RX-	6 PIN	TX-

8. Remote Terminal Assignment

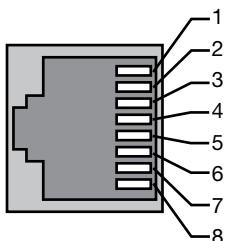
8-1. Remote Terminal (RJ-45) Assignment

Each terminal function can be set from the GPI CONTROL SETUP Menu.



Remote (RJ-45)

Remote PIN Assignment			
1 PIN	GPI Port 1	5 PIN	GPI Port 5
2 PIN	GPI Port 2	6 PIN	GPI Port 6
3 PIN	GPI Port 3	7 PIN	GPI Port 7 (Stand by/Power ON/OFF)
4 PIN	GPI Port 4	8 PIN	COMMON (GND)



Through (RJ-45)

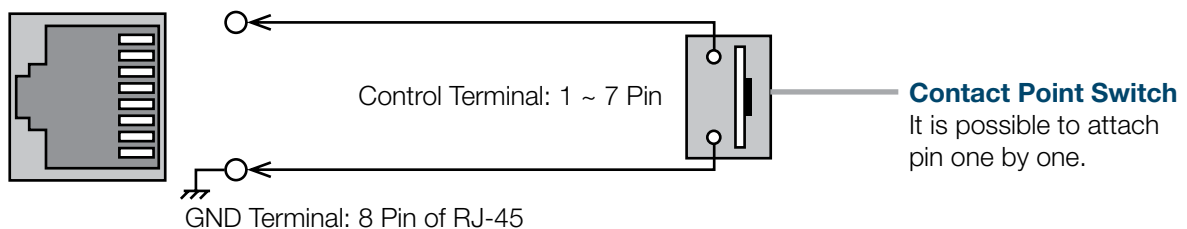
“Through Terminal” is the same function as “Remote Terminal”.

This is used to connect with Remote Terminal.

(Through Terminal: Option)

8-2. How to connect GPI Port

Connect with External contact point.



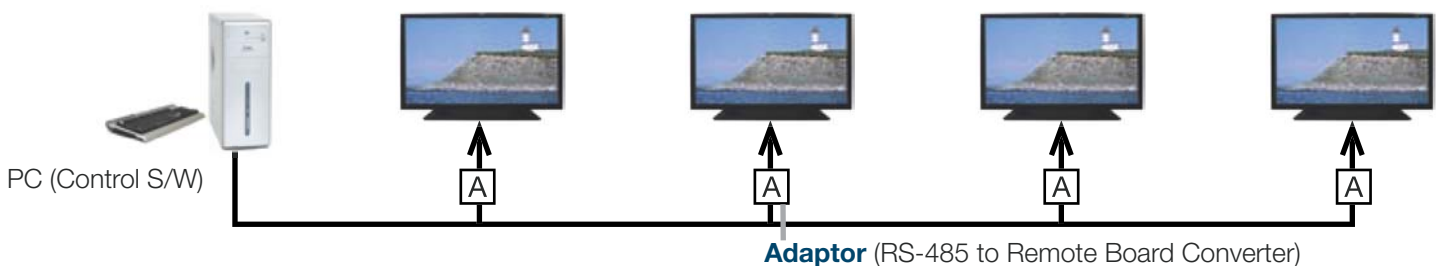
8. Remote Terminal Assignment continued

8-2. Remote Terminal Assignment

Port Assignment Items	Function	Operating conditions	
VBS1 Input	Switches the input VBS1		
VBS2 Input	Switches the input VBS2		
VBS3 Input	Switches the input VBS3		
SDI1 Input	Switches the input SDI-1		
SDI2 Input	Switches the input SDI-2		
DVI Input	Switches the input DVI		
PC-R/G/B Input	Switches the input PC-RGB		
Y/Pb/Pr Input	Switches the input YUV		
RGB Input	Switches the input RGB		
Y/C Input	Switches the input Y/C		
PaP on/off	PaP mode ON/OFF		
Waveform/ Time Code	Waveform/ Time Code On/Off		
Audio Level Display on/off	Audio Level ON/OFF		Edge operation
Pixel to Pixel on/off	Pixel to Pixel ON/OFF		Level Operation (Connected: ON, Open: Off)
Anamorphic on/off	Anamorphic ON/OFF		
Tally Red on/off	Tally Lamp Red ON/OFF	Edge operation	
Tally Green on/off	Tally Lamp Green ON/OFF		
MONO on/off	Screen Mono ON/OFF		
BLUE on/off	Screen Blue Only ON/OFF		
MARKER 16:9 on/off	Marker 16:9 ON/OFF		
MARKER on/off	Marker 4:3 ON/OFF		
SD ASPECT on/off	SD Aspect ON/OFF		
1:1 SCAN on/off	1:1 SCAN ON/OFF		
Center Marker on/off	Center Marker ON/OFF		
H/V Delay on/off	H/V Delay ON/OFF		
Safe 16:9	Adjust Safe area when 16:9		
Safe 4:3	Adjust Safe area when 4:3		
SCAN	Select the screen size as per front button function		
UP ()	Cursor UP when Menu setup		
DOWN ()	Cursor DOWN when Menu setup		
MENU	Menu ON/OFF		
ENTER	Enter button ON/OFF		
STANDBY	Power ON/OFF	Operating conditions	

8-3. How to connect and control multiple Monitors

You can connect multiple monitors by using an optional adaptor (RS-485 to Remote Board), PC and appropriate program.



Specifications of this product may be changed without prior notice.

9. List of Compatible Signal Formats

9-1. Video Signal

No	Input Signal Formats	Composite Video	Component		HD/SD-SDI	DVI
			Y,Pb,Pr	R,G,B(sog)		
1	NTSC (525/59.94i)	✓	-	-	-	-
2	PAL (625/50i)	✓	-	-	-	-
3	720x480/59.94i(SD/NTSC)	-	✓	✓	✓	-
4	720x480/59.94p,60p	-	✓	-	-	✓
5	720x576/50i (SD/PAL)	-	✓	✓	✓	-
6	720x576/50p	-	✓	-	-	✓
7	1280x720/59.94p	-	✓	-	✓	✓
8	1280x720/60p	-	✓	-	✓	✓
9	1280x720/50p	-	✓	-	✓	✓
10	1920x1035/59.94i	-	✓	-	✓	-
11	1920x1035/60i	-	✓	-	✓	-
12	1920x1080/24sf	-	✓	-	✓	-
13	1920x1080/23.98sf	-	✓	-	✓	-
14	1920x1080/24p	-	✓	-	✓	-
15	1920x1080/23.98p	-	✓	-	✓	-
16	1920x1080/25p	-	✓	-	✓	✓
17	1920x1080/29.97p	-	✓	-	✓	✓
18	1920x1080/30p	-	✓	-	✓	✓
19	1920x1080/50p	-	-	-	✓ Dual	✓
20	1920x1080/50i	-	✓	-	✓	✓
21	1920x1080/59.94p	-	-	-	✓ Dual	✓
22	1920x1080/59.94i	-	✓	-	✓	✓
23	1920x1080/60p	-	-	-	✓ Dual	✓
24	1920x1080/60i	-	✓	-	✓	✓
25	2048x1080/24psf,sf	-	-	-	✓	-

9-2. Computer Signal (PC-RGB/DVI)

No	Input Signal Names	Screen Resolution	PC-RGB	DVI	Vertical Frequency
1	VGA	640x480	✓	✓	60Hz ~ 100Hz
2	SVGA	800x600	✓	✓	56Hz ~ 85Hz
3	XGA	1024x768	✓	✓	86Hz ~ 100Hz
4	WXGA	1280x768	✓	✓	50Hz ~ 85Hz
5	SXGA	1280x1024	✓	✓	60Hz ~ 76Hz
6	WSXGA+	1680x1050	✓	✓	50Hz~60Hz
7	UXGA	1600x1200	✓	✓	60Hz Only
8	WUXGAx	1920x1080	-	✓	60Hz
9	WUXGA	1920x1200	-	✓	60Hz (PC Only)

10. Specifications

	Function	PBM-070	PBM-184	PBM-117
SDI-INPUT	Input Channel	1 Channel	2 Channels	2 Channels
	Input Signal	800mVp-p ± 10%, 75		
	HD-SDI Signal	Max, 1.485Gbps		
	SD-SDI Signal	Max, 270Mbps		
SDI-OUTPUT	LOOP Output Channel	1 Channel, Selected Output		
	Output Signal	800mVp-p ± 10%, 75		
VGA INPUT	Input Channel	1 Channel		
	Analog Level	R, G, B : 0.7Vp-p, H/V Sync : 4V ± 1Vp-p		
	Input Mode	640 x 480 up to 1280 x 1024, max 1600 x 1200		
DVI INPUT	Input Channel	1 Channel		
	DVI - Interface	TMDS Single Link (DVI Standard)		
	DVI Digital Mode	640 x 480 up to 1920 x 1200		
ANALOG INPUT	Input Channel	3 Channels		
	CVBS	3ch,1.0Vp-p , NTSC/PAL		
	YC(S-Video)	Y :1.0Vp-p, C:0.286Vp-p		
	Component (Y, Pb, Pr)	Y :1.0Vp-p, Pb :0.7Vp-p, Pr :0.7Vp-p		
	Component (RGB)	G :1.0Vp-p(with Sync), B :0.7Vp-p, R :0.7Vp-p		
	Analog Video Format	480i(59.94),576i(50)		
SDI DIGITAL FORMAT	SMPTE-274M/295M (1920x1080)	1080i(60/59.94/50)1080p(30/29.97/24/25/24sf/23.98/23.98sf)		
	SMPTE-296M (1280x720)	720p(60/59.94/50)		
	SMPTE-260M (1920x1035)	1035i(60/59.94)		
	SMPTE-259M/125M/ ITU-R BT656 (720x480/576)	480i(59.94) 576i(50)		
SPEAKER	Internal	1	-	2
LCD	Size	7"	8.4"	17"
	Resolution	800 X 480	1024 X 768	1366 X 768
	Pixel Pitch	0.19 mm	0.166 mm	0.291 mm
	Color	16.7M	16.7M	16.7M
	Viewing Angle	R/L:170°, U/D:170°	R/L:170°, U/D:170°	R/L:176°, U/D:176°
	Luminance of White	300 cd	400 cd	450 cd
	Contrast	300 : 1	400 : 1	900 : 1
	Display Area (H X V)	152.4 X 91.44 mm	170 X 127 mm	372.48 X 223.48 mm
POWER		DC Adaptor(12V 5A)	DC Adapter(12V 5A)	AC 100-230V / DC Adapter(12V 5A)
OPERATING TEMP.	0°C ~40°C(32°F~104°F)			
WEIGHT (w/o Stand)	2 kg - 4.210 lbs	2.2 kg - 4.85 lbs	6.4 kg - 14.11 lbs	
DIMENSIONS (W x H x D) w/o Box & Stand	205 x 132 x 56 mm 8" x 5.25" x 2.25"	207 x 177 x 82 mm 8.25" x 7" x 3.25"	421.6 x 309 x 95.3 mm 1' 4 .5" x 1'.25" x 3.75"	
ACCESSORY	Power Cord, Manual, DVI to VGA Adapter	Power Cord, Manual, DVI to VGA Adapter	Power Cord, Manual, DVI to VGA Adapter, Stand Mount	
OPTION	Hood, Rack Mount, Carrying Case, V-Mount, Vertical/Wall Mount			

10. Specifications continued

	Function	PBM-120	PBM-124	PBM-126
SDI-INPUT	Input Channel	2 Channels		
	Input Signal	800mVp-p ± 10%, 75		
	HD-SDI Signal	Max, 1.485Gbps		
	SD-SDI Signal	Max, 270Mbps		
SDI-OUTPUT	LOOP Output Channel	1 Channel, Selected Output		
	Output Signal	800mVp-p ± 10%, 75		
VGA INPUT	Input Channel	1 Channel		
	Analog Level	R, G, B : 0.7Vp-p, H/V Sync : 4V ± 1Vp-p		
	Input Mode	640 x 480 up to 1280 x 1024, max 1600 x 1200		
DVI INPUT	Input Channel	1 Channel		
	DVI - Interface	TMDS Single Link (DVI Standard)		
	DVI Digital Mode	640 x 480 up to 1920 x 1200		
ANALOG INPUT	Input Channel	3 Channels		
	CVBS	3ch,1.0Vp-p , NTSC/PAL		
	YC(S-Video)	Y :1.0Vp-p, C:0.286Vp-p		
	Component (Y, Pb, Pr)	Y :1.0Vp-p, Pb :0.7Vp-p, Pr :0.7Vp-p		
	Component (RGB)	G :1.0Vp-p(with Sync), B :0.7Vp-p, R :0.7Vp-p		
	Analog Video Format	480i(59.94),576i(50)		
SDI DIGITAL FORMAT	SMPTE-274M/295M (1920x1080)	1080i(60/59.94/50)1080p(30/29.97/24/25/24sf/23.98/23.98sf)		
	SMPTE-296M (1280x720)	720p(60/59.94/50)		
	SMPTE-260M (1920x1035)	1035i(60/59.94)		
	SMPTE-259M/125M/ ITU-R BT656 (720x480/576)	480i(59.94) 576i(50)		
SPEAKER	Internal	2	2	2
LCD	Size	20"	24"	26"
	Resolution	1680 X 1050	1920 X 1200	1920 X 1200
	Pixel Pitch	0.258 mm	0.270 mm	0.2865 mm
	Color	16.7M	16.7M	16.7M
	Viewing Angle	R/L:178° , U/D:178°	R/L : 178° , U/D : 178°	R/L : 178° , U/D : 178°
	Luminance of White	400 cd	300 cd	500 cd
	Contrast	600 : 1	800 : 1	800 : 1
	Display Area (H X V)	408.24 X 255.15 mm	433.4 X 270.90 mm	550 X 343.8 mm
POWER		AC 100 - 230V/ DC	AC 100 - 230V	AC 100 - 230V
OPERATING TEMPERATURE		0°C ~ 40°C (32°F~104°F)		
WEIGHT (w/o Stand)		12 kg - 24.455 lbs	14.2 kg - 31.306 lbs	16 kg - 35.274 lbs
DIMENSIONS (W x H x D) w/o Box & Stand		467.6 x 342 x 102.9 mm 1' 6.5" x 1' 1.5" x 4"	554.6 x 395 x 90.8 mm 1' 9.75" x 1' 3.5" x 3.5"	591 x 422 x 104.5 mm 1' 11.25" x 1' 4.5" x 4"
ACCESSORY		Power Cord, Manual, DVI to VGA Adapter, Desk Mount		
OPTION		Rack Mount, Wall Bracket, Carrying Case		

10. Specifications continued

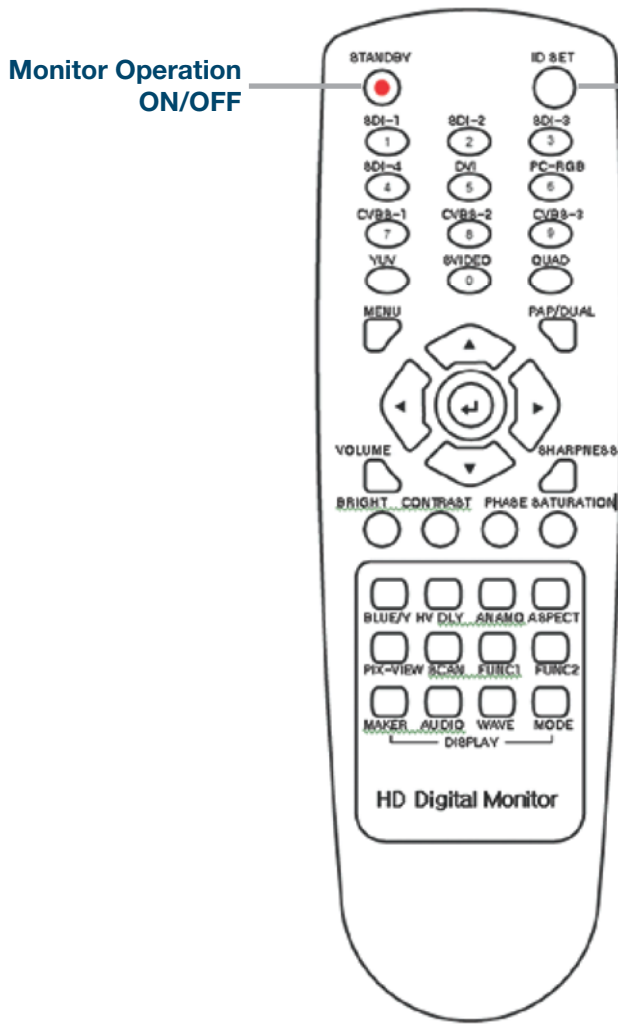
	Function	PBM-132	PBM-137	PBM-142
SDI-INPUT	Input Channel	2 Channels		
	Input Signal	800mVp-p ± 10%, 75		
	HD-SDI Signal	Max, 1.485Gbps		
	SD-SDI Signal	Max, 270Mbps		
SDI-OUTPUT	LOOP Output Channel	1 Channel, Selected Output		
	Output Signal	800mVp-p ± 10%, 75		
VGA INPUT	Input Channel	1 Channel		
	Analog Level	R, G, B : 0.7Vp-p, H/V Sync : 4V ± 1Vp-p		
	Input Mode	640 x 480 up to 1280 x 1024, max 1600 x 1200		
DVI INPUT	Input Channel	1 Channel		
	DVI - Interface	TMDS Single Link (DVI Standard)		
	DVI Digital Mode	640 x 480 up to 1920 x 1200		
ANALOG INPUT	Input Channel	3 Channels		
	CVBS	3ch, 1.0Vp-p, NTSC/PAL		
	YC(S-Video)	Y : 1.0Vp-p, C: 0.286Vp-p		
	Component (Y, Pb, Pr)	Y : 1.0Vp-p, Pb : 0.7Vp-p, Pr : 0.7Vp-p		
	Component (RGB)	G : 1.0Vp-p(with Sync), B : 0.7Vp-p, R : 0.7Vp-p		
	Analog Video Format	480i(59.94), 576i(50)		
SDI DIGITAL FORMAT	SMPTE-274M/295M (1920x1080)	1080i(60/59.94/50)1080p(30/29.97/24/25/24sf/23.98/23.98sf)		
	SMPTE-296M (1280x720)	720p(60/59.94/50)		
	SMPTE-260M (1920x1035)	1035i(60/59.94)		
	SMPTE-259M/125M/ ITU-R BT656 (720x480/576)	480i(59.94) 576i(50)		
SPEAKER	Internal	2	2	2
LCD	Size	32"	37"	42"
	Resolution	1366 X 768	1920 X 1080	1920 X 1080
	Pixel Pitch	0.170x0.510 mm	0.42675 mm	0.4845 mm
	Color	16.7M	16.7M	16.7M
	Viewing Angle	R/L : 178° , U/D : 178°	R/L:178°, U/D:178°	R/L : 178° , U/D : 178°
	Luminance of White	500 cd	500 cd/m ²	500 cd
	Contrast Ratio	1000 : 1	800:1(1600:1)	900 : 1
	Display Area (H X V)	697.6 X 392.2 mm	0.42675 mm	930.24 X 523.01 mm
POWER		AC 100 - 230V/ DC	AC 100 - 230V	AC 100 - 230V
OPERATING TEMPERATURE	0°C ~ 40°C (32°F~104°F)			
WEIGHT (w/o Stand)	30 kg - 66.139 lbs	36 kg - 79.366 lbs	40 kg - 88.185 lbs	
DIMENSIONS (W x H x D) w/o Box & Stand	783.4 x 488.25 x 98.6 mm 2' 6.75" x 1' 7.25" x 4"	907.6 x 558.5 x 105.6 mm 2' 11.75" x 1' 11.75" x 4.25"	1018.4 x 620 x 106 mm 3' 4" x 2' 5" x 4.25"	
ACCESSORY	Power Cord, Manual, DVI to VGA Adapter, Desk Mount			
OPTION	Wall Bracket, Carrying Case			

10. Specifications continued

	Function	PBM-147	PBM-155	PBM-170
SDI-INPUT	Input Channel	2 Channels		
	Input Signal	800mVp-p ± 10%, 75		
	HD-SDI Signal	Max, 1.485Gbps		
	SD-SDI Signal	Max, 270Mbps		
SDI-OUTPUT	LOOP Output Channel	1 Channel, Selected Output		
	Output Signal	800mVp-p ± 10%, 75		
VGA INPUT	Input Channel	1 Channel		
	Analog Level	R, G, B : 0.7Vp-p, H/V Sync : 4V ± 1Vp-p		
	Input Mode	640 x 480 up to 1280 x 1024, max 1600 x 1200		
DVI INPUT	Input Channel	1 Channel		
	DVI - Interface	TMDS Single Link (DVI Standard)		
	DVI Digital Mode	640 x 480 up to 1920 x 1200		
ANALOG INPUT	Input Channel	3 Channels		
	CVBS	3ch,1.0Vp-p , NTSC/PAL		
	YC(S-Video)	Y :1.0Vp-p, C:0.286Vp-p		
	Component (Y, Pb, Pr)	Y :1.0Vp-p, Pb :0.7Vp-p, Pr :0.7Vp-p		
	Component (RGB)	G :1.0Vp-p(with Sync), B :0.7Vp-p, R :0.7Vp-p		
	Analog Video Format	480i(59.94),576i(50)		
SDI DIGITAL FORMAT	SMPTE-274M/295M (1920x1080)	1080i(60/59.94/50)1080p(30/29.97/24/25/24sf/23.98/23.98sf)		
	SMPTE-296M (1280x720)	720p(60/59.94/50)		
	SMPTE-260M (1920x1035)	1035i(60/59.94)		
	SMPTE-259M/125M/ ITU-R BT656 (720x480/576)	480i(59.94) 576i(50)		
SPEAKER	Internal	2	2	2
LCD	Size	47"	55"	70"
	Resolution	1920 X 1080	1920 X 1080	1920 X 1080
	Pixel Pitch	0.5415 mm	0.630 mm	0.807 mm
	Color	16.7M	16.7 M	16.7 M
	Viewing Angle	R/L : 178° , U/D : 178°	R/L : 178° , U/D : 178°	R/L : 178° , U/D : 178°
	Luminance of White	500 cd	500 cd	600 CD
	Contrast Ratio	1000 : 1	1200:1	1500:1
	Display Area (H x V)	1039.6 x 584.8 mm	1209.6 x 680.4 mm	1549.4 x 871.56 mm
POWER		AC 100 - 230V/ DC	AC 100 - 230V	AC 100 - 230V
OPERATING TEMPERATURE		0°C ~ 40°C (32°F~104°F)		
WEIGHT (w/o Stand)		44 kg - 97.003 lbs	52 kg - 114.64 lbs	75 Kg - 163.142 lbs
DIMENSIONS (W x H x D) w/o Box & Stand		1128.6 x 683.4 x 105.9 mm 3' 8.5" x 2' 3" x 4.25"	1298.4 x 778.8 x 100.95 mm 4' 3" x 2' 6.75" x 4"	1664 x 986 x 130 mm 5' 5.5" x 3' 2.75" x 5.125"
ACCESSORY		Power Cord, Manual, DVI to VGA Adapter, Desk Mount		
OPTION		Wall Bracket, Carrying Case		

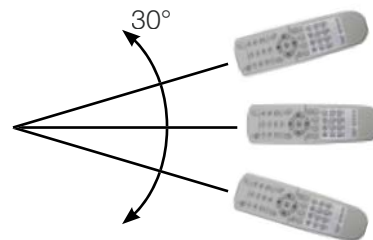
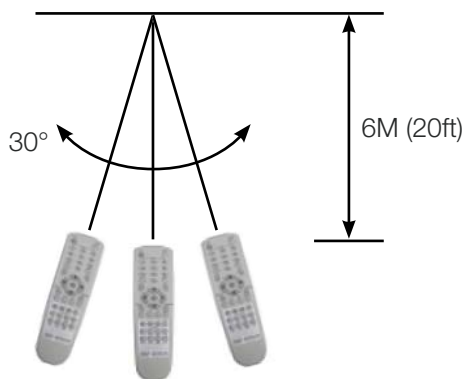
11. IR Remote Controller

IR Remote Controller is for 32", 37", 42", 47", 55", and 70".



- **How to pair IR Remote with display:**
 1. Hold Remote Controller close to IR receiver on monitor and press the related ID number.
 2. Holding ID SET button more than 2 seconds, ID=XX message will be displayed and then blink.
 3. Monitor will now operate with controller.
- **How to disable IR Remote:**
 1. Hold Remote Controller close to the IR receiver and press a different ID number, which is not assigned.
 2. After pressing ID SET button more than 2 seconds, Remote Disable message will be displayed and then it will disable the remote operation.
- **To control multiple monitors simultaneously with one IR R/C, please use the same IR Remote ID number.**
- **Individual IR control of multiple monitors requires either multiple R/C's, or GPI control.**

Operation Range of IR Remote Controller



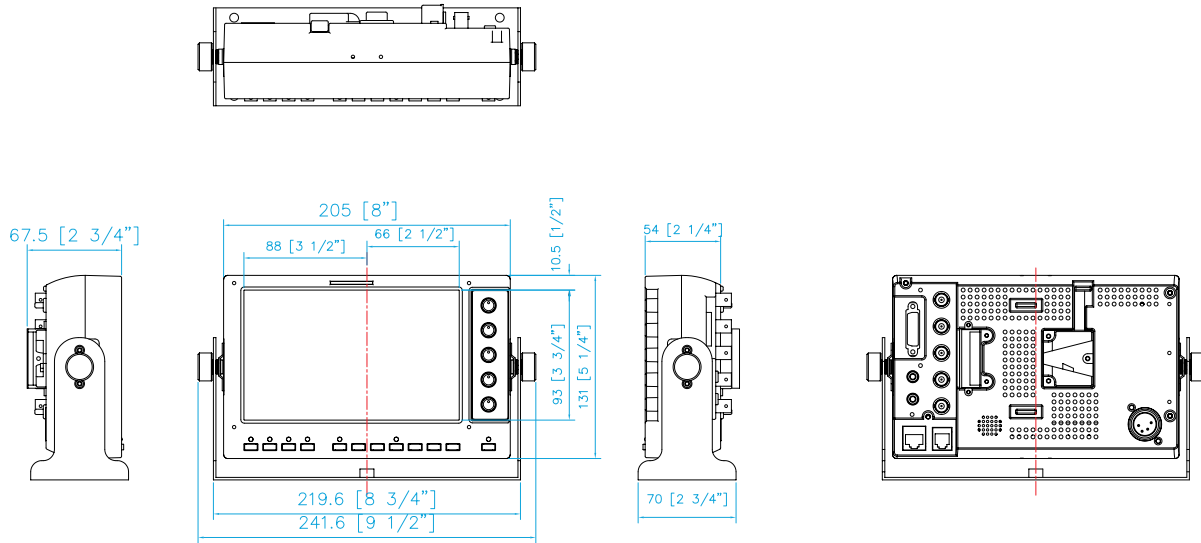
Operation Range of IR Remote Controller is 30° (up, down, left and right) and operation distance is about 6M (20ft).



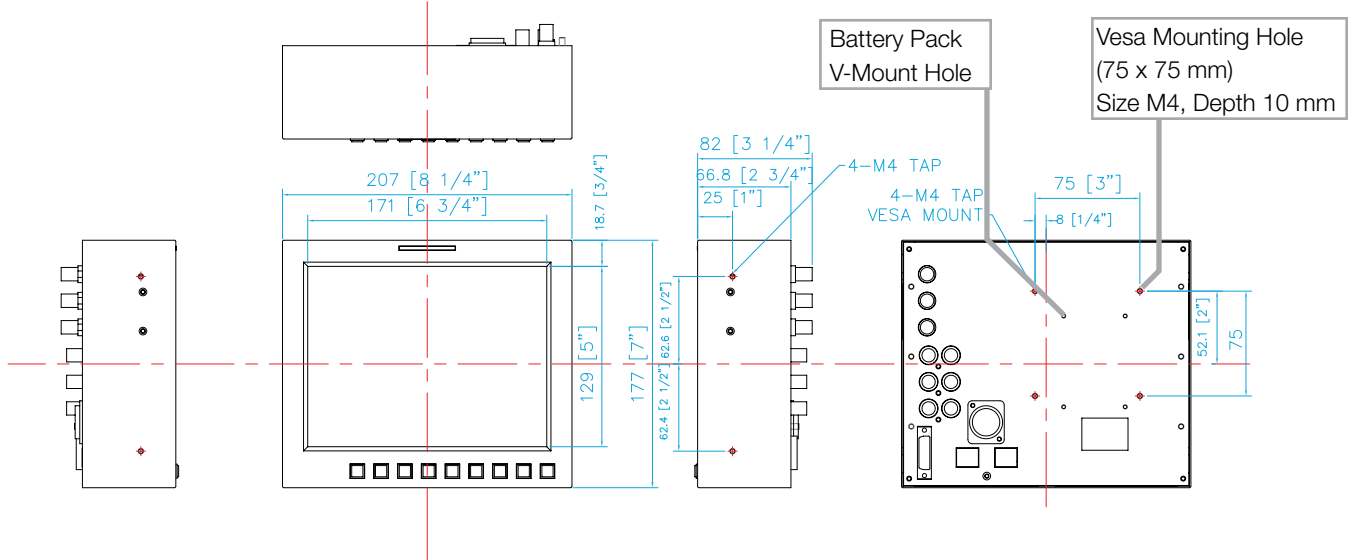
Please consult with authorized technician for update program or display adjustment.

12. Product Dimensions

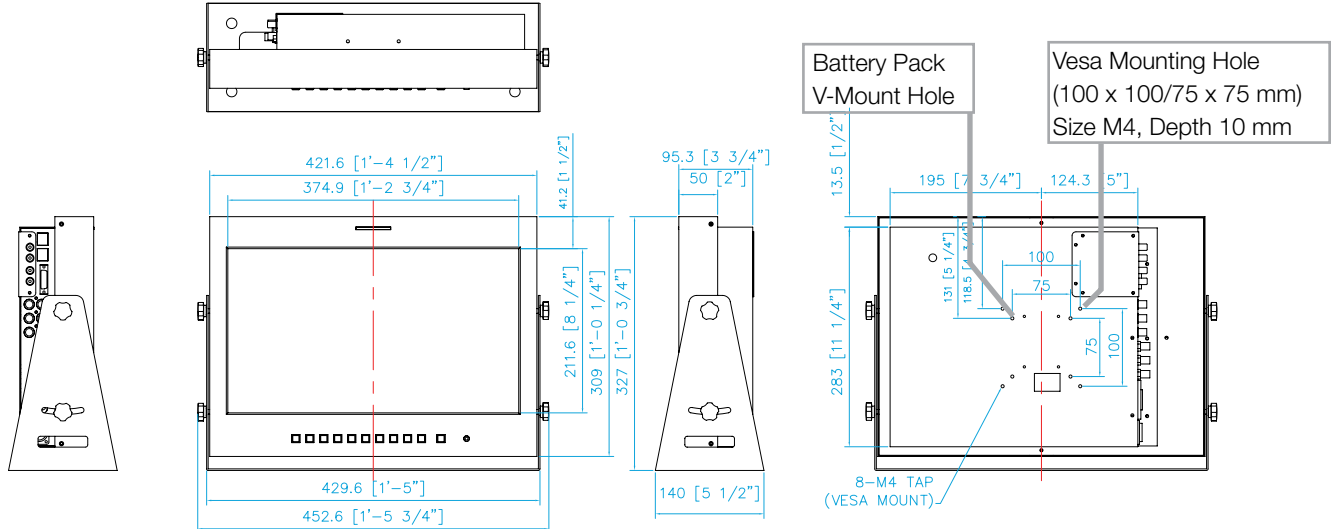
PBM-070



PBM-184

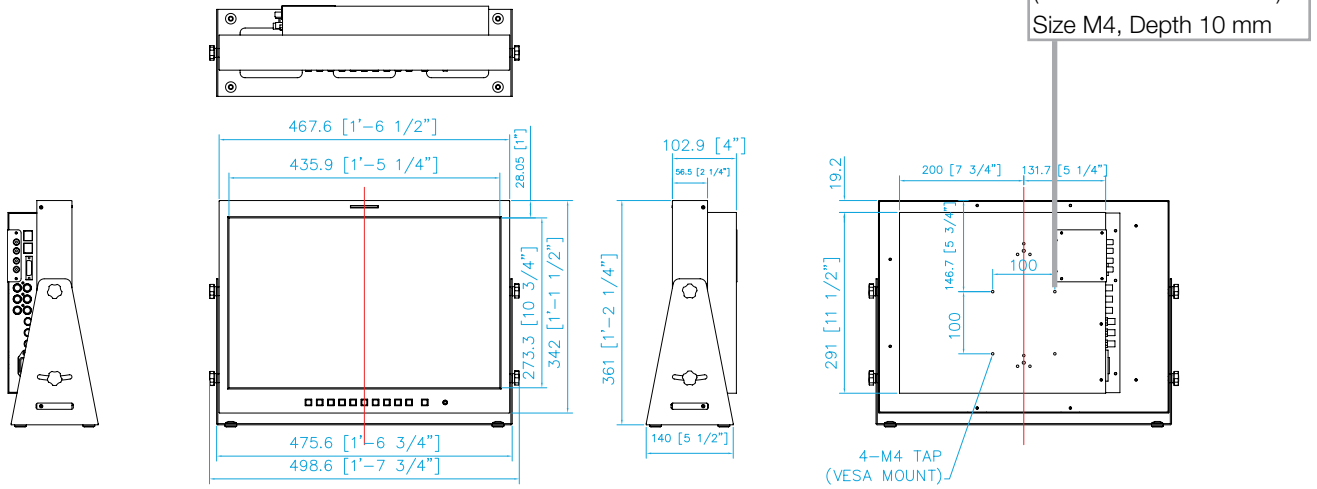


PBM-117

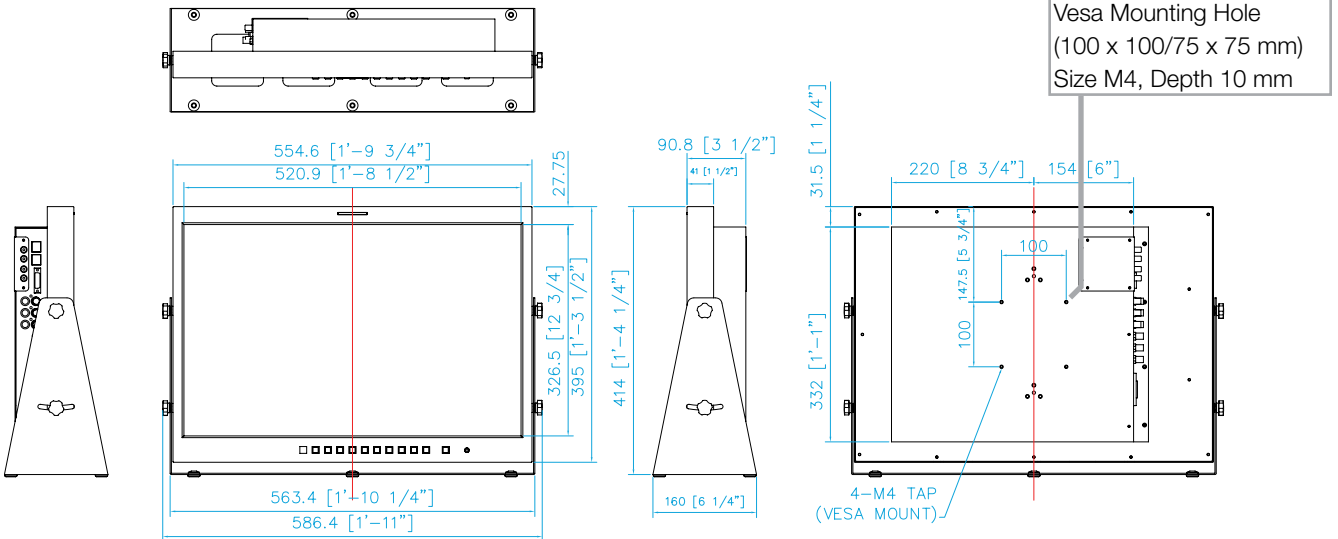


12. Product Dimensions continued

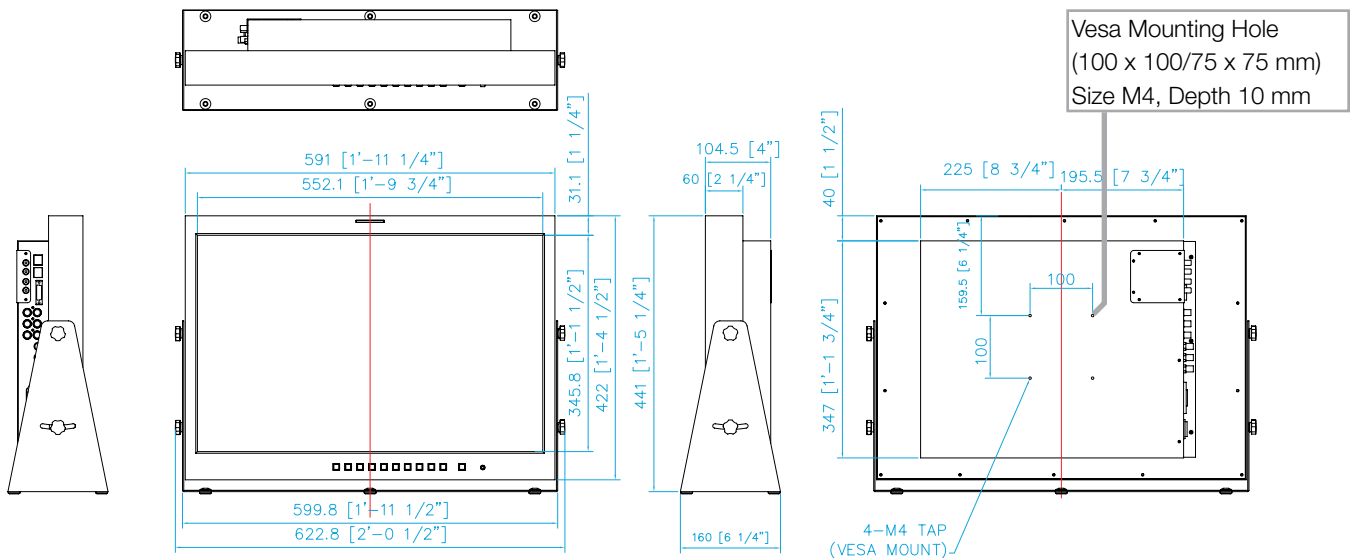
PBM-120



PBM-124

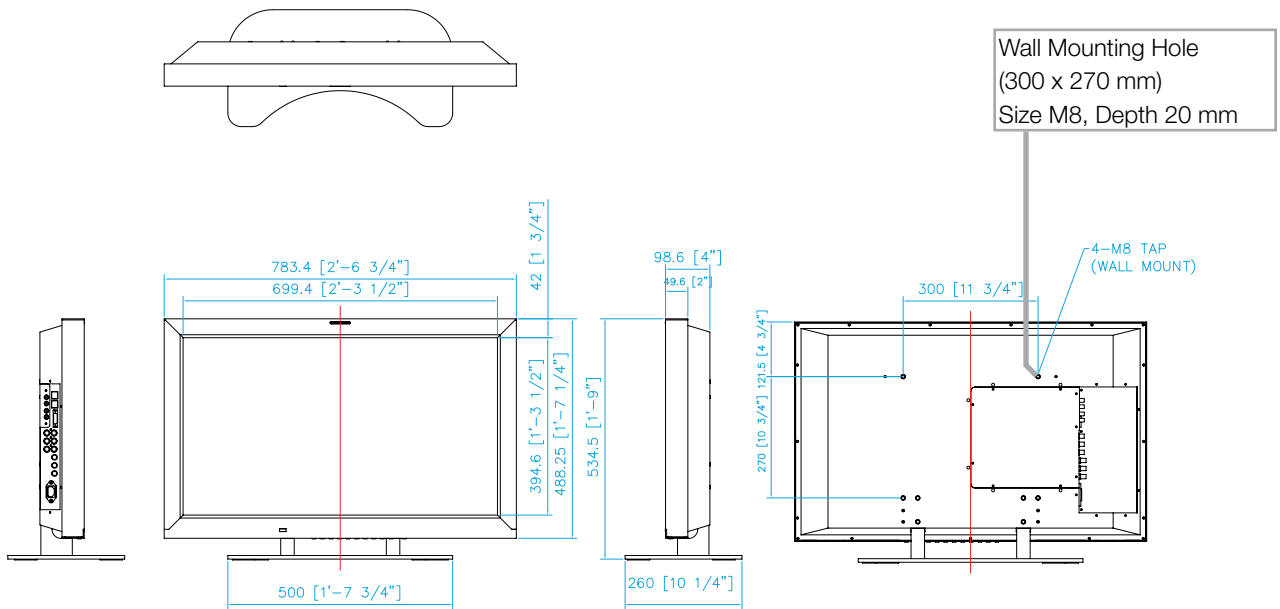


PBM-126

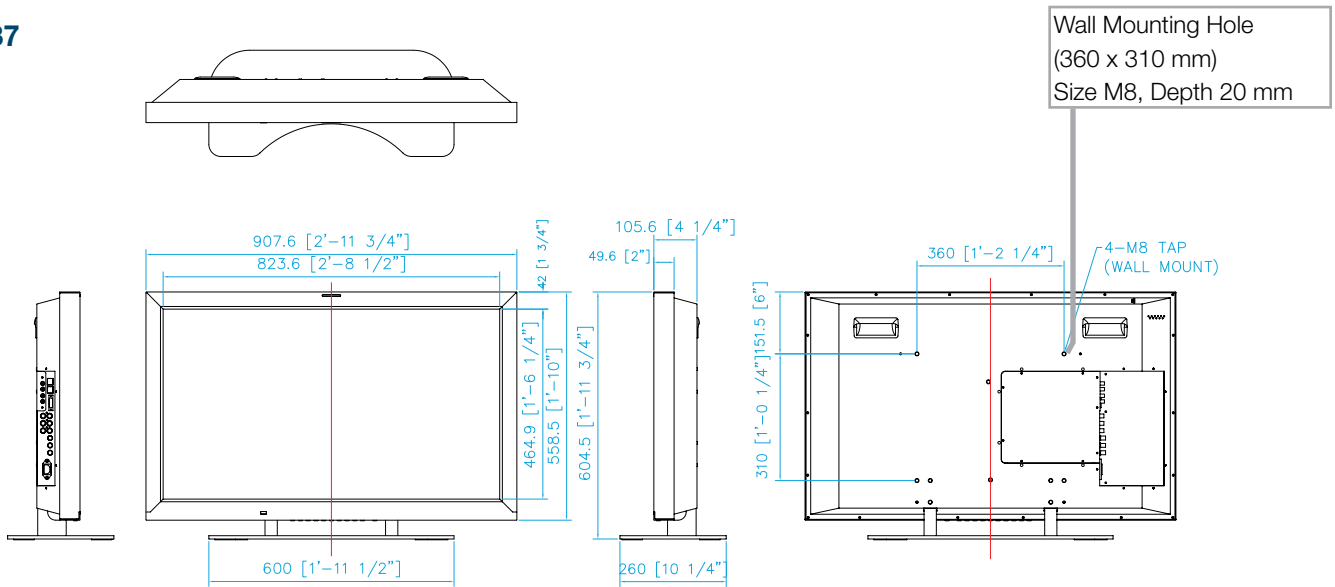


12. Product Dimensions continued

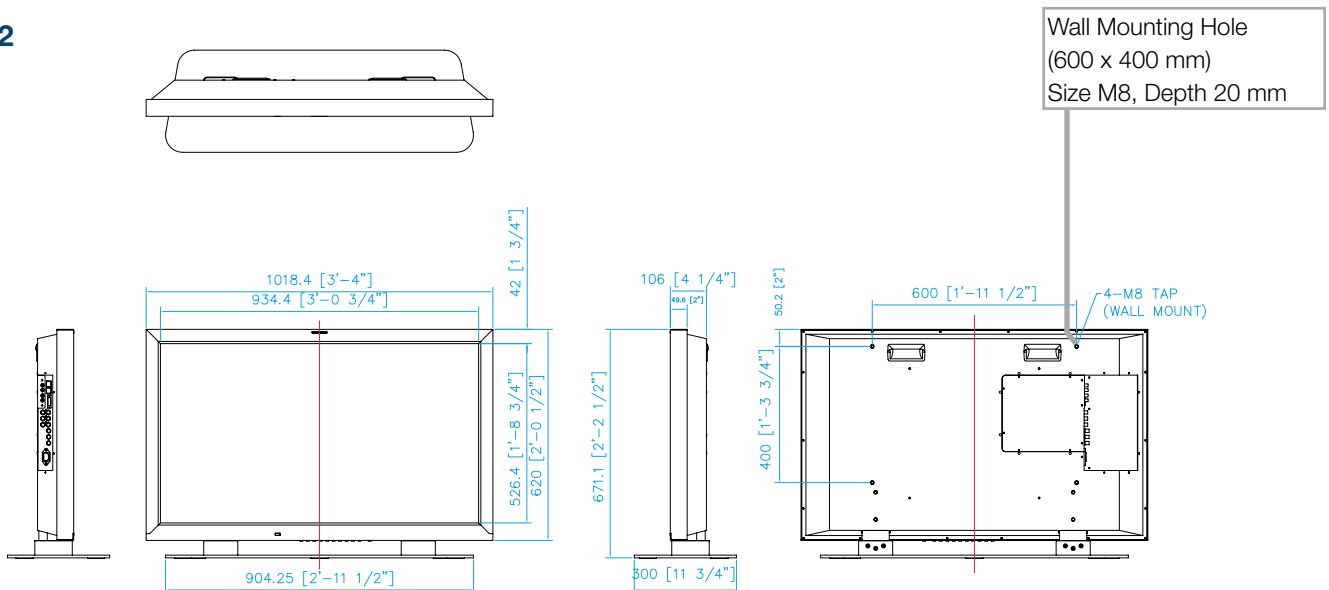
PBM-132



PBM-137

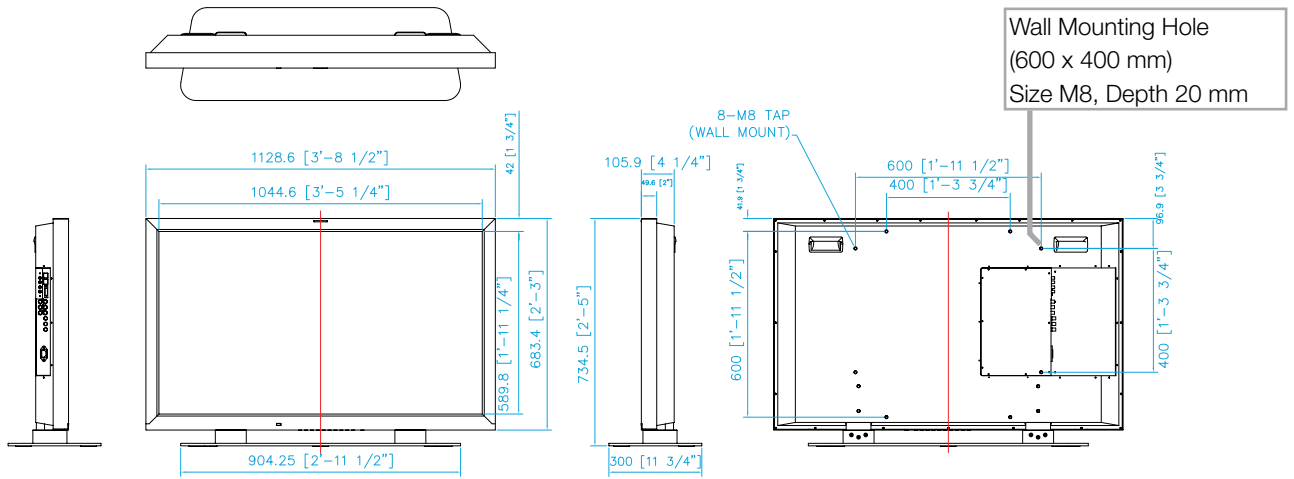


PBM-142

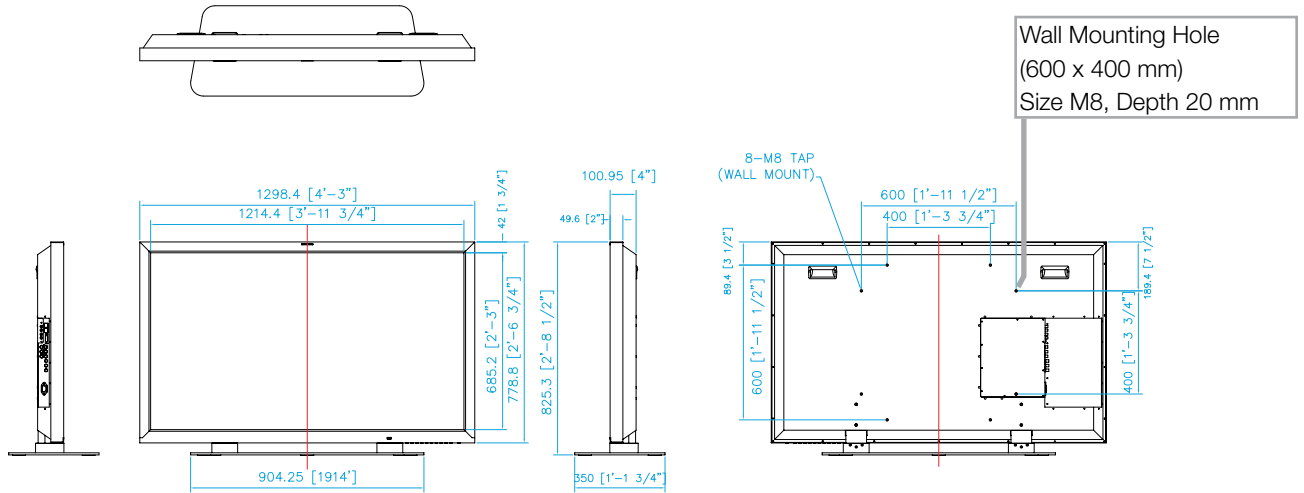


12. Product Dimensions continued

PBM-147



PBM-155



PBM-170

13. Troubleshooting

Solutions to common problems related to the monitor are described here. If none of the solutions presented here solves the problem, unplug the monitor and consult an Authorized Dealer or Service Center.

No.	Symptom	Probable cause and corrective action
1	No power	<ul style="list-style-type: none">• Firmly insert the Power Cord.• Check the power. (100V ~220V)
2	No picture with the power on	<ul style="list-style-type: none">• Connect the signal cable firmly.• Turn on the power of the connected component and set the output correctly.• Check if the input signal format is acceptable to the monitor.
3	No sound	<ul style="list-style-type: none">• Connect the signal cable firmly.• Adjust Volume Level.
4	Wrong color, no color	<ul style="list-style-type: none">• Check if the Hue is set up with basic value from the menu.• Check if the color temperature is in basic value.
5	Wrong picture position, wrong picture size	<ul style="list-style-type: none">• Check if Pixel to Pixel mode is on.• Adjust the picture size (H/V Position)
6	Menu does not appear on the screen or it is shaking	<ul style="list-style-type: none">• Items which are not available for the current input or the current input signal are not displayed on the menu. Change input or the input signal.• Check if the input signal format is acceptable for the monitor.

14. Maintenance

- When a still image is displayed for a long time, it may appear incorrectly due to heating on the screen. This is due to the characteristics of the LCD display and is not a malfunction. Power cycle the monitor, and the image will reset.
- Random fixed color dots (“stuck pixels”) on the panel surface are a normal characteristic of LCD displays, and are not a problem. The LCD display is built with very high precision technology. However, be aware that a few very small pixels may be affected by each other or lighting.
- Periodic maintenance inspection time of backlight is about 50,000 hours.
- Periodic maintenance inspection time of fan motor (option) is about 10,000 hours.

15. Update and Modification of Product

Specifications of this product may be changed without prior notice.

Notes

plura

b r o a d c a s t

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