

# TECHNICAL MANUAL (Ver. 2.0)

**PLASMA DISPLAY MONITOR: PDP-503CMX/PDP-503MXE  
PDP-433CMX/PDP-433MXE**

**VIDEO CARD: PDA-5002**

**TABLE TOP STAND: PDK-TS01**

**PDP BRACKET: PDK-5005**

**PLASMA DISPLAY WALL-MOUNT HARDWARE: PDK-5011**

**PLASMA DISPLAY CEILING SUSPENSION HARDWARE: PDK-5012**

**PLASMA DISPLAY WALL-MOUNT HARDWARE: PDK-5013**

**MOBILE CART: PDK-5014**

**CABLE COVER: PDA-P01**


**SPEAKER SYSTEM: PDP-S05-LR**

**PDP-S07-LR**

This manual provides precautions and information for installation, preparation, and handling of the plasma display and its dedicated mounting hardware.

Before installation and preparatory work, choose a safe and appropriate site after thorough consideration of construction, materials used, strength, and surroundings. If adequate safeguards are not in place, immediately halt the installation process and discontinue marketing activities.

## CAUTION

 Exclamation marks placed within triangles are intended to alert users to the presence of important safety information. Be sure to read instructions indicated by this symbol.

## PRECAUTIONS:

- We accept no responsibility for losses resulting from the use of parts other than those supplied by us.
- We guarantee the performance of our products only when they are assembled and adjusted as described in this manual.
- The specifications and external designs shown in this manual are subject to change without notice.

## ABOUT MOUNTING/INSTALLATION

- This product is sold under the assumption that installation will be performed by experienced, qualified experts. Refer all mounting and installation work to qualified personnel, or consult the nearest PIONEER dealer for assistance.
- We accept no responsibility for accident or loss resulting from failure to select an appropriate installation site, or for those occurring during assembly, installation, mounting, or operation of this product, or resulting from modifications made to this product, or from natural disasters.

**Pioneer**

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### CAUTION

- To prevent injury and material damage, thoroughly read this manual and all labels found on the equipment before attempting to mount, install, move, or adjust the product.
- Do not install the unit outside or in the open air. Doing so will lead to water seepage into the system, resulting in fire or electric shock.
- Be especially careful when working around parts of the system that have sharp edges.
- When performing installation work from a height, take suitable precautions to guard against falling. Set up a barrier around the work site to prevent accidentally dropped objects from injuring persons standing or walking below.
- Keep all foreign objects out of the unit. Do not tamper with the unit, or fire or electric shock may result.
- Observe the following operating environmental limitations:
  - Temperature: 0 to 40°C
  - Humidity: 20 to 80%
- Install the unit only in properly ventilated areas.

## Introduction

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### Introduction

The contents of "5.1 Before Beginning Adjustments" and subsequent sections are premised on the PDP-503CMX/PDP-503MXE and PDP-433CMX/PDP-433MXE being equipped with the PDA-5002.

Items that apply only when the PDA-5002 is installed are marked with a star "★".

#### Precautions

When the PAD-5002 is not installed, the PDP-503CMX/PDP-503MXE will not handle the following functions.

##### Input terminals

INPUT 1,2	Input	<ul style="list-style-type: none"><li>• Component video signal</li><li>• RGB signals from AV devices other than PCs</li></ul>
INPUT 3	Input	S terminal (mini DIN 4 PIN connector) <ul style="list-style-type: none"><li>• Y/C separate video signal</li></ul>
	Input	Pin jacks x 2 <ul style="list-style-type: none"><li>• Audio L/R signal</li></ul>
INPUT 4	Input	BNC terminal <ul style="list-style-type: none"><li>• Composite video signal</li></ul>
	Output	BNC terminal
	Input	Pin jack x 2 <ul style="list-style-type: none"><li>• Audio L/R signal</li></ul>
INPUT 5	Input	DVI-D 24 pin terminal <ul style="list-style-type: none"><li>• Digital RGB signal</li></ul>

# Features

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## Features and Functions of this device

### PDP-503CMX/PDP-503MXE

- **Introduces newly developed 50" XGA Wide Plasma Panel**

The new high-precision XGA 50" wide plasma panel (1,280 by 768 dots/16:9) pushes the envelope of previous high-luminance panels, producing brighter, clearer images with higher contrast.

- **Newly developed full screen filter produces clear, high-contrast images even in a lighted room.**

The new full screen filter suppresses surface reflections to a minimum, producing clear, high-contrast images even in lighted locations. Unnecessary frequency components of RGB signals are also cut, greatly enhancing color reproduction.

- **Supports wide range of computer signal formats**

Direct display of computer signals is supported in resolutions from 640x400 and 640x480 (VGA) to 1024x768 (XGA) and 1280x768; computer signals with resolutions of 1280x1024 (SXGA) and 1600x1200 (UXGA) are supported in compressed display format. Screen aspect ratios include DOT-BY-DOT, 4:3, FULL, and PARTIAL \*1

\* 1. Operation of screen aspect ratios and screen size differ depending on the input signal.

- **Free Installation Configuration  
Broader installation possibilities with thinner, lighter, high-endurance design.**

While producing a large 50" screen image, the display is only 98mm thick, and weighs in at only 38.9 kg. On the other hand, the efficient heat-radiating design greatly improves environmental operating conditions. The thinner, lighter design, coupled to high-endurance construction greatly broadens the range of possible installation locations and styles.

- **High reliability for commercial applications**

The is provided with features giving it high dependability in commercial applications, including the ability to suppress peak luminance in accordance with the viewing program, and to change the cooling fan's speed in accordance with changes in operating environment. Such features provide safety and high-endurance under conditions of commercial use.

- **Improved usability**

User convenience has been improved by the inclusion of features making the display even more compatible with your computer. Some of these include the one-touch screen adjustment AUTO SETUP function for computer connections, and the POINT ZOOM function to enlarge local portions of the screen image to display important detailed program data.

- **Power-Saving Design**

While equipped with a high-precision (1,280 by 768) panel, this display achieves the lowest power consumption in the industry for screens in the 50" XGA class (380 W/about 20% reduced according to in-house comparison of previous products). Further, use of the power-control function provides a 20% reduction in power consumption compared to normal operating conditions (MODE 1, with color-bar signal input).

### PDP-433CMX/PDP-433MXE

- **Introduces newly developed 43" high-precision Wide Plasma Panel**

The new high-precision 43" wide plasma panel (1,024 by 768 dots/16:9) pushes the envelope of previous high-luminance panels, producing brighter, clearer images with higher contrast.

- **Newly developed full screen filter produces clear, high-contrast images even in a lighted room.**

The new full screen filter suppresses surface reflections to a minimum, producing clear, high-contrast images even in lighted locations. Unnecessary frequency components of RGB signals are also cut, greatly enhancing color reproduction.

- **Supports wide range of computer signal formats**

Non-compressed display of computer signals is supported in resolutions from 640x400 to 640x480 (VGA) to 1,024x768 (XGA); computer signals with resolutions of 1,280x1,024 (SXGA) and 1,600x1,200 (UXGA) are supported in compressed display format. Screen aspect ratios and screen sizes include DOT-BY-DOT, 4:3, and FULL \*1

\* 1. Operation of screen aspect ratios and screen size differ depending on the input signal.

- **Free Installation Configuration  
Broader installation possibilities with thinner, lighter, high-endurance design.**

While producing a large 43" screen image, the display is only 98mm thick, and weighs in at only 31.5 kg. On the other hand, the efficient heat-radiating design greatly improves environmental operating conditions. The thinner, lighter design, coupled to high-endurance construction greatly broadens the range of possible installation locations and styles.

- **High reliability for commercial applications**

The is provided with features giving it high dependability in commercial applications, including the ability to suppress peak luminance in accordance with the viewing program, and to change the cooling fan's speed in accordance with changes in operating environment. Such features provide safety and high-endurance under conditions of commercial use.

- **Improved usability**

User convenience has been improved by the inclusion of features making the display even more compatible with your computer. Some of these include the one-touch screen adjustment AUTO SETUP function for computer connections, and the POINT ZOOM function to enlarge local portions of the screen image to display important detailed program data.

- **Power-Saving Design**

This display achieves the lowest power consumption in the industry for screens in the 43" class (298 W). Further, use of the power-control function provides a 20% reduction in power consumption compared to normal operating conditions (MODE 1, with color-bar signal input).

# Specifications (PDP-503CMX/PDP-503MXE)

## 2.1 Specifications

### (PDP-503CMX/PDP-503MXE)

**Light-emitting panel** ..... 50-inch plasma display panel  
**Aspect ratio** ..... 16 : 9  
**Pixels** ..... 1280 × 768  
**Pixel pitch** ..... 0.858 (H•RGB trio) × 0.808 (V) mm  
**Viewing angle** ..... Horizontal: more than 160 degrees  
 Vertical: more than 160 degrees

#### Input/output terminals

##### Video-related

<PDP-503CMX/PDP-503MXE>

INPUT 1  **Input** Mini D-sub, 15-pin connector (female)  
 ① RGB signal (for G ON SYNC)  
 R,G,B ..... 0.7 Vp-p/75 Ω/no sync  
 G ON SYNC .. 1 Vp-p/75 Ω/  
 sync negative  
 HD/CS.VD TTL level (1 to 5 Vp-p)/  
 positive and  
 negative polarity/2.2 kΩ  
 ② Component video signal★  
 (applies only when equipped with PDA-5002)  
 Y ..... 1.0 Vp-p/75 Ω/sync negative  
 Pb/Cb, Pr/Cr .. 0.525 Vp-p/75 Ω  
 (75% degree of saturation)

\* Microsoft Plug & Play (VESA DDC 1/2B) supported

**Output** Mini D-sub, 15-pin connector (female)  
 ..... 75 Ω/with buffer

INPUT 2  **Input** BNC terminal × 5  
 ① RGB signal (for G ON SYNC)  
 R,G,B ..... 0.7 Vp-p/75 Ω/no sync  
 G ON SYNC .. 1 Vp-p/75Ω/  
 sync negative  
 HD/CS.VD TTL level (1 to 5 Vp-p)/  
 positive and  
 negative polarity/  
 75 Ω or 2.2 kΩ (with  
 impedance switching)  
 ② Component video signal★  
 (applies only when equipped with PDA-5002)  
 Y ..... 1.0 Vp-p/75 Ω/sync negative  
 Pb/Cb, Pr/Cr ... 0.525 Vp-p/75 Ω  
 (75% degree of saturation)

<PDA-5002>★ (applies only when equipped with PDA-5002)

INPUT 3  **Input** S terminal (Mini-DIN, 4-pin connector)  
 Y/C separate video signal  
 Y ..... 1.0 Vp-p/75 Ω/sync negative  
 C ..... 0.286 Vp-p/75 Ω (NTSC)  
 0.3 Vp-p/75 Ω (PAL)

INPUT 4  **Input** BNC terminal  
 Composite video signal  
 ..... 1.0 Vp-p/75 Ω/sync negative  
 **Output** BNC terminal ..... 75 Ω/with buffer

INPUT 5  **Input** DVI-D 24-pin connector  
 Digital RGB signal (DVI compliant TMDS signal)

\* Microsoft Plug & Play (VESA DDC 2B) supported

(NOTE 1) The display is preset at the factory to 4800bps. This setting can be changed using either the remote control unit or a PC.  
 (NOTE 2) Allow for 400 W = 400VA of consumption per unit.  
 (NOTE 3) The correct operating environmental temperature may vary, depending on the installation site. (Refer to Installation Site Requirements.)

##### Audio-related

<PDP-503CMX/PDP-503MXE>

AUDIO INPUT  **Input** Stereo mini jack  
 (for INPUT 1/2/5) L/R ... 500mVrms/more than 10 kΩ

AUDIO OUTPUT  **Output** Stereo mini jack  
 L/R ... 500mVrms (max)/less than 5 kΩ

SPEAKER  **Output** L/R .... 8 to 16 Ω/2 W + 2 W (at 8 Ω)

<PDA-5002>★ (applies only when equipped with PDA-5002)

AUDIO INPUT  **Input** Pin jack (x2)  
 (for INPUT 3) L/R ... 500mVrms/more than 10 kΩ

AUDIO INPUT  **Input** Pin jack (x2)  
 (for INPUT 4) L/R ... 500mVrms/more than 10 kΩ

##### Control-related

RS-232C terminal: D-sub, 9-pin (male)

(NOTE 1) Combination In/Out Terminal: Mini-DIN, 6-pin  
 Control In/Out Terminal: Monaural mini-jack (× 2)

##### Power requirements

PDP-503CMX ..... AC 100 V to 120 V, 50/60 Hz  
 PDP-503MXE ..... AC 100 V to 240 V, 50/60 Hz

**In-rush** ..... less than 30 A

**Power factor** ..... more than 0.95

**Consumption** ..... 380 W (NOTE 2) (1 W in standby)

##### External dimensions (without attachment stand)

..... 1218 (W) × 714 (H) × 98 (D) mm  
 47-31/32 (W) × 28-1/8 (H) × 3-7/8 (D) in.

**Weight (without attachment stand)** ..... 38.9 kg (85.8 lbs.)

**Dimensions of packaging** .. 1341 (W) × 846 (H) × 424 (D) mm  
 52-13/16 (W) × 33-5/16 (H) × 16-11/16 (D) in.

**Weight when packaged** ..... 51 kg (112.5 lbs.)

**Operating Temperature** ..... 0 to 40 °C (32 to 104 °F) (NOTE 3)

**Operating Humidity** ..... 20 to 80 %

**Operating atmospheric pressure** ..... 800 to 1100 hPa

##### Storage limitations (when installed)

Temperature ..... -20 to +60 °C (-4 to 140 °F)

Humidity ..... 20 to 90 %

Atmospheric pressure ..... 670 to 1500 hPa

##### Storage limitations (when in original package)

Temperature ..... -30 to +60 °C (-22 to 140 °F)

Humidity ..... 20 to 90 %

Atmospheric pressure ..... 670 to 1500 hPa

Stacking ..... Fewer than three tiers

##### Standard accessories

<PDP-503CMX/PDP-503MXE>

Power cord (PDP-503CMX only) ..... 1  
 Ferrite core (PDP-503MXE only) ..... 1  
 Cable tie (PDP-503MXE only) ..... 1  
 Remote control unit ..... 1  
 AA battery ..... 2  
 Wiping cloth ..... 1  
 Speed clamp ..... 2  
 Bead Band ..... 2  
 Operating instructions ..... 1  
 Warranty card ..... 1  
 Remote control unit holder ..... 1  
 Display stand ..... 2  
 Washer ..... 2  
 Hexagon socket head screw (M8 × 40) ..... 2

<PDA-5002>★ (applies only when equipped with PDA-5002)

Label for remote control unit ..... 1  
 BNC/Pin conversion adaptor ..... 1  
 Connector indicator label ..... 1  
 Operating Instructions ..... 1  
 Warranty ..... 1

Specifications and external designs are subject to change without notice.



# Specifications

## INPUT Response Signals

### INPUT 1, 2

Video signals supported ★ (applies only when equipped with PDA-5002)

Vertical Frequency Fv (Hz)	Horizontal Frequency Fh (kHz)	Signal Format	Remark
50	15.625	Component RGB	625i(575i) SDTV
	28.1	Component RGB	1125i(1080i) HDTV
	31.25	Component RGB	625p(575p) SDTV
60	15.734	Component RGB	520i(480i) SDTV
	31.5	Component RGB	525p(480p) SDTV
	33.75	Component RGB	1125i(1035i, 1080i) HDTV High vision video signal
	45.0	Component RGB	750p(720p) HDTV
	67.5	Component RGB	1125p(1080p) HDTV

PC signals supported

Resolution (Dot x Line)	Vertical Frequency	Horizontal Frequency	Remark
640 x 400	56.4Hz	24.8kHz	NEC PC-9800
	70.1Hz	31.5kHz	NEC PC-9800
640 x 480	60Hz	31.5kHz	(852 x 480) (864 x 480)
	66.7Hz	35.0kHz	Apple Macintosh 13"
	72Hz	37.9kHz	
	75Hz	37.5kHz	
800 x 600	85Hz	43.3kHz	
	56Hz	35.2kHz	
	60Hz	37.9kHz	(1072 x 600)
	72Hz	48.1kHz	
832 x 624	75Hz	46.9kHz	
	85Hz	53.7kHz	
832 x 624	74.6Hz	49.7kHz	Apple Macintosh 16"
852 x 480	60Hz	31.7kHz	
1024 x 768	60Hz	48.4kHz	(1376 x 768)
	70Hz	56.5kHz	
	75Hz (74.9Hz)	60.0kHz (60.2kHz)	Figur in brackets are for Apple Macintosh 19"
	85Hz	68.7kHz	

Resolution (Dot x Line)	Vertical Frequency	Horizontal Frequency	Remark
1152 x 864	60Hz	53.7kHz	
	72Hz	64.9kHz	
	75Hz	67.7kHz	
1152 x 870	75.1Hz	68.7kHz	Apple Macintosh 21"
1152 x 900	66.0Hz	61.8kHz	Sun Microsystems LO
	76.0Hz	71.7kHz	Sun Microsystems HI
1280 x 768	56Hz	45.1kHz	
	60Hz	48.4kHz	
	70Hz	55.5kHz	
1280 x 960	60Hz	60.0kHz	
1280 x 1024	60Hz	64.0kHz	
	75Hz	80.0kHz	(1600 x 1024)
	85Hz	91.1kHz	
1600 x 1200	60Hz	75.0kHz	
	65Hz	81.3kHz	
	70Hz	87.5kHz	
	75Hz	93.8kHz	
	85Hz	106.3kHz	



**INPUT 3★ (applies only when equipped with PDA-5002):** Y/C Separate video signal NTSC, PAL, SECAM, 4.43 NTSC

**INPUT 4★ (applies only when equipped with PDA-5002):** Composite video signal NTSC, PAL, SECAM, 4.43 NTSC

**INPUT 5★ (applies only when equipped with PDA-5002)**

**PC signals supported**

Resolution (Dot x Line)	Vertical Frequency	Horizontal Frequency	Remark
640 x 480	60Hz	31.5kHz	
800 x 600	56Hz	35.1kHz	
	60Hz	37.9kHz	
852 x 480	60Hz	31.7kHz	
1024 x 768	60Hz	48.4kHz	
1152 x 864	60Hz	53.7kHz	
1280 x 768	56Hz	45.1kHz	
	60Hz	48.1kHz	
1280 x 960	60Hz	60.0kHz	
1280 x 1024	60Hz	64.0kHz	

# External Dimensions (PDP-503CMX/PDP-503MXE)


## 2.2 External Dimensions (PDP-503CMX/PDP-503MXE)

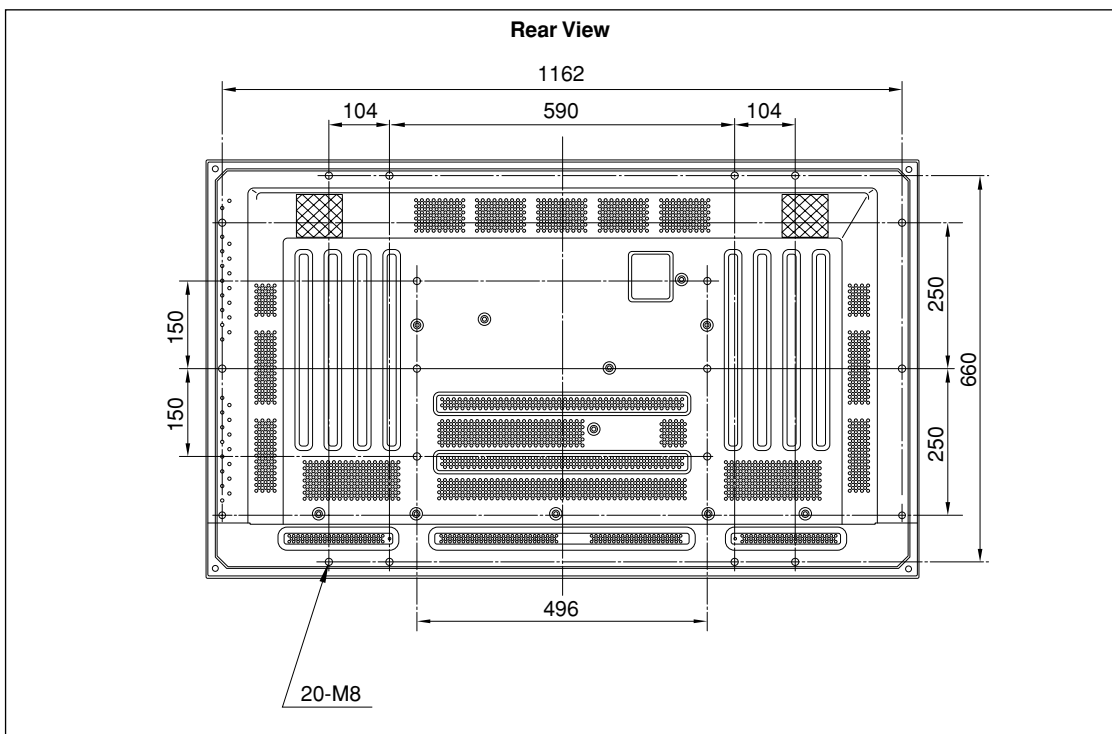
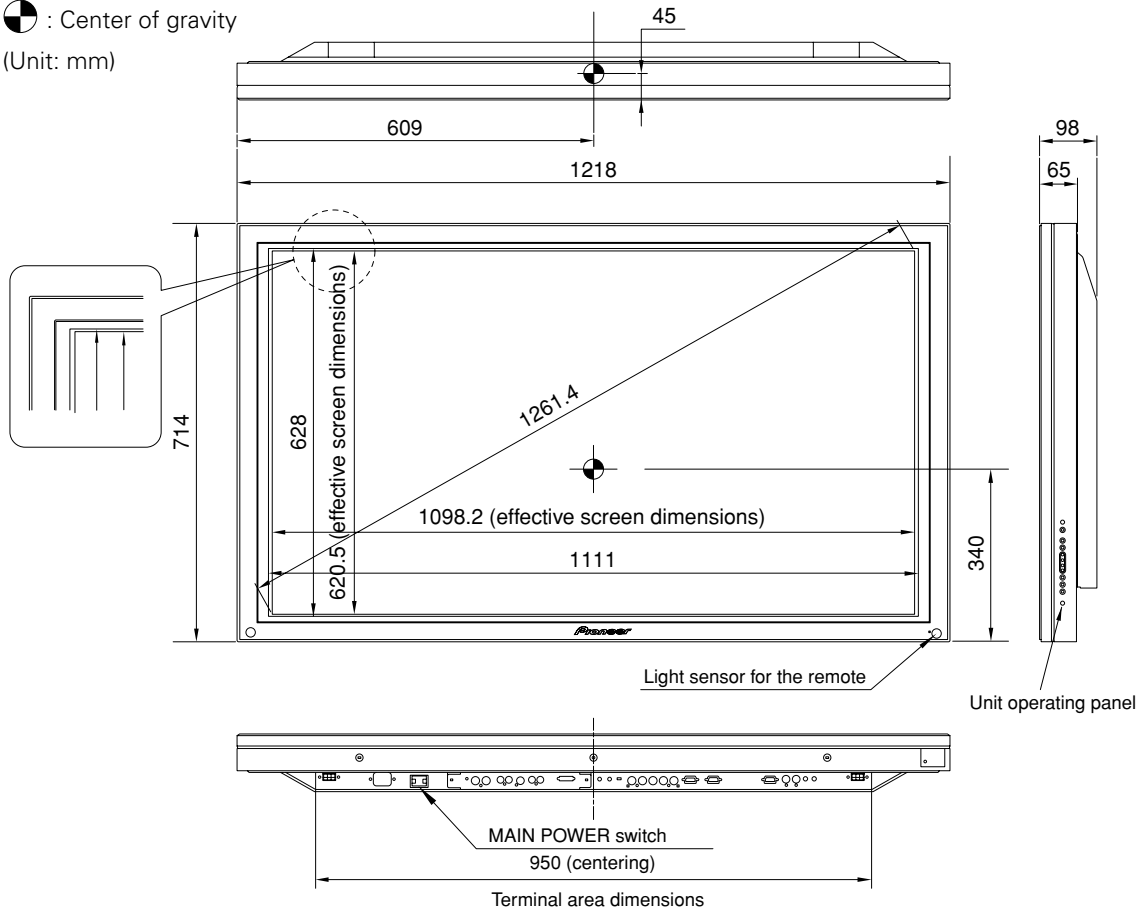
Weight: 38.9 kg (without attachment stand)

Material: Front: Resin; Rear cover: Aluminum, Front protector panel: Glass

Treatment: Front: Paint; Rear cover: Paint (All paints are Pioneer original colors)

For packaging information, refer to 3.4.2 "Unpacking".

 : Center of gravity  
(Unit: mm)



## External Dimensions (PDP-433CMX/PDP-433MXE)

### External Dimensions (PDP-433CMX/PDP-433MXE)

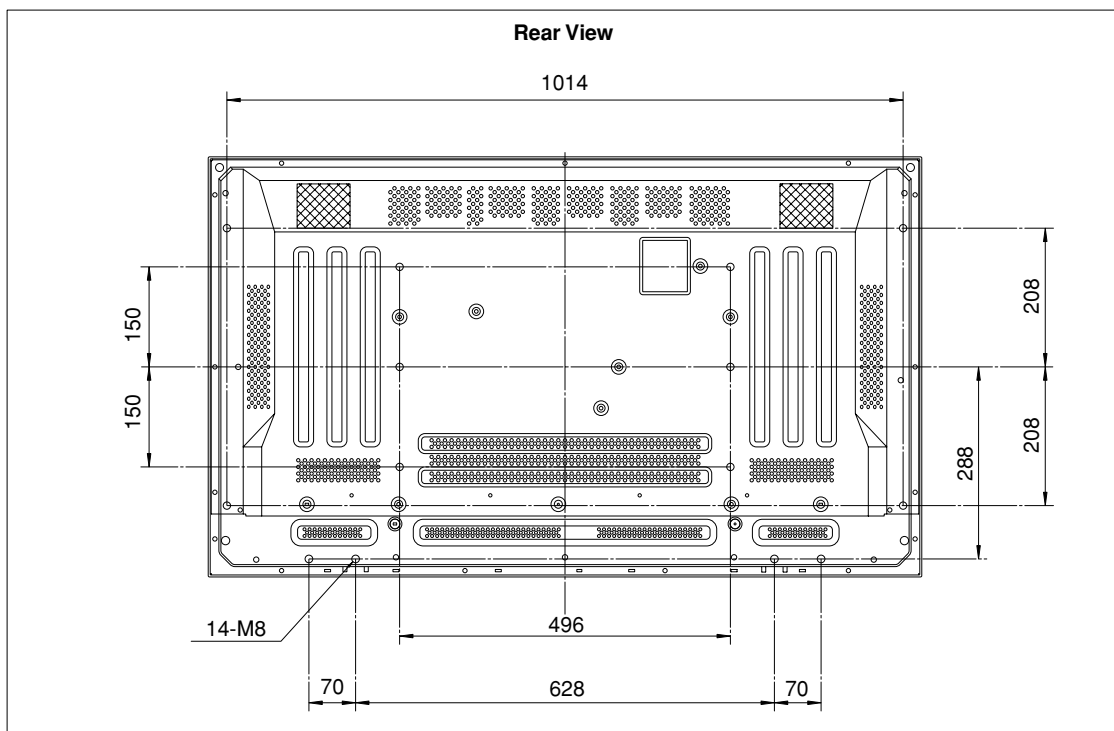
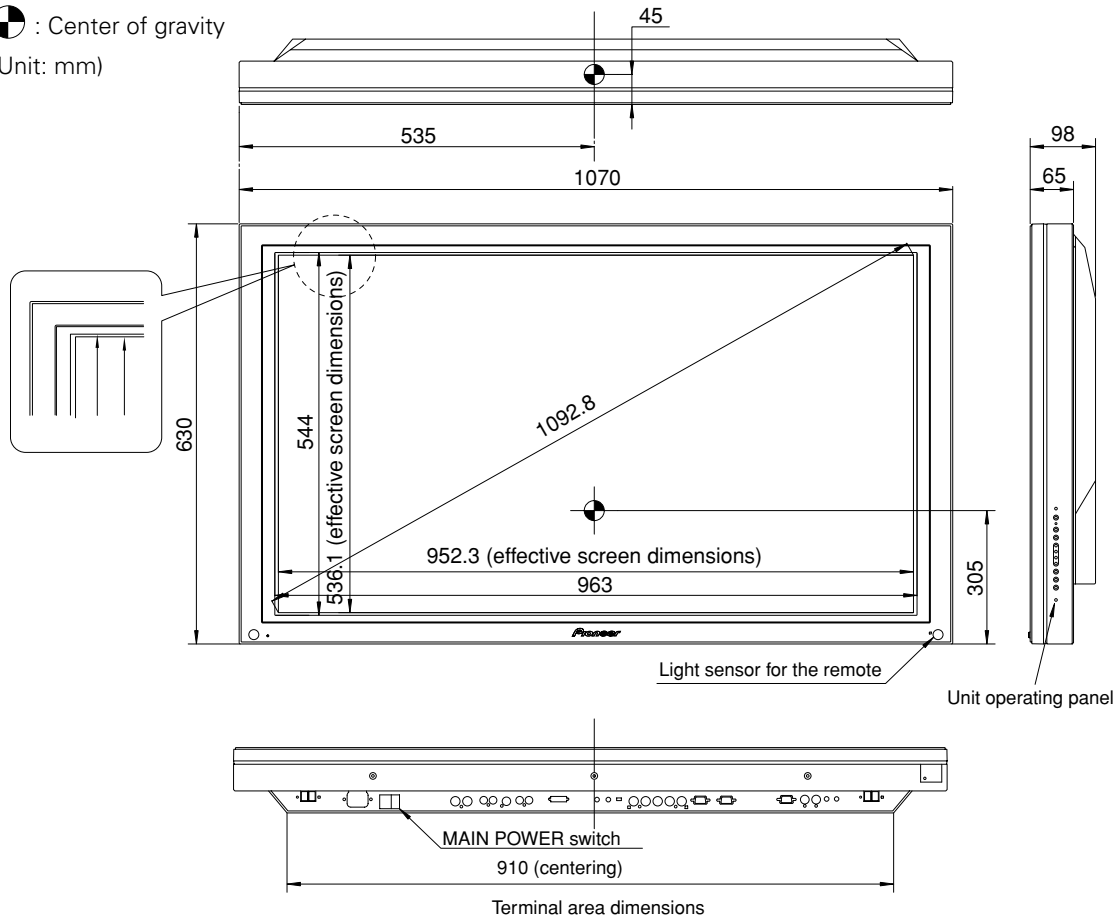
Weight: 31.5 kg (without attachment stand)

Material: Front: Resin; Rear cover: Aluminum, Front protector panel: Glass

Treatment: Front: Paint; Rear cover: Paint (All paints are Pioneer original colors)

For packaging information, refer to 3.4.2 "Unpacking".

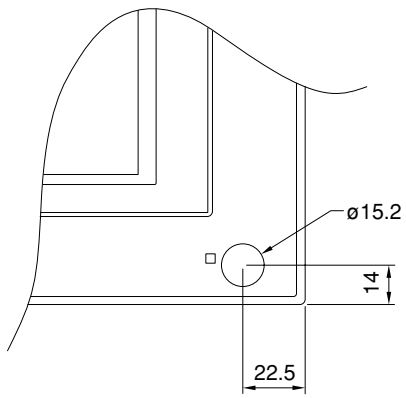
● : Center of gravity  
(Unit: mm)



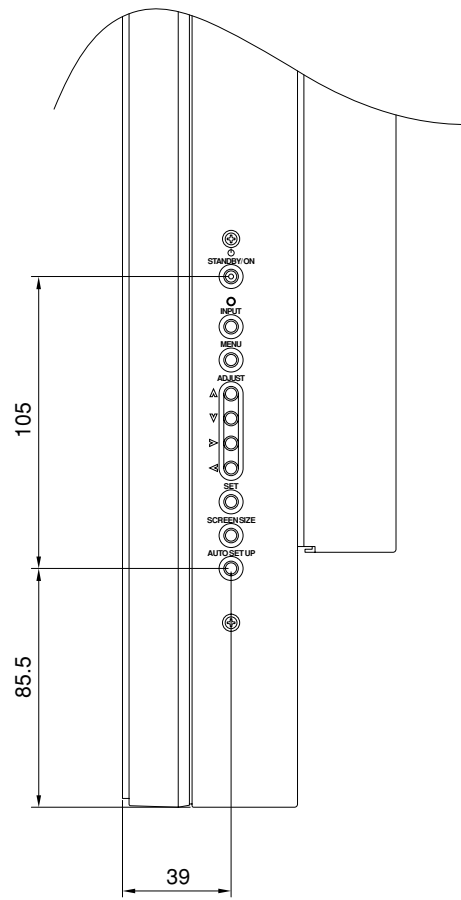
# External Dimensions

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<Light Sensor for the Remote>

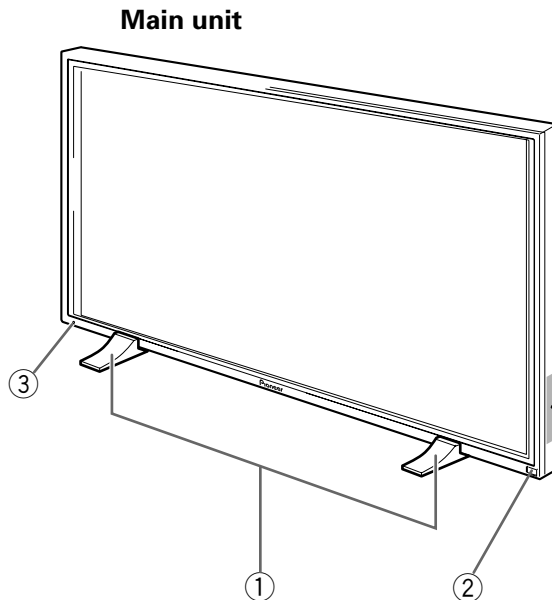


<Main Unit Operation Panel>

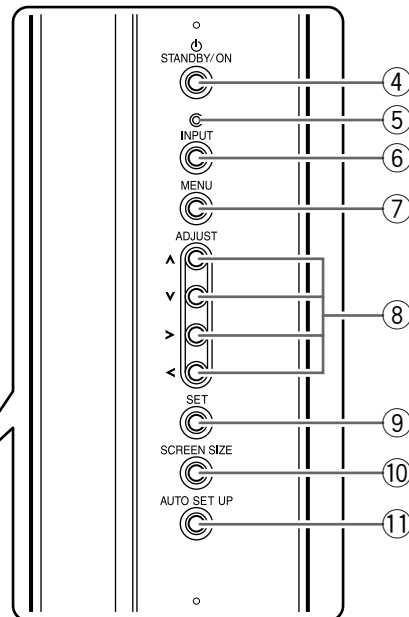


## 2.3 Controls and Connectors

### Main unit



### Operation panel on the main unit



#### Note

When optional speakers have been connected, the operation panel on the main unit will not be operable.

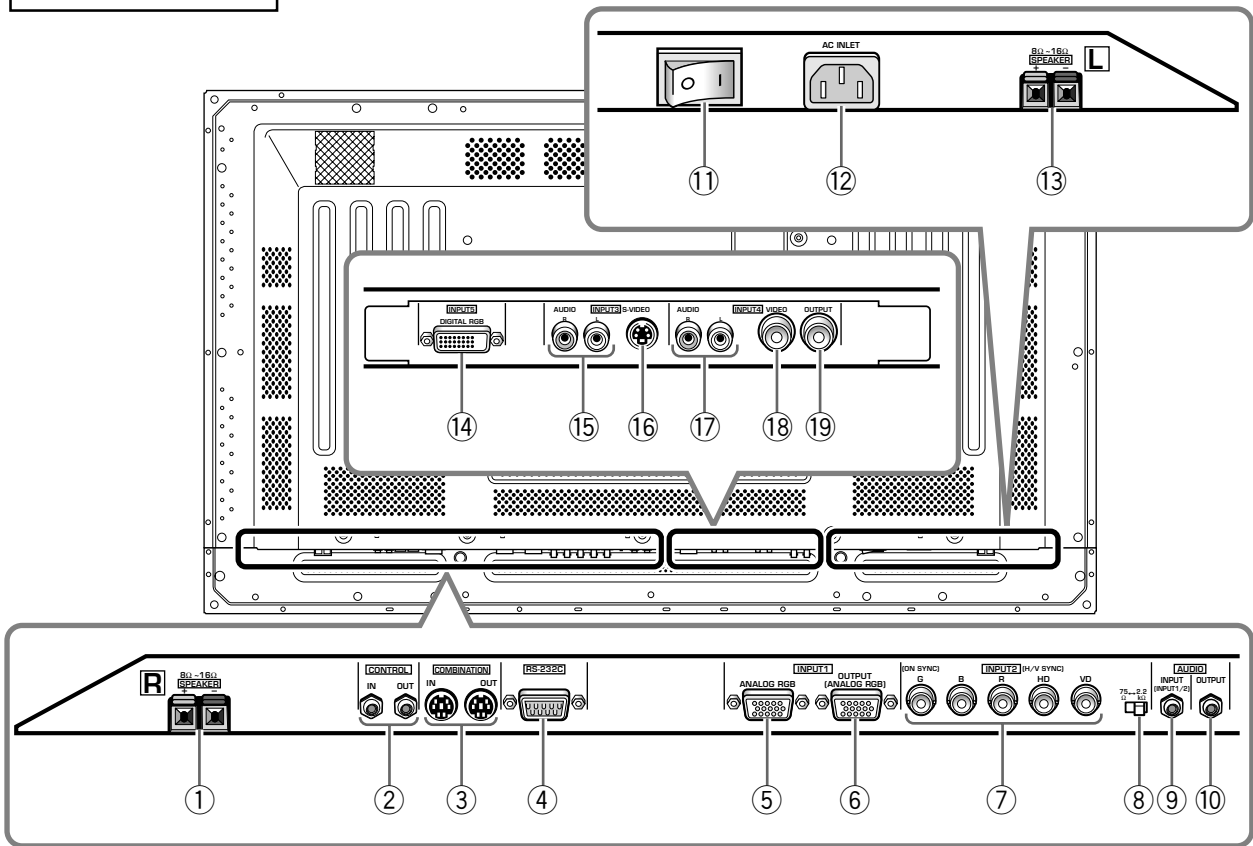
### Main unit

- ① **Display stand**
- ② **Remote control sensor**  
Point the remote control toward the remote sensor to operate the unit.
- ③ **STANDBY/ON indicator**  
This indicator is red during standby mode, and turns to green when the unit is in the operation mode.  
Flashes green when Power-Management function is operating.  
The flashing pattern is also used to indicate error messages.


### Operation panel on the main unit

- ④ **STANDBY/ON button**  
Press to put the display in operation or standby mode.
- ⑤ **KEY LOCK/UNLOCK Button (concealed button)**  
This switches between main unit panel and remote control operation permitted/forbidden.
- ⑥ **INPUT button**  
Press to select input.
- ⑦ **MENU button**  
Press to open and close the on-screen menu.
- ⑧ **ADJUST (▲/▼/▶/◀) buttons**  
Use to navigate menu screens and to adjust various settings on the unit.  
Usage of cursor buttons within operations is clearly indicated in the on-screen display.
- ⑨ **SET button**  
Press to adjust or enter various settings on the unit.
- ⑩ **SCREEN SIZE button**  
Press to select the screen size.
- ⑪ **AUTO SET UP button**  
When entering a computer signal to INPUT 1 or 2, automatically sets the POSITION and CLOCK/PHASE to optimum values.

## Connection Panel



## Plasma Display Section

- ① SPEAKER (R) terminal**  
 For connection of an external right speaker.  
 Connect a speaker whose impedance is 8 -16 Ω.
- ② CONTROL IN/OUT (monaural mini jacks)**  
 For connection of PIONEER components that bear the  mark. Making CONTROL connection enables control of the main unit as a component in a system.  
 (NOTE) The main unit cannot be operated by the wired remote control RV-V107.
- ③ COMBINATION IN/OUT**  
 Used when a number of sets are controlled collectively. (See "5.6 Combination Connection")  
 Please use a mini DIN 6 pin cable (straight, fully connected) available on the market as the connecting cable.  
 (NOTE) It has no ABL linking function. And it is not compatible with the RM-V4000V or other multi-projection. It is not output when the main power is off.
- ④ RS-232C**  
 This terminal is used for adjustments by a PC (EIA-232-F standard).  
 (See "5.5 RS-232C Adjustment Mode")
- ⑤ INPUT1 (mini D-sub 15 pin)**  
 For connection of components that have RGB or component\* (applies only when equipped with PDA-5002) output jacks such as a personal computer, DVD player, or external RGB decoder.
- ⑥ OUTPUT (INPUT1) (mini D-sub 15 pin)**  
 Use the OUTPUT (INPUT1) connector to output the video signal to an external monitor or other component.  
 (NOTE)
 
  - The video signal will not be output from the OUTPUT (INPUT1) connector when the main power of this display is off or in standby mode.
  - When connecting the main units in a series, please set the number that can be connected as a total of 5 including the set that the signal is initially input to. But a condition for performing separate sink or composite sink input and output is that the sink level of the source used is at least TTL level at 2.2kΩ terminal time.

### ⑦ INPUT2 (BNC jacks)

For connection of components that have RGB or component\* (applies only when equipped with PDA-5002) output jacks such as a personal computer, DVD player, or external RGB decoder.

### ⑧ Synchronizing signal impedance selector switch

Depending on the connections made at INPUT2, it may be necessary to set this switch to match the output impedance of the connected component's synchronization signal.

When the output impedance of the component's synchronization signal is below 75  $\Omega$ , set this switch to the 75  $\Omega$  position.

### ⑨ AUDIO INPUT (Stereo mini jack)

Use to obtain sound when INPUT1, INPUT2 or INPUT5\* (applies only when equipped with PDA-5002) is selected.

Connect this jack to the audio output connector of the device connected to the plasma display's INPUT1 or INPUT2, or to the audio output connector of the device connected to the video card's INPUT5\* (applies only when equipped with PDA-5002).

### ⑩ AUDIO OUTPUT (Stereo mini jack)

Use to output the audio of the selected source component connected to the main unit to an AV amplifier or similar component.

### ⑪ MAIN POWER switch

Use to switch the main power or the main unit on and off.

### ⑫ AC INLET

A power cable is furnished with the main unit: connect one end of the power cable to this connector and the other end to a standard AC power source.

### ⑬ SPEAKER (L) terminal

For connection of an external left speaker. Connect a speaker that has an impedance of 8 -16  $\Omega$ .

### Video Card <PDA-5002> Section ★ (applies only when equipped with PDA-5002)

### ⑭ INPUT5 (DVI-D jack)

Use to connect a computer.

**Note:** This unit does not support the display of copyguard-protected video signals.

### ⑮ AUDIO INPUT3 (RCA Pin jacks)

Use to obtain sound when INPUT3 is selected.

Connect these jacks to the audio output connectors of components connected to the video card's INPUT3.

Note: The left audio channel (L) jack is not compatible with monaural input sources.

### ⑯ INPUT3 (S-video jack)

For connection of components that have an S-video output jack such as a video deck, video camera, laser disc player, or DVD player.

### ⑰ AUDIO INPUT4 (RCA Pin jacks)

Use to obtain sound when INPUT4 is selected.

Connect these jacks to the audio output connectors of components connected to the video card's INPUT4.

Note: The left audio channel (L) jack is not compatible with monaural input sources.

### ⑱ INPUT4 (BNC jack)

For connection of components that have a composite video output jack such as a video deck, video camera, laser disc player, or DVD player.

### ⑲ OUTPUT (INPUT4) (BNC jack)

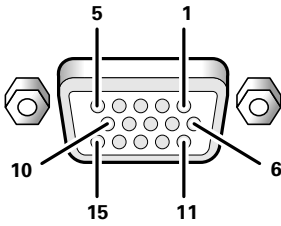
Use the OUTPUT (INPUT4) jack to output the video signal to an external monitor or other component.

Note: The video signal will not be output from the OUTPUT (INPUT4) jack when the main power of this display is off or in standby mode.

# Controls and Connectors

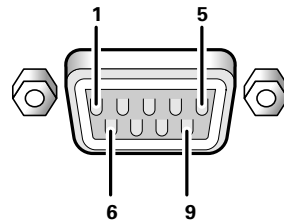
## 2.4 Pin layout

**INPUT 1 (Mini D-sub, 15-pin connector; female) pin layout**



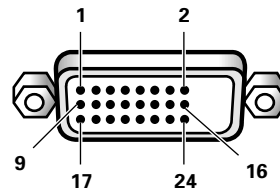
Pin No.	⑰ INPUT1 input terminals	⑱ INPUT1 output terminals
1	R or C <sub>R</sub> /P <sub>R</sub>	←
2	G or Y	←
3	B or C <sub>B</sub> /P <sub>B</sub>	←
4	NC (not connected)	←
5	GND	←
6	GND	←
7	GND	←
8	GND	←
9	DDC +5V	NC (not connected)
10	GND	←
11	NC (not connected)	←
12	DDC SDA	NC (not connected)
13	HD or H/V SYNC	←
14	VD	←
15	DDC SCL	NC (not connected)

**RS-232C terminal (D-sub 9-pin connector; male) pin layout**



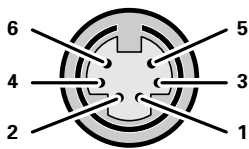
Pin No.	Signal
1	NC (not connected)
2	TxD (Transmit Data)
3	RxD (Receive Data)
4	NC (not connected)
5	GND
6	NC (not connected)
7	NC (not connected)
8	RTS (Request To Send)
9	NC (not connected)

**INPUT 5 \* (applies only when equipped with PDA-5002) (DVI-D 24 pin connector; female) pin layout**



Pin No.	Signal Assignment
1	T.M.D.S. Data2-
2	T.M.D.S. Data2+
3	T.M.D.S. Data2/4 Shield
4	NC (No connection)
5	NC (No connection)
6	DDC Clock
7	DDC Data
8	NC (No connection)
9	T.M.D.S. Data1-
10	T.M.D.S. Data1+
11	T.M.D.S. Data1/3 Shield
12	NC (No connection)
13	NC (No connection)
14	+5V Power
15	GND
16	Hot Plug Detect
17	T.M.D.S. Data0-
18	T.M.D.S. Data0+
19	T.M.D.S. Data0/5 Shield
20	NC (No connection)
21	NC (No connection)
22	T.M.D.S. Clock Shield
23	T.M.D.S. Clock+
24	T.M.D.S. Clock-

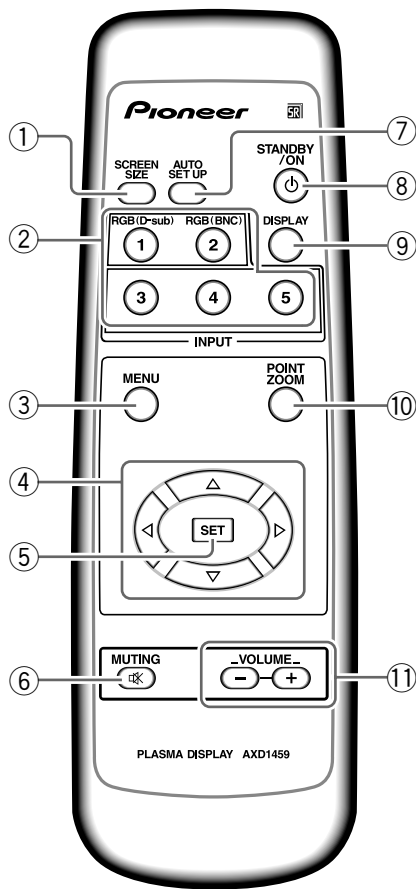
**Combination IN/OUT terminal pin layout**



Pin No.	Combination IN	Combination OUT
1	GND	GND
2	NC (not connected)	NC (not connected)
3	TxD (output)	RxD (input)
4	NC (not connected)	NC (not connected)
5	RxD (input)	TxD (output)
6	NC (not connected)	NC (not connected)



## 2.5 Remote Control Unit

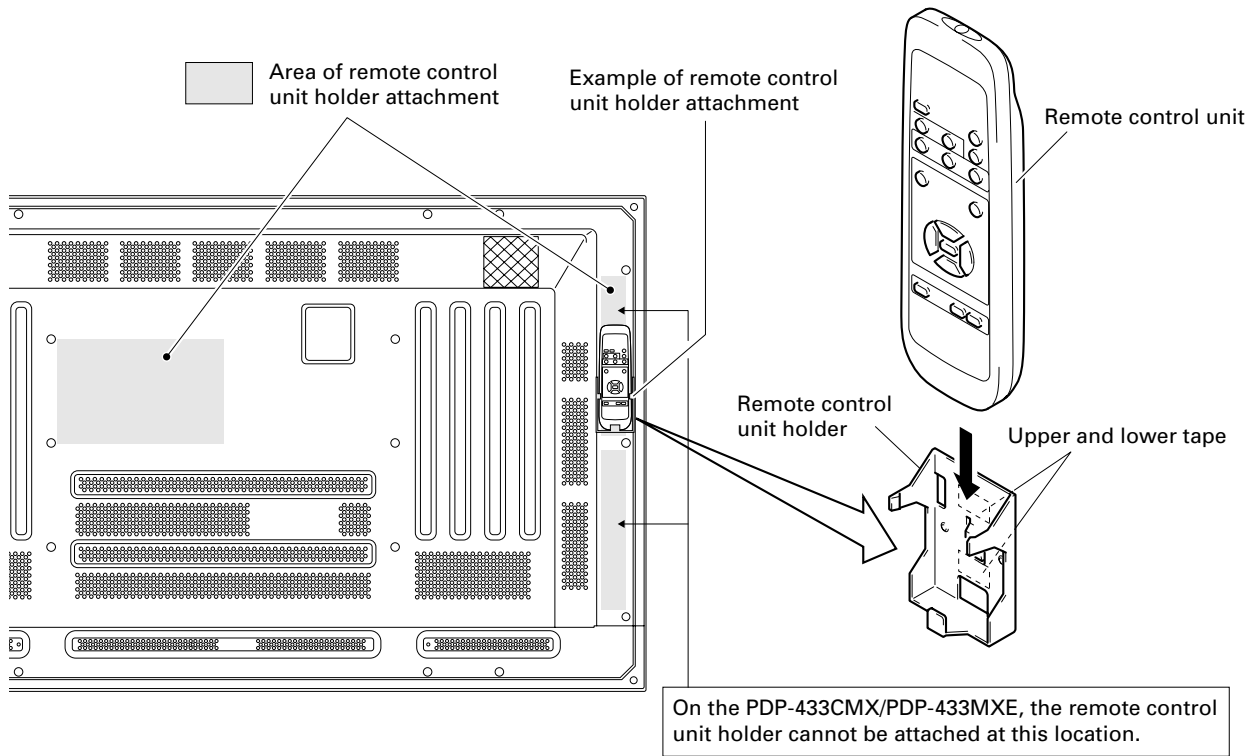


- ① **SCREEN SIZE button**  
Press to select the screen size.
- ② **INPUT buttons**  
Use to select the input.  
(③, ④, and ⑤ are used when the PDA-5002 is connected.)
- ③ **MENU button**  
Press to open and close the on-screen menu.
- ④ **ADJUST (▲/▼/▶/◀) buttons**  
Use to navigate menu screens and to adjust various settings on the unit.  
Usage of cursor buttons within operations is clearly indicated at the bottom the on-screen menu display.
- ⑤ **SET button**  
Press to adjust or enter various settings on the unit.
- ⑥ **MUTING button**  
Press to mute the volume.
- ⑦ **AUTO SET UP button**  
When entering a computer signal to INPUT 1 or 2, automatically sets the POSITION and CLOCK/ PHASE to optimum values.
- ⑧ **STANDBY/ON button**  
Press to put the unit in operation or standby mode.
- ⑨ **DISPLAY button**  
Press to view the unit's current input and setup mode.
- ⑩ **POINT ZOOM button**  
Use to select and enlarge one part of the screen.
- ⑪ **VOLUME (+/-) buttons**  
Use to adjust the volume.

## Remote Control Unit Holder

### 2.6 Remote Control Unit Holder

Peel the sticker paper off of the lower and upper tape on the rear side of the remote control unit holder, and attach it to the rear of the main unit or some other fixed surface, so that it will be available for putting away the remote control unit when it is not in use.



**⚠ (NOTE) Do not obstruct the ventilation holes in the remote control unit holder.**



## 3.1 Installation Site Requirements

If the site requires modifications or special preparations for installation of the plasma display or its mounting hardware, obtain permission in advance from the building owner or building authorities. To ensure installations safety, it is also important to determine the strength of the installation site with the help of the original building contractor.

### Safety Precautions

#### 1) Structure of the installation site

Make sure you thoroughly understand the structure of the installation site before determining the most suitable installation method. Buildings vary in structure and materials, and the appropriate mounting hardware with differ accordingly. When drilling into walls, always remain aware of the internal electric wiring and pipes.

#### 2) Weight capacity of the installation site

Select a location with a weight capacity sufficient to support the total weight of the display and mounting hardware.

#### 3) Flat, level surfaces

Select a flat, level surface for installation, such that mounting software will be parallel to the surface to which it is affixed.

Install the unit so that the load is evenly distributed along the ceiling or floor, as well as on mounting hardware such as hang bolts.

#### 4) Sufficient work space

Select a location with sufficient space for installation work. The installation work should be conducted by two or more persons.

#### 5) Nearby equipment

If air conditioning ducts or lamps, etc. are located near the installation site, the attendant dust, extreme temperatures, humidity, and condensation may become sources of trouble. Please take sufficient steps to avoid this.

#### 6) Safe locations

Do not install the unit where it may be easily touched or leaned against. Avoid locations subject to high vibration or severe impacts.

#### 7) Lighting conditions

- Consider existing lighting and sunlight angles when creating the installation layout. Extremely bright lighting can reduce the visibility and quality of the display image.
- In extremely bright surroundings, adjusting screen intensity may not result in perceptibly brighter images. Keep in mind that extreme intensity settings can reduce system service life.

#### 8) Other installation conditions

The unit is designed for indoor use, and is not suited for open-air use. Installation in locations that are even partially exposed to the elements may lead to malfunctions or breakdown caused by any of the following. And if there is danger of it being exposed to similar effects even when installed indoors, it is necessary to block the outside air by cooling the casing etc.

- Water and dust
- Changes in temperature and humidity
- Salt-bearing wind

Direct sunlight upon the display degrades image quality. In installing the display, avoid sites exposed to direct sunlight.

**9) Temperature and humidity conditions** ⚠

- The installation site should meet the following conditions:
  - Operating temperatures: 0 to 40 °C (largely depending on installation conditions)
  - Operating humidity: 20 to 80 %
  - Storage temperature: -20 to 60 °C
  - Storage humidity: 20 to 90 %
  - Operating atmospheric pressure: 800 to 1100 hPa
  - Storage atmospheric pressure: 670 to 1500 hPa
- We recommend against installing electronic products such as this unit in locations subject to high humidity. If the unit is to be installed in a location subject to relatively high humidity, observe the following:
  - Failure to install the unit in unacceptable ways may result in non-warranty damages.
  - Make sure the unit is grounded.
  - Do not allow water or other liquids to enter the unit.

**10) Prevent condensation**

One of the chief sources of problems during the winter is "condensation". Rapid temperature fluctuations can deposit water vapor inside the unit or on the screen, degrading performance. If condensation occurs, turn the unit off and leave it off for an hour or so. It is also good practice to increase the room temperature gradually. Beware of condensation. Consult Pioneer authorized dealers for assistance.

**11) Power requirements** ⚠

- This unit functions properly when powered at  $\pm 10\%$  of its rated voltage. Characteristics of power lines may effect the voltage output. If any of the following occurs, contact an electrician to inspect the power.
  - Significant voltage drop between the circuit panel and the plasma display
  - Significant changes in voltage when switching the unit power on or off
- Please consider the following to allow a margin for power consumption per unit.
  - PDP-503CMX/PDP-503MXE: 400 W = 400 VA
  - PDP-433CMX/PDP-433MXE: 320 W = 320 VA

**(NOTE)**

- **The in-rush current upon powering will be approximately 30 A.**
- A grounded three-core power cable is used by the plasma display in order to maintain its functions. Connect the power cord by inserting it in a grounded electrical outlet, making sure that the cord is properly grounded. When using a power source use conversion plug, insert it in a grounded electrical outlet and securely attach the ground wire.
- A leakage current within a value stipulated by standards in each country flows from an internal noise filter through devices installed inside switching power sources such as television sets or air-conditioners. Because these currents are added together when multiple units are used, be careful to avoid an electric shock and take steps to prevent electric shock caused by ground wires etc.
 

When a leakage breaker will be installed in a power distribution series, choose the leakage breaker rating so that it has a non-operating current that is at least two times the total leakage current in order to prevent frequent malfunctions. And when many devices are connected, increase the number of leakage breakers and form branches in the wiring system.

**12) Effective remote control distance**

This display emits weak infrared radiation. If other products controlled with infrared remote controls are placed nearby, remote control function may be affected. In such cases, move them further away from the display or contact Pioneer authorized dealer for assistance.

Depending on installation conditions, the range of the unit's own remote control may be reduced by infrared radiation emitted by the screen.

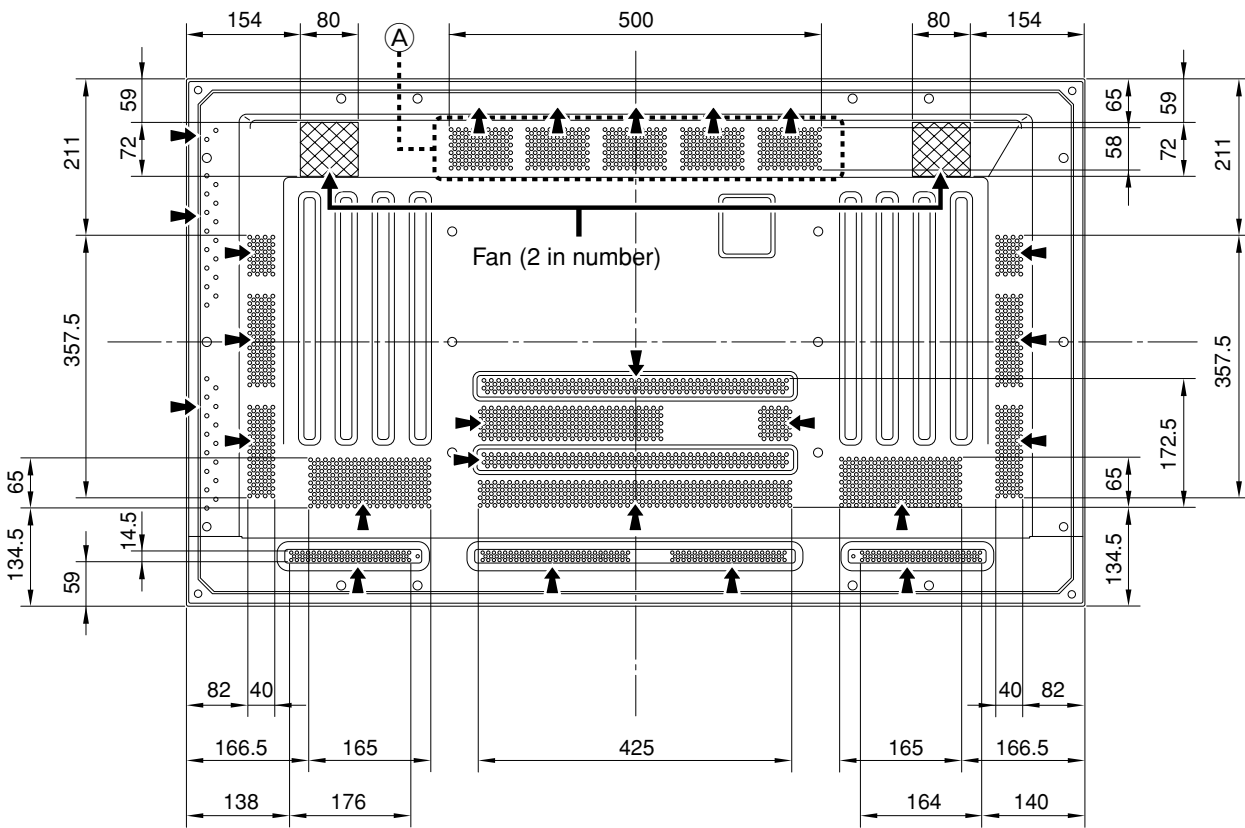
The screen's infrared intensity will vary, depending on the image displayed.

### 3.2 Installation Conditions (PDP-503CMX/PDP-503MXE)

#### 3.2.1 Heat dissipation

This unit has openings for effective ventilation at locations marked by arrows in the illustration below. **To allow proper dissipation of heat from the unit, do not cover any of these openings.**

(Unit : mm)



Two fans and part Ⓐ in a normal installation case draw off hot air from the unit. All openings not assisted by fans serve as air inlets. If the unit is hung from or embedded into a wall, special operating temperature limits and other limitations may apply. Refer to "3.5 Special Installation".

**3.2.2 Calculating heat quantity**

As a courtesy to our customers, we have included the power formula to calculate the air conditioning needs.

For power consumption, allow for 400 W = 400 VA per unit.

Since most of the power consumed is transformed into heat, power consumption may be regarded as roughly equal to generated heat.

① Conversion to calories

$$[W] \times 0.86 = [kcal/h]$$

$$\text{Heat generated per display: } 400 \text{ W} \times 0.86 = 344 \text{ kcal/h}$$

② Conversion to British Thermal Units

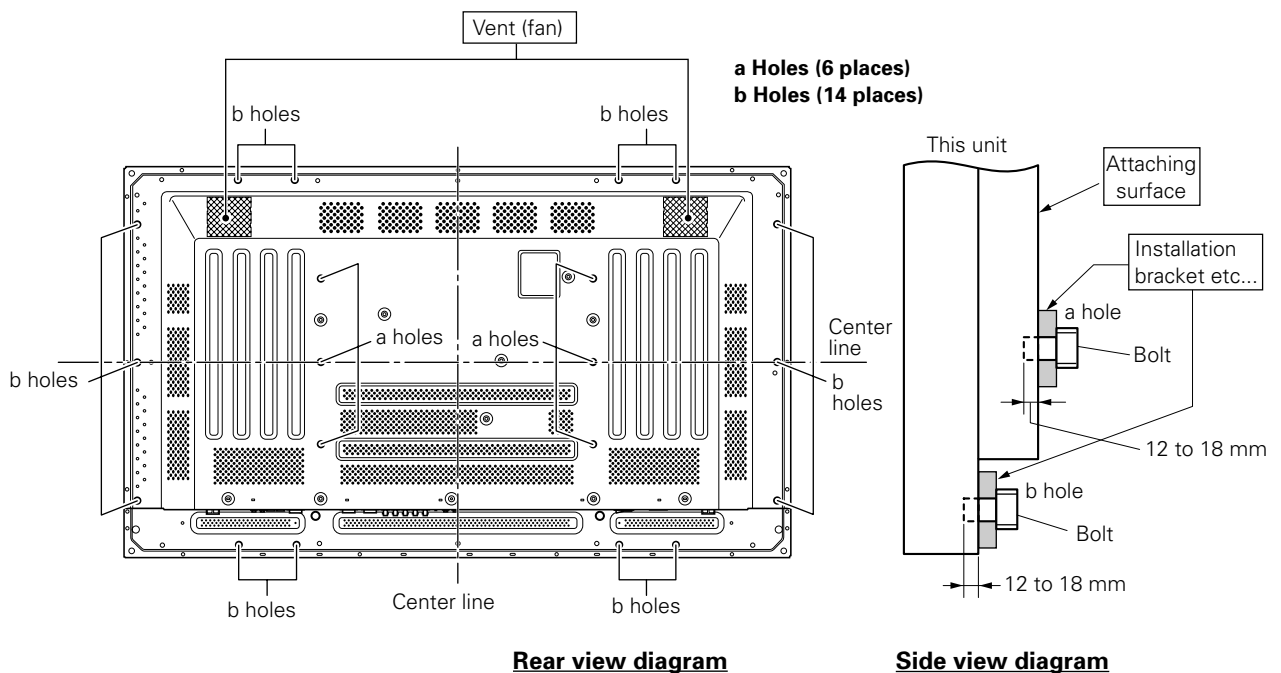
$$[W] \times 3.41 = [BTU/h]$$

$$\text{Heat generated per unit: } 400 \text{ W} \times 3.41 = 1364 \text{ BTU/h}$$

**3.2.3 Product mounting holes**

We recommend using mounting hardware available from Pioneer. If you use other mounting hardware items, mount them to the unit using the M8-bolt holes provided in the unit. Tighten the bolts with a torque between 50 and 80 kg/cm. Applying a torque beyond these limits may lead to internal component failure.

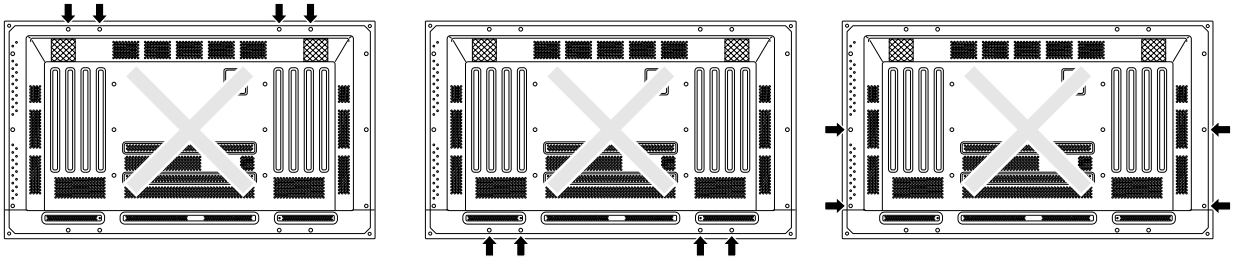
- Locations of useable mount holes are shown below.



- ⚠ Always use a minimum of 4 mounting holes, evenly distributed on opposite sides of both the horizontal and vertical center lines.
- ⚠ Use bolts that can be driven 12 to 18 mm into holes "a" or "b", as shown in the Side View above.
- ⚠ Do not block or cover air outlets and openings for ventilation on the rear panel. Take precautions to prevent soiling walls behind the product with exhaust air discharged from the air outlets.
- ⚠ This unit incorporates glass components. Install only on flat surfaces.
- ⚠ Always turn every bolt by hand 2 or 3 times and check to make sure it is straight, then tighten it using a tool. Do not over tighten bolts. Do not use loctight or similar bonding products.
- ⚠ Please make sure that you use M8 (P=1.25) bolts. (other types of bolt cannot be used).

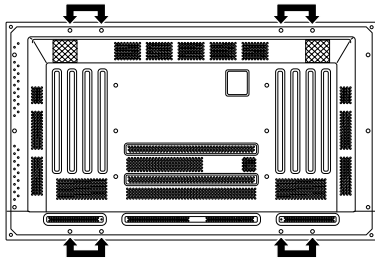
This unit is designed to be mounted using four bolt holes. For additional safety, we recommend securing it at six to eight points on opposite sides of the horizontal and vertical center lines, as shown in the illustration below. Do not secure the unit at four points arranged in a single row, as shown below.

**Methods for securing - Unfavorable examples**

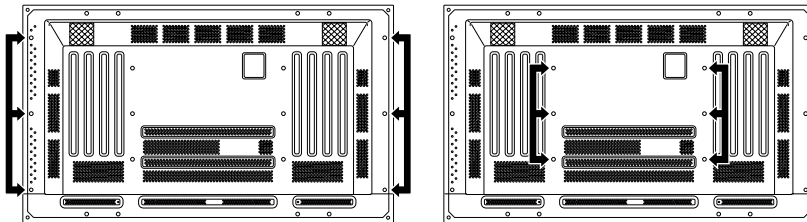


**Methods for securing - Favorable examples**

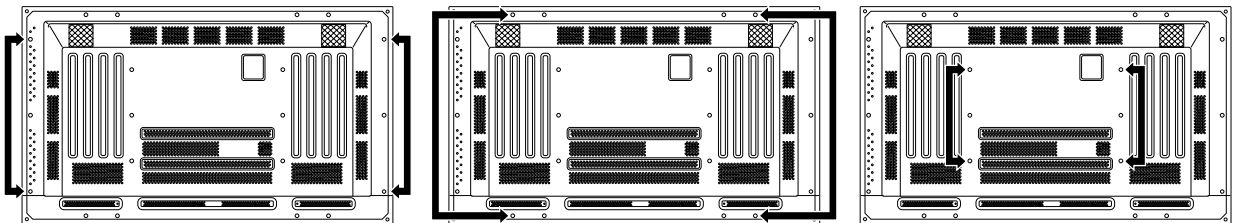
A. Secured at eight points



B. Secured at six points

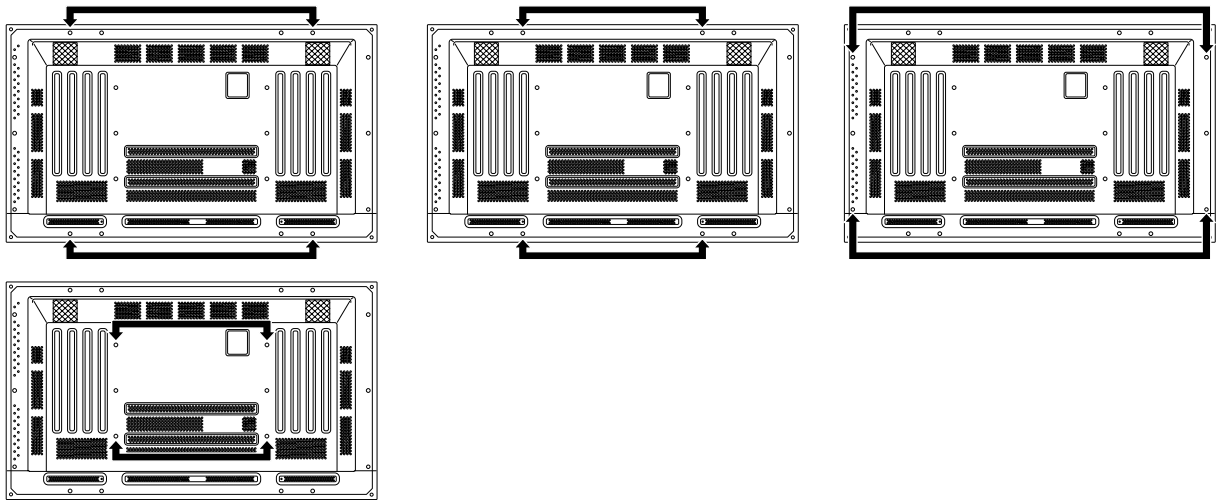


C. Secured at four points (with mounting hardware attached to the sides)





D. Secured at four points (with mounting hardware attached horizontally)



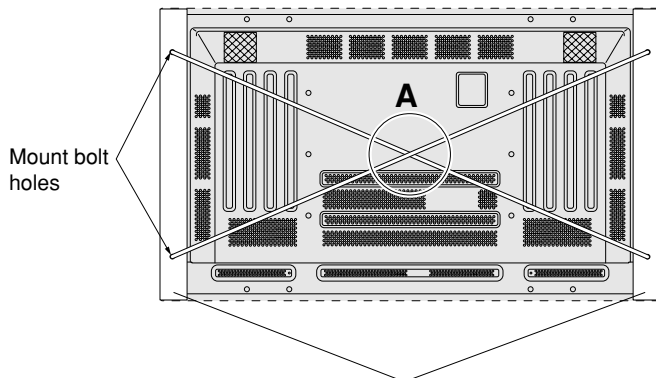
(Take proper precautions to prevent pinching the power cord or signal cables.)

**3.2.4 Mounting surface warping**

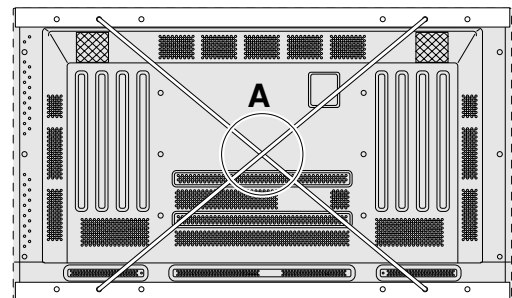
The display section incorporates glass. Before mounting the product, using hardware other than that provided by Pioneer, perform the following to confirm that the display is free from warps exceeding 1 mm\*.

\* Regarding the 1mm limit  
 The frame of the display may have a warp of up to 3mm. If the total warp (the warp of the frame plus the warp of the mount surface) exceeds 4mm then the glass in the display may be put under excessive stress. In order to ensure that the total warp is less than 4mm, you should make sure that the warp of the mount surface is less than 1mm.

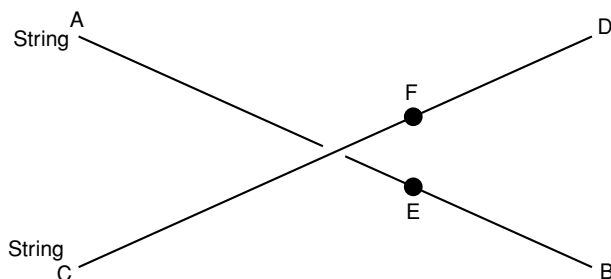
- ① Referring to the illustration below, diagonally extend string of maximum  $\phi$  0.1-mm diameter through the bolt mount openings. Strings thus arranged should be completely free of slack.
- ② Measure the clearance (L) between the strings at their point of intersection.  
 Distortion is expressed by:  $[Distortion] = L \times 2$ .
- ③ If L is found to be 0, pass the strings through the other bolt mount openings and repeat the measurements. Any value of L greater than 0 indicates the presence of distortion. If the measured value in both cases is 0, the distortion is negligible.



Plasma Display Mount Surface (Mount Brackets)



Magnified view of section A



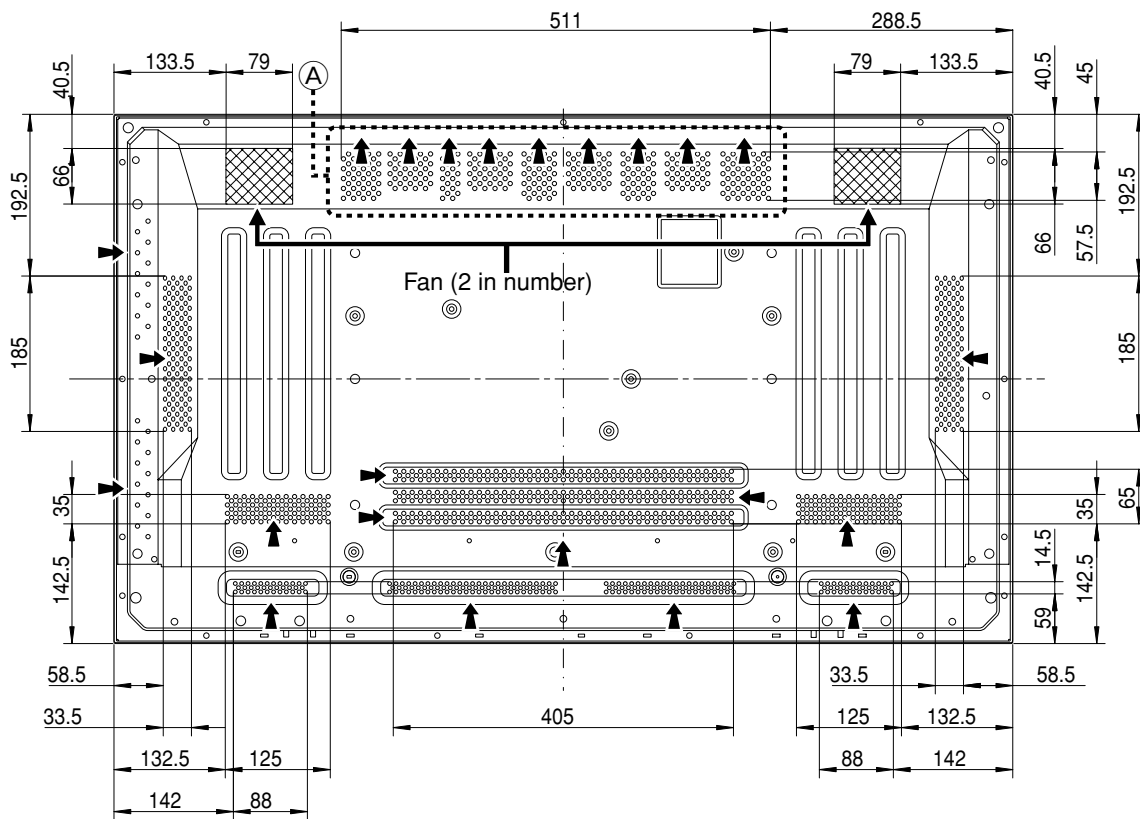
Point E is the center point of string segment A-B.  
 Point F is the center point of string segment C-D.  
 Clearance between points E and F = L.  
 (Points E and F are shown displaced for illustrative purposes.)

3.3 Installation Conditions (PDP-433CMX/PDP-433MXE)

3.3.1 Heat dissipation

This unit has openings for effective ventilation at locations marked by arrows in the illustration below. **To allow proper dissipation of heat from the unit, do not cover any of these openings.**

(Unit : mm)



Two fans and part A in a normal installation case draw off hot air from the unit. All openings not assisted by fans serve as air inlets. If the unit is hung from or embedded into a wall, special operating temperature limits and other limitations may apply. Refer to "3.6 Special Installation".

### 3.3.2 Calculating heat quantity

As a courtesy to our customers, we have included the power formula to calculate the air conditioning needs.

For power consumption, allow for 320 W = 320 VA per unit.

Since most of the power consumed is transformed into heat, power consumption may be regarded as roughly equal to generated heat.

① Conversion to calories

$$[W] \times 0.86 = [\text{kcal/h}]$$

$$\text{Heat generated per display: } 320 \text{ W} \times 0.86 = 275 \text{ kcal/h}$$

② Conversion to British Thermal Units

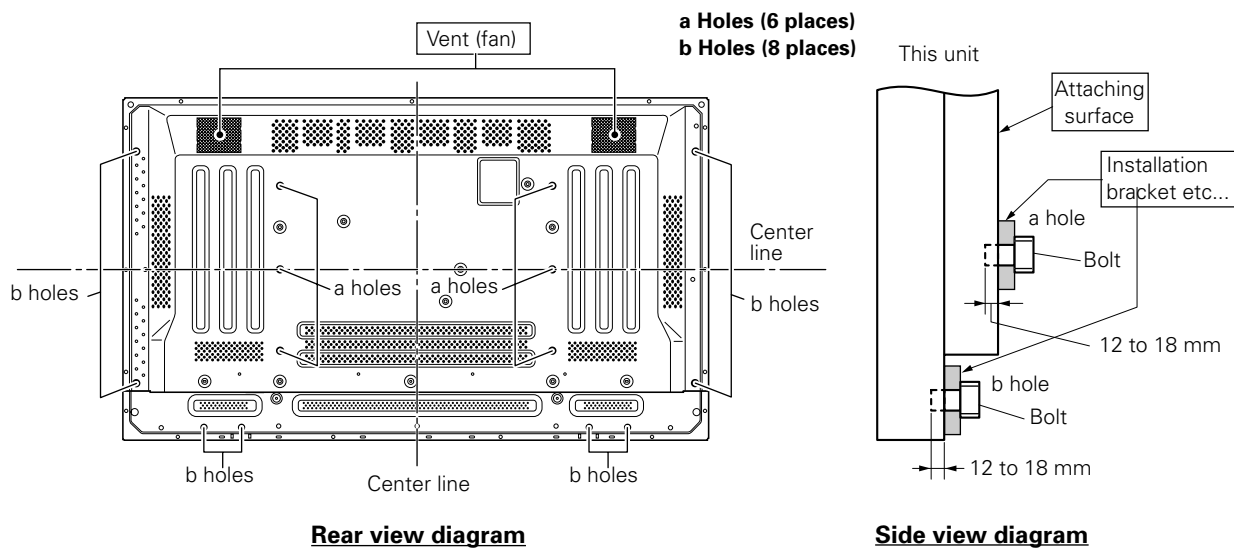
$$[W] \times 3.41 = [\text{BTU/h}]$$

$$\text{Heat generated per unit: } 320 \text{ W} \times 3.41 = 1091 \text{ BTU/h}$$

### 3.3.3 Product mounting holes

We recommend using mounting hardware available from Pioneer. If you use other mounting hardware items, mount them to the unit using the M8-bolt holes provided in the unit. Tighten the bolts with a torque between 50 and 80 kg/cm. Applying a torque beyond these limits may lead to internal component failure.

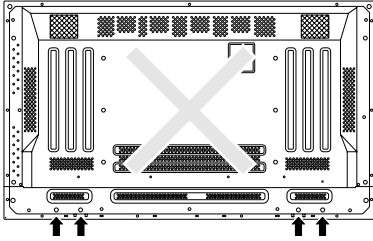
- Locations of useable mount holes are shown below.



- ⚠ Always use a minimum of 4 mounting holes, evenly distributed on opposite sides of both the horizontal and vertical center lines.
- ⚠ Use bolts that can be driven 12 to 18 mm into holes "a" or "b", as shown in the Side View above.
- ⚠ Do not block or cover air outlets and openings for ventilation on the rear panel.  
Take precautions to prevent soiling walls behind the product with exhaust air discharged from the air outlets.
- ⚠ This unit incorporates glass components. Install only on flat surfaces.
- ⚠ Always turn every bolt by hand 2 or 3 times and check to make sure it is straight, then tighten it using a tool.  
Do not over tighten bolts.  
Do not use loctight or similar bonding products.
- ⚠ Please make sure that you use M8 (P=1.25) bolts. (other types of bolt cannot be used).

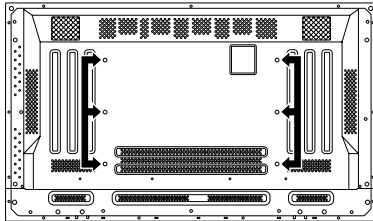
This unit is designed to be mounted using four bolt holes. For additional safety, we recommend securing it at four to six points on opposite sides of the horizontal and vertical center lines, as shown in the illustration below. Do not secure the unit at four points arranged in a single row, as shown below.

**Methods for securing - Unfavorable examples**

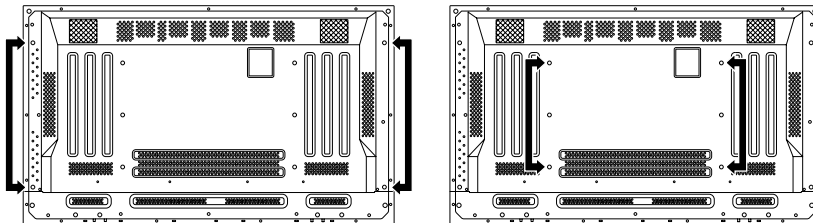


**Methods for securing - Favorable examples**

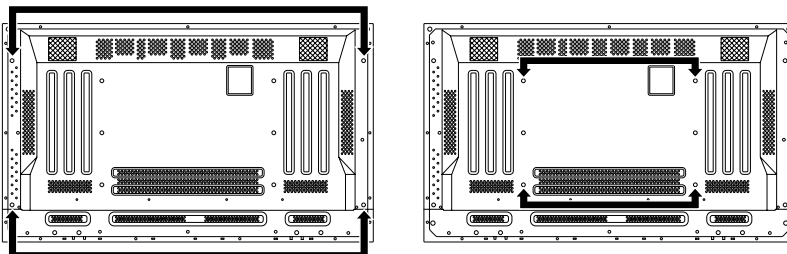
A. Secured at six points



B. Secured at four points (with mounting hardware attached to the sides)



C. Secured at four points (with mounting hardware attached horizontally)



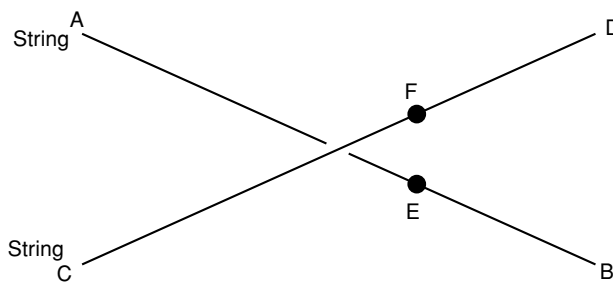
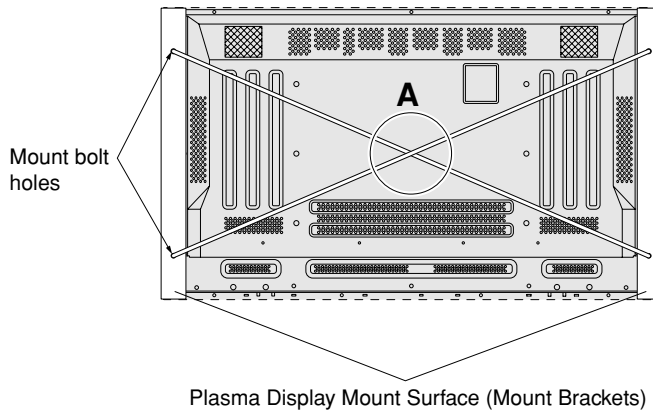
(Take proper precautions to prevent pinching the power cord or signal cables.)

**3.3.4 Mounting surface warping**

The display section incorporates glass. Before mounting the product, using hardware other than that provided by Pioneer, perform the following to confirm that the display is free from warps exceeding 1 mm\*.

\* Regarding the 1mm limit  
 The frame of the display may have a warp of up to 3mm. If the total warp (the warp of the frame plus the warp of the mount surface) exceeds 4mm then the glass in the display may be put under excessive stress. In order to ensure that the total warp is less than 4mm, you should make sure that the warp of the mount surface is less than 1mm.

- ① Referring to the illustration below, diagonally extend string of maximum  $\phi$  0.1-mm diameter through the bolt mount openings. Strings thus arranged should be completely free of slack.
- ② Measure the clearance (L) between the strings at their point of intersection.  
 Distortion is expressed by:  $[\text{Distortion}] = L \times 2$ .
- ③ If L is found to be 0, pass the strings through the other bolt mount openings and repeat the measurements. Any value of L greater than 0 indicates the presence of distortion. If the measured value in both cases is 0, the distortion is negligible.



Magnified view of section A

Point E is the center point of string segment A-B.  
 Point F is the center point of string segment C-D.  
 Clearance between points E and F = L.  
 (Points E and F are shown displaced for illustrative purposes.)

### 3.4 Installation Procedures

#### 3.4.1 Transportation precautions

- ① Any transportation of the unopened unit in its packaging should be done by two or more persons. To avoid injury or damage, do not lift the package by its packing bands.
- ② When transporting or storing the unit, always position it vertically - never horizontally. Horizontal transportation or storage invalidates the product warranty
- ③ In transportation or storage of products in original packing, never stack more than three units high. This warning is also indicated on the upper face of the carton.
- ④ For transportation or storage, observe the warnings and instructions on the upper face of the carton.
- ⑤ Plasma display is mode off grass. Please take precautions to prevent it from being damaged.

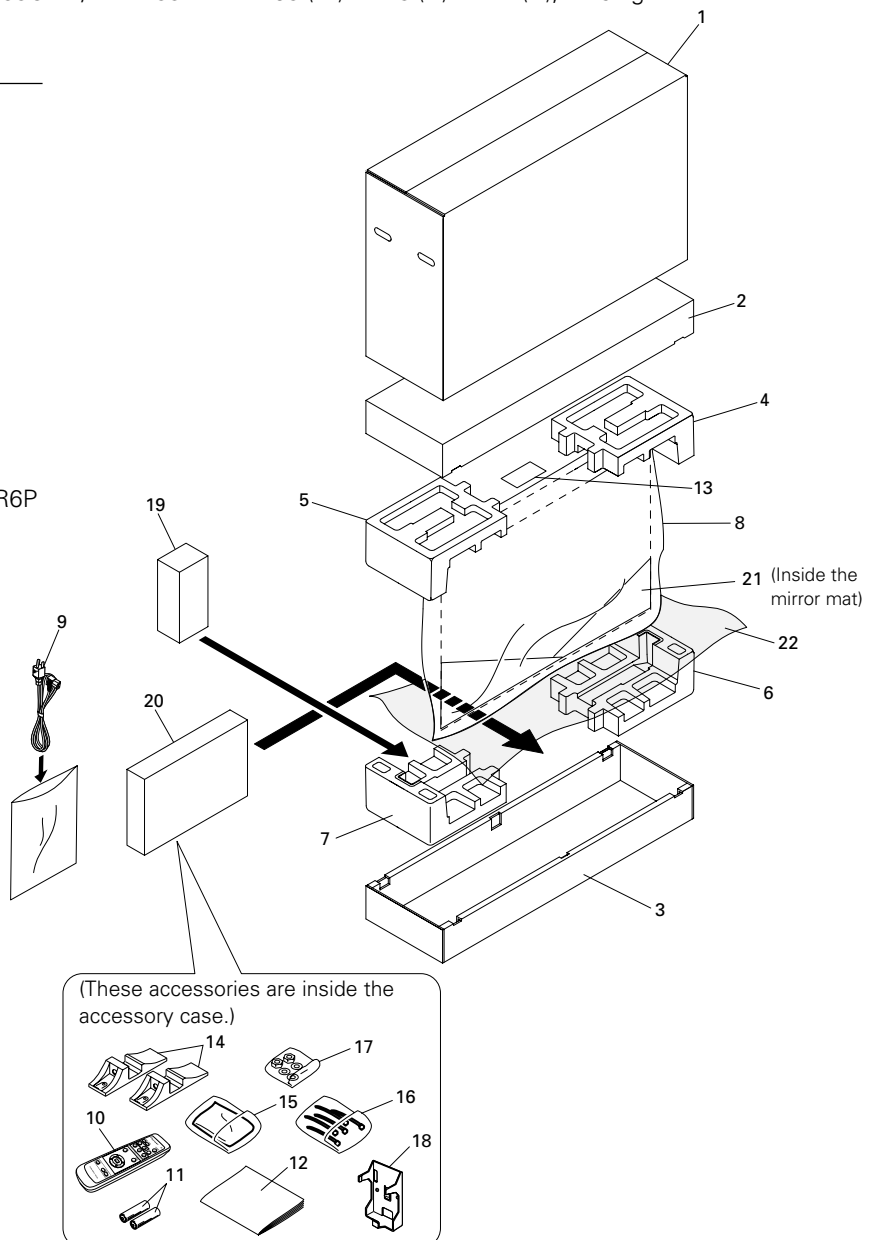
#### 3.4.2 Unpacking

The original packing material can be re-used to safely ship the Plasma Display. When doing so, it is important to use the material in the same way as when they were originally shipped. Failure to correctly use the material can damage the display.

- 1) Packing specifications; PDP-503CMX/PDP-503MXE: 1341 (W) × 846 (H) × 424 (D), 51 kg  
 PDP-433CMX/PDP-433MXE: 1193 (W) × 748 (H) × 424 (D), 41.5 kg

Ref. No.	Terms
----------	-------

- |    |   |
|----|---|
| 1  | Upper face of the carton                        |
| 2  | Carton cover                                    |
| 3  | Lower face of the carton                        |
| 4  | Pad   |
| 5  | Pad   |
| 6  | Pad   |
| 7  | Pad   |
| 8  | Miller mat                                      |
| 9  | Power cord                                      |
| 10 | Remote control unit                             |
| 11 | 2 manganese AA batteries, R6P                   |
| 12 | Operating instructions                          |
| 13 | Warranty card                                   |
| 14 | Display stand                                   |
| 15 | Wiping cloth                                    |
| 16 | Binder Assembly                                 |
| 17 | Bolt, Washer                                    |
| 18 | Remote control unit holder                      |
| 19 | Power cord case                                 |
| 20 | Accessory case                                  |
| 21 | Front sheet<br>(PDP-503CMX/<br>PDP-503MXE only) |
| 22 | Polyethylene sheet                              |



## 2) Unpacking procedures

- ① Remove the packing bands.
- ② Slowly lift and remove the upper carton.
- ③ Lift and remove the carton cover.
- ④ Remove the pads.
- ⑤ Remove the accessory case and power cord case.
- ⑥ Remove the unit. (This should be performed by two persons.)

## 3) Transportation of the unpacked unit.


If it needs to be moved, the unit should be lifted by two persons.

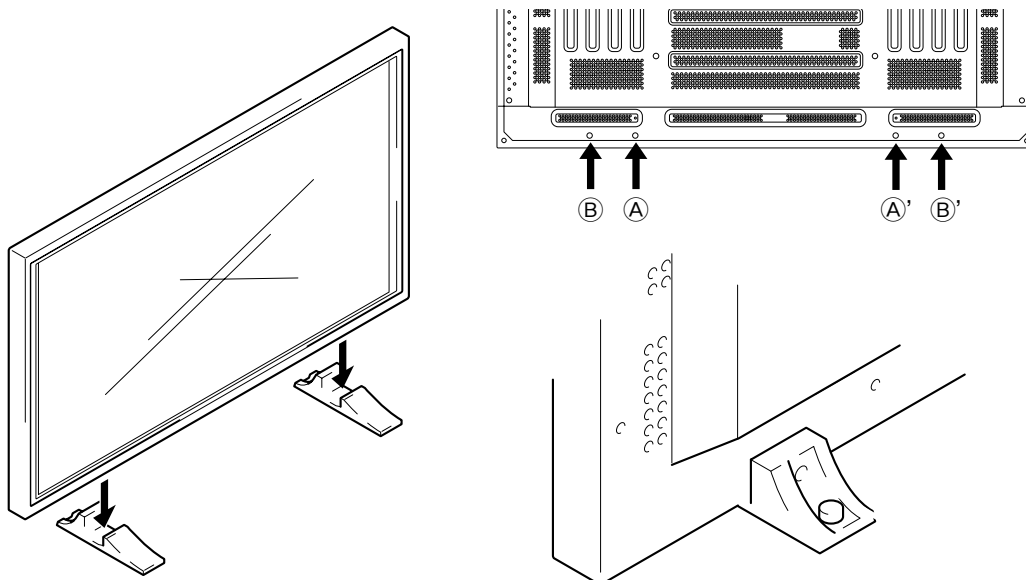
- Never move the unit by dragging it along the floor.
- Move the unit slowly, taking care to prevent scraping or striking the delicate front protective panel.
- In order to prevent adhesion of dust, remove the protective film only after all work and preparations for the installation site, including clean-up following unpacking, are complete.

### 3.4.3 Mounting on the attachment stands (See 4.3 "Installation of the Attachment Stand" for instructions on permanent installation.)

Insert the stand bolts into (A) and (A') or into (B) and (B') on the back of the main unit.

This method should, insofar as possible, be a temporary setup pending proper installation. When installing the attachment stand, consult 4.3 "Installation of the Attachment Stand".

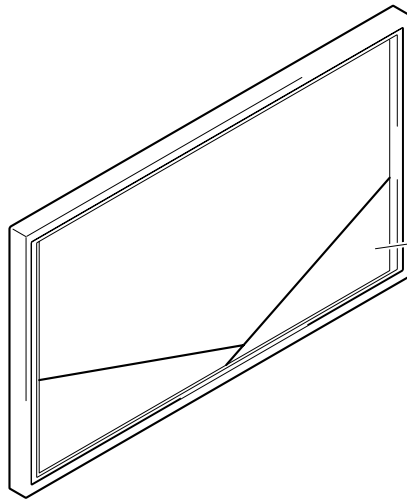
 Placing the screen on the stands is only a temporary step before proper installation. We cannot guarantee against damage to the screen caused by it toppling over under an external force etc. while it is placed on the stands.



### 3.4.4 Re-packing (re-packing and re-shipping are not covered by the warranty.)

If the unit needs to be re-packaged, observe the following guidelines.

- Pack by performing in reverse order the steps described in 3.4.2 "Unpacking". Be sure to attach the front sheet to the front of the protective panel (PDP-503CMX/PDP-503MXE only). The miller mat must be positioned so that the shiny film surface faces outward and its soft surface faces inward (toward the unit).
- Restore all accessories to their original locations. Secure with adhesive tape to prevent damage during transportation.
- Do not re-package and ship if the packing material is damaged.



Be sure to attach the front sheet.  
(PDP-503CMX/PDP-503MXE only)  
(Attach it tightly to the protective panel and  
insert it into gaps on the front frame.)

### 3.4.5 Wiring

#### 1) Connecting the power cable

- Refer to the section on **Power Cord Connection** on p. 13 of the operating instructions.
- For power source specifications, refer to 3.1 "Installation Site Requirements", Section 11) Power requirements, above.

#### 2) Connecting signal cables

(1) Please refer to p10~14 of the instruction manual for instructions on how to connect a PC or a video device.

(2) Important notes

- Use coaxial cables. As a rough guide, for video signals use 3C-2V cables for lengths up to 15 meters, and 5C-2V cables for lengths up to 30 meters. Use thicker cables for computer signals, since these signals are more likely to degrade: 5C-2V cables, for example, for 15-meter lengths. Generally, thicker cables will produce more reliable connections. You can also improve signal quality by minimizing cable length.
- Video cables plugged into video inputs and outputs close to dimmers, neon signs, air-conditioning units, or cables for wired broadcasts may occasionally deliver slightly corrupted images.


#### 3) Processing wires

- In the case of permanent or long-term installation, please be careful to select cables of the correct length, considering the whole wiring route when doing this (this is not so important in the case of short-term installation such as with special events).
- Arrange and secure cables so that they will not be subject to direct load or physical force. For temporary installation, securing cables with string should be perfectly adequate. For permanent installations, secure by more reliable means.



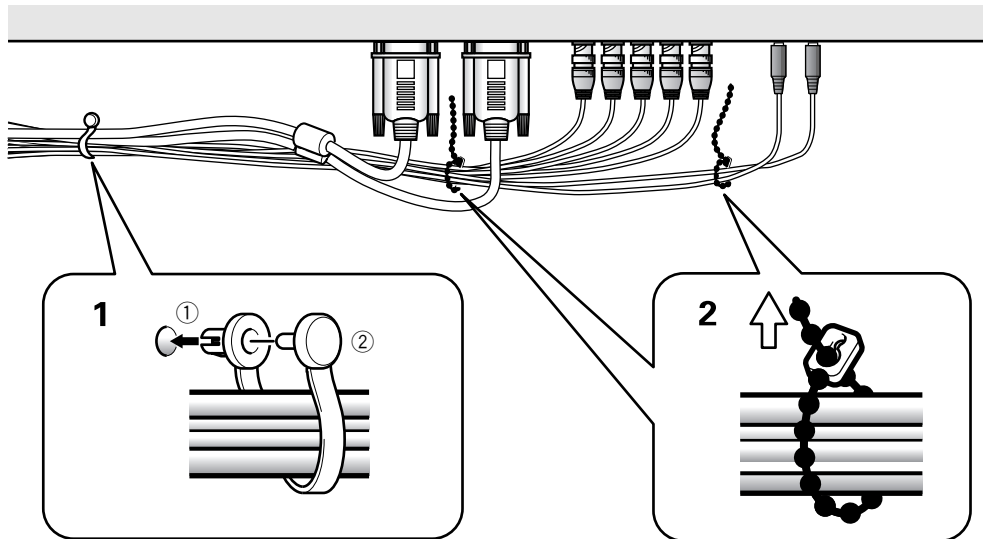
4) Arranging and securing cables with speed clamps and bead bands

**1** Fasten cables using the supplied speed clamps.

 Remember that speed clamps are not easily removed, once fastened.

**2** Secure cables with the supplied bead bands.

\* As viewed from the rear of the display.



**1** Organize cables together using the provided speed clamps.

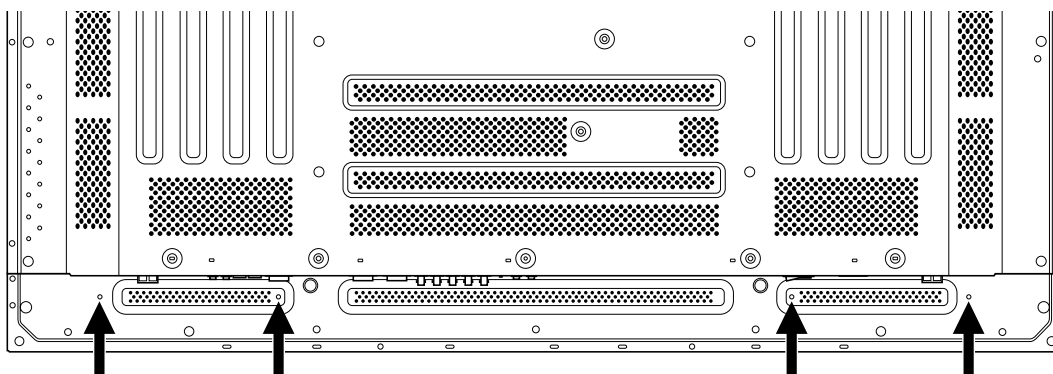
Insert ① into an appropriate hole on the rear of the unit, then snap ② into the back of ① to fix the clamp.

**2** Bunch separated cables together and secure them with the provided bead bands.

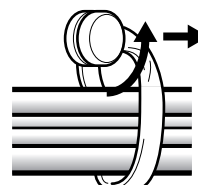
**Note**  
Cables can be routed to the right or left.

Speed clamps are designed to be difficult to undo once in place. Please attach carefully.

**To attach the speed clamps to the main unit**  
Connect the speed clamps using the 4 holes marked with • below, depending on the situation.



**To remove speed clamps**  
Using pliers, twist the clamp 90° and pull it outward. In some cases the clamp may have deteriorated over time and may be damaged when removed.



3.5 Special Installation (PDP-503CMX/PDP-503MXE)

The unit can be hung from or embedded in a wall, but such special installations impose additional limitations on operating temperatures and other operational factors.

Examine installation methods and the ambient conditions for your installation site, and refer to sections 3.1, 3.2, 3.4 in this manual.

Measurements discussed in this manual assume the following conditions:

- A 100 % white input is supplied.
- Sufficient aging has been completed.

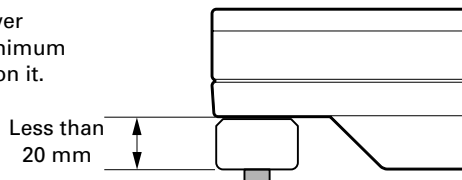
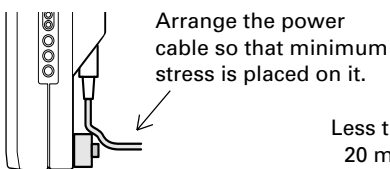
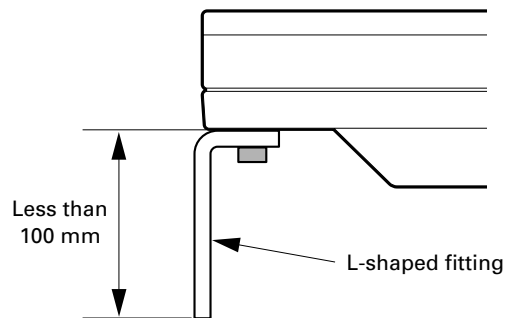
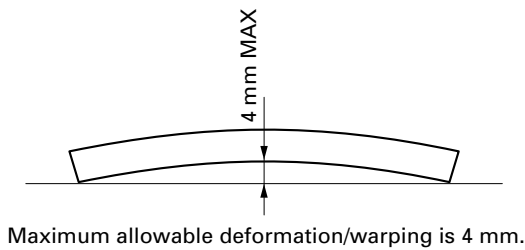
Make all measurements under identical conditions. The aging period required for correct measurement will be about two and a half hours, depending on the space available at the installation site.

3.5.1 Mounting to fittings

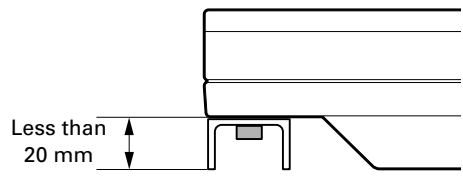
Observe the following guidelines when mounting the unit to fittings.

Notes ② to ⑦ apply to all cases of mounting to fitting.

- ① When mounting the unit, make sure that there are no objects around it within a distance of 300mm.
- ② Any unit deformation/warping occurring as a result of installation should be less than 4 mm.
- ③ Never block or cover openings, aside from those shown as blocked in the illustrations on the following page.
- ④ The fittings should have a thickness of less than 20 mm. (This limit does not apply to fittings in examples 2, 4, 6 and 8 on the following page.)
- ⑤ L-shaped fittings should have a thickness of less than 100 mm.
- ⑥ The strength of the fittings should be adequate to bear the weight of the display.
- ⑦ Take precautions to avoid sharply bending the power cable.



( No thickness limitations in examples 2, 4, 6 and 8 on the following page.)



( No thickness limitations in examples 2, 4, 6 and 8 on the following page.)

☆ Operating environment for standard installation

- Ambient Temperature: 0 to 40 °C (examples 1 to 4)

☆ Operating environment for vertical installation

0 to 40 °C (vertical installation: examples 5 to 8)

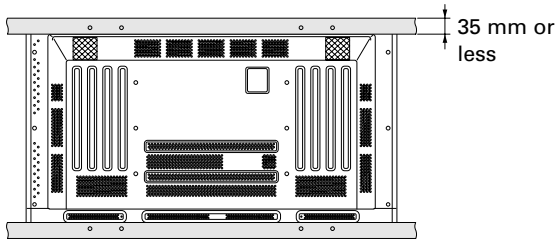
☆ Operating temperatures for Upside-Down Installations (possible only for attachment examples 2 and 3)

- Ambient temperature: 0 to 40 °C

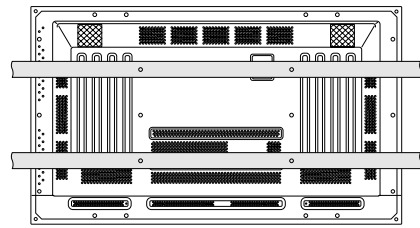
The operating temperature restrictions for the speaker system (PDP-S05-LR) are the same regardless of whether installation is horizontal or vertical.

Standard installation (Note that only Examples 2 and 3 apply in cases where top and bottom are reversed)

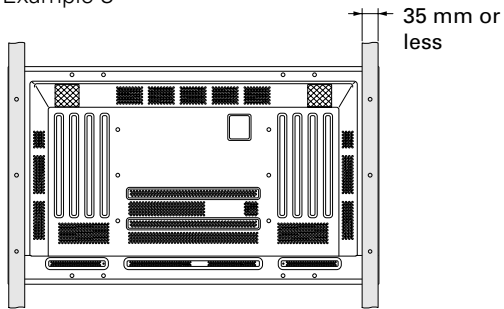
Example 1



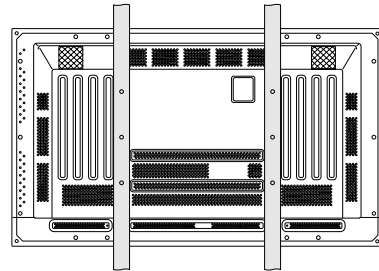
Example 2



Example 3

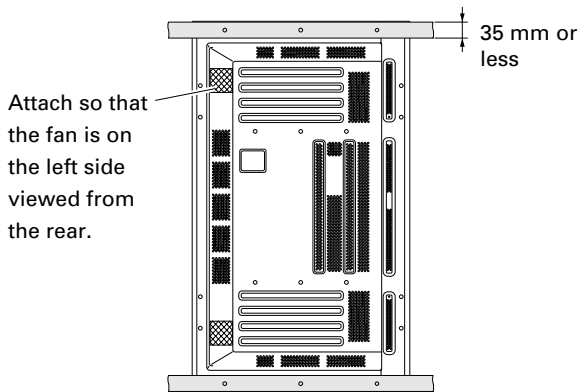


Example 4

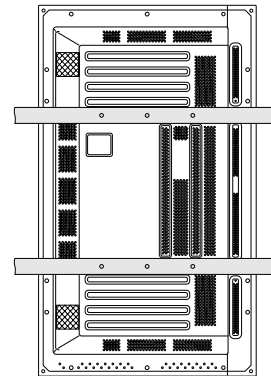


Vertical installation

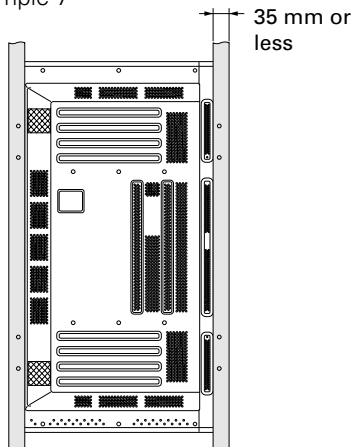
Example 5



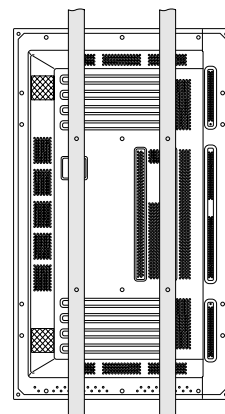
Example 6



Example 7

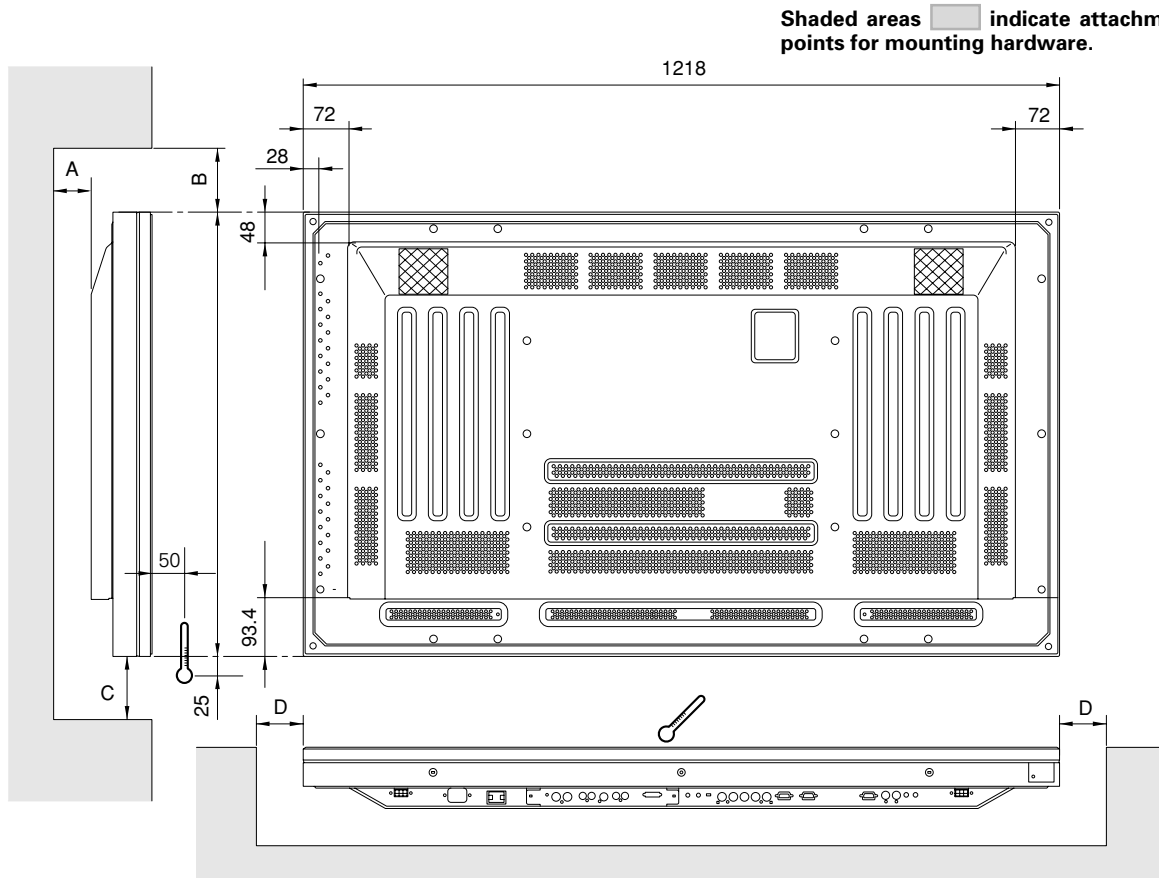


Example 8



3.5.2 Hanging on the wall

Carefully read the following before attempting to hang the unit on a wall, and observe the various limitations specified below. Be sure to mount the unit so that twisting, bending, or any other deformation does not exceed 4 mm.



Operating temperature restrictions

☆ **Standard single-unit installation**

\* When attached using PDK-5005 PDP brackets, the distance A between the unit and the wall must be no less than 50 mm.

Distance from wall (A)	B	C	D	Ambient temperature
50 mm or less	300 mm or more	300 mm or more	300 mm or more	0 to 35°C
50 mm or more	100 mm or more	50 mm or more	50 mm or more	0 to 40 °C

☆ **Horizontal/vertical, left/right reverse installation (Note that only Examples 2 and 3 apply in cases where top and bottom are reversed)**


\* No matter what the distance between the unit and the wall, the unit must be installed in such a way as to ensure free air flow (With no obstructions within a distance of 300 mm from the unit).

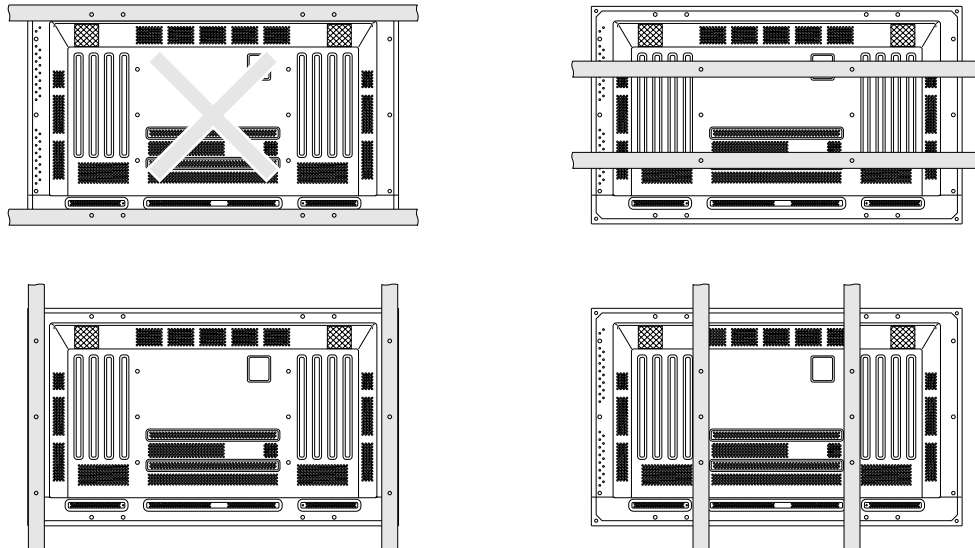
Distance from wall (A)	B	C	D	Ambient temperature
50 mm or more	300 mm or more	300 mm or more	300 mm or more	0 to 35°C

☆ **Requirements when used with PDP-S05-LR speaker system**

When installed as a single unit, all requirements are the same as those listed above for horizontal/vertical, left/right reverse installation. Note, however, that the figures listed above are to be interpreted as indicating the distance between the speakers and the wall.

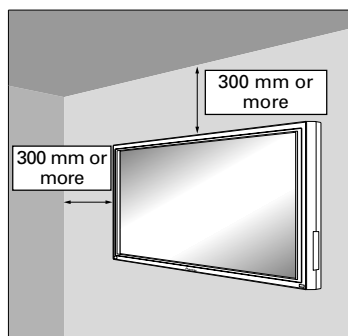
(NOTE) Different temperature restrictions apply to the PDK-5011 and PDK-5013. Refer to "4.6 Wall-mounted Tiltable Plasma Display Hardware" and "4.7 Wall-mounted Type Tiltable Fixed Plasma Display Hardware". In wall-mounting installation, allow adequate space (a clearance of 300 mm or more) above and below the monitor set, as well as to the right and left.

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The method indicated by a large X-mark must not be used. Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct. (Also refer to 3.5.1 "Mounting to fittings".)



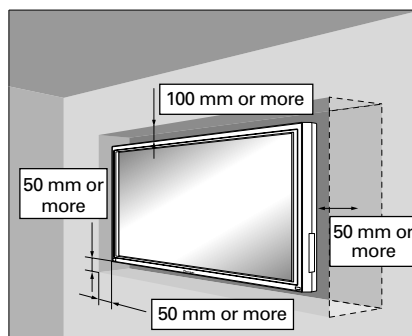
**NOTE 1** Heated air is drawn off from the interior of the unit by fans. Before installation, consider the heat resistance of the wall or other surfaces behind the unit. Exhaust temperatures can be 30 °C higher than the outside temperature.

**NOTE 2** For wall-mounting, do not bundle the cables in a way that will obstruct ventilation.



**Flush-wall installation**  
(distance between unit and wall less than 50 mm)

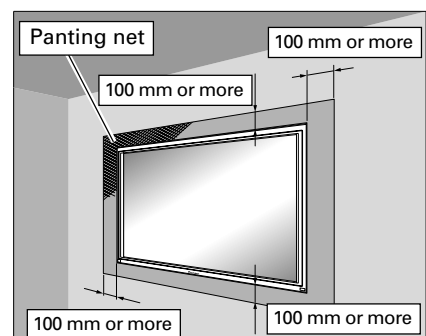
- Requirements :
- Free air flow (With no obstructions within a distance of 300 mm from the unit)
  - Temperature of 0–35°C



Ex.: Installation requirements when installed in recess in wall

**Wall-mounted installation**  
(distance between unit and wall greater than 50 mm)

- Requirements :
- Free air flow (With no obstructions within a distance of 300 mm from the unit) around all four sides of the unit is not necessarily required when the unit is installed at a distance of greater than 50 millimeters away from the wall.
  - \* Note, however, that in such cases the unit may not be placed behind a glass panel or any other obstruction which would create a closed space.
  - Temperature of 0–40°C



Ex.: Installation when covered with a Panting net

**Wall-embedded installation**  
(i.e., installation in closed space)  
(distance between unit and wall greater than 50 mm)

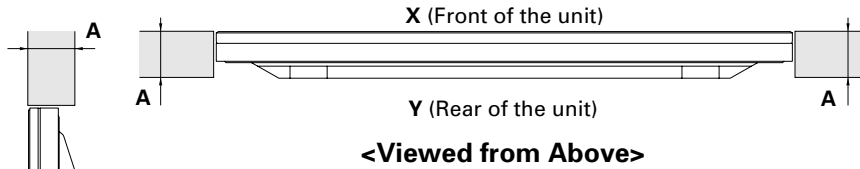
- Requirements :
- See 3.5.3 Embedding in the wall for installation requirements..
  - Temperature of 0–40°C

3.5.3 Embedding in the wall

Carefully read the following before trying to embed the unit in a wall, and make sure to observe all the limitations specified below.

Be sure to mount the unit so that twisting, bending, or other deformation of the unit does not exceed 4 mm.

- (1) Embedding in walls with space provided behind the unit (With no obstructions within a distance of 300 mm from the back surface of the unit).



☆ **Operating Temperature Restrictions**

	Temperature in space X and Y
A: 0 to 370 mm	0 to 40 °C

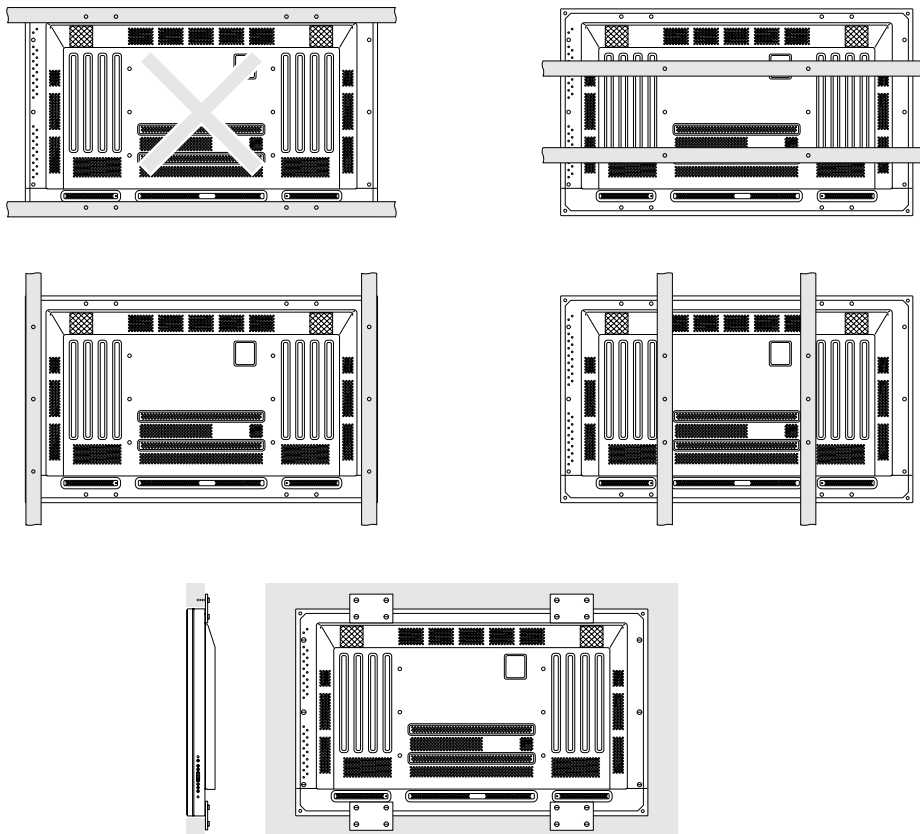
\* The same operating temperature restrictions apply to the speaker system (PDP-S05-LR).

☆ **Operating Temperature Restrictions for Upside-Down Installations**

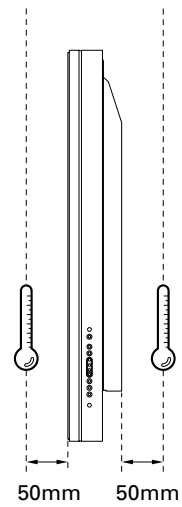
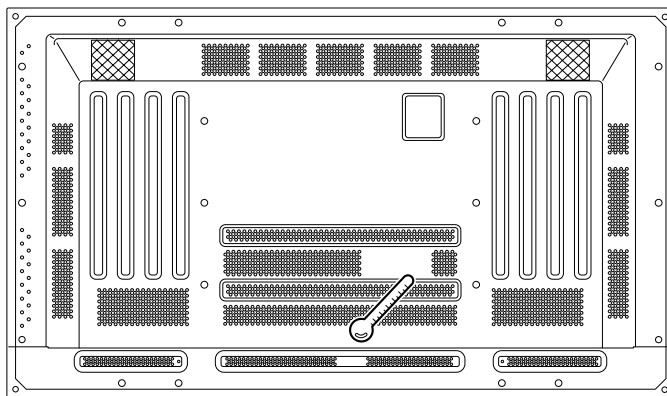
\* Upside-down mounting is unavailable when embedding this device in a wall.

<Viewed from the Right Side>

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The methods indicated by a large X-mark must not be used. Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct. (Also refer to 3.5.1 "Mounting to fittings".)

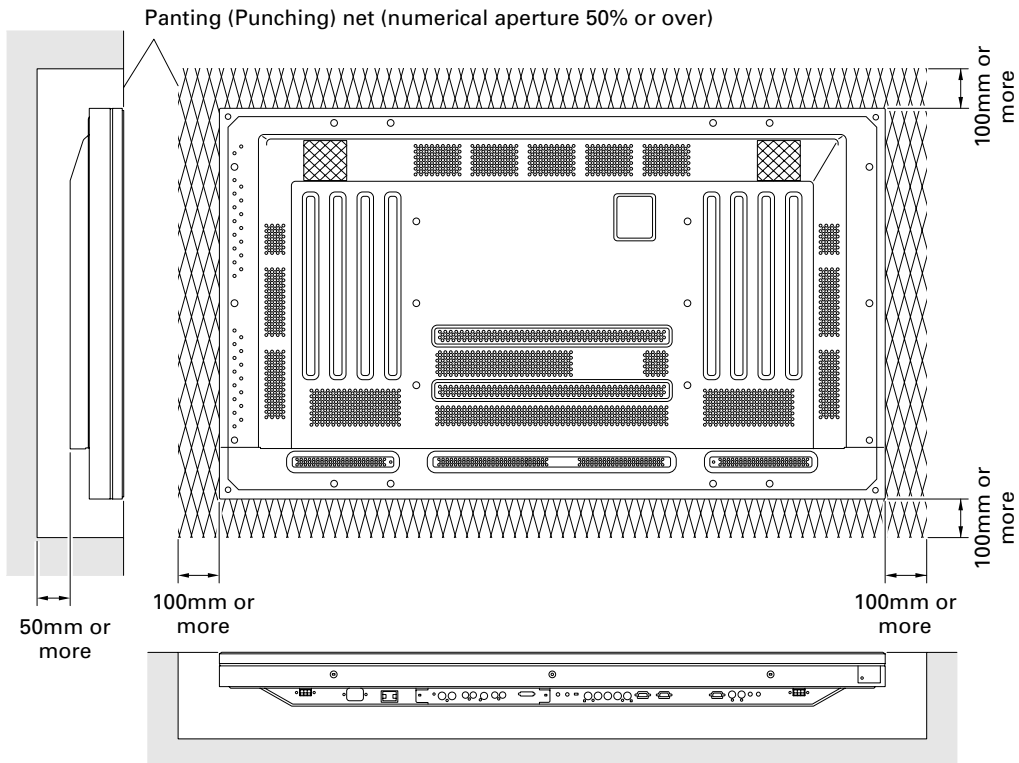


Temperature Measurement Points (Illustration for reference purposes)



- Make measurements at a distance of 5 cm from the unit, without directly subjecting the thermometer to fan exhaust.
- For spaces where temperature fluctuations are likely, gather additional measurement points for an adequate data set.

(2) Embedding in walls with no space provided behind the unit.



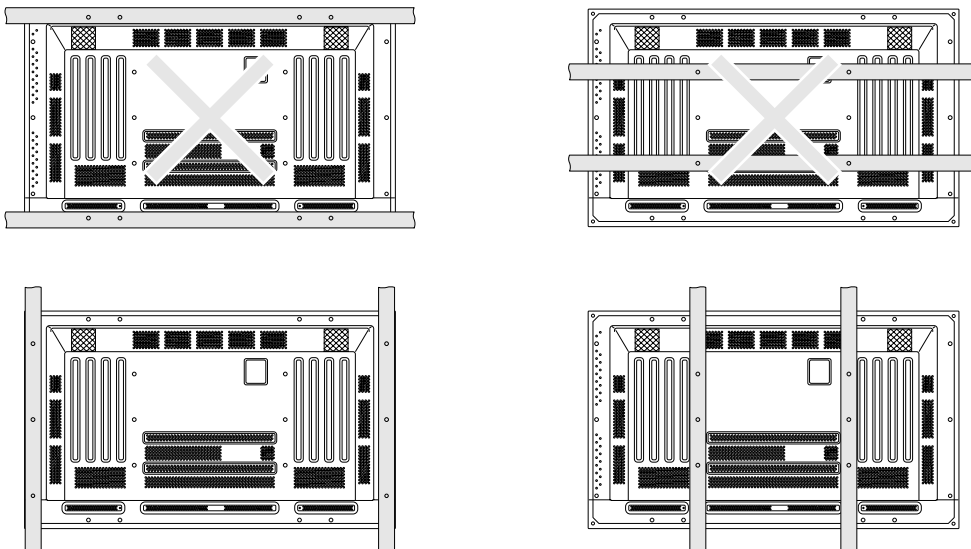
Cation : Due to possible heat up, we do not recommend installation in narrow, enclosed areas.

- ☆ **Operating Temperature Restrictions**
  - Ambient temperature: 0 to 40 °C
  - The same operating temperature restrictions apply to the speaker system (PDP-S05-LR).
- ☆ **Operating Temperature Restrictions for Upside-Down Installations**
  - \* Upside-down mounting is unavailable when embedding this device in a wall.

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The methods indicated by a large X-mark must not be used.

Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct.

(Also refer to 3.5.1 "Mounting to fittings".)





**3.5.4 When the display is put in a box**

Operating this display in confined spaces is not recommended.

- If the display is to be used in confined spaces, observe the following conditions shown in the drawing below in this page:

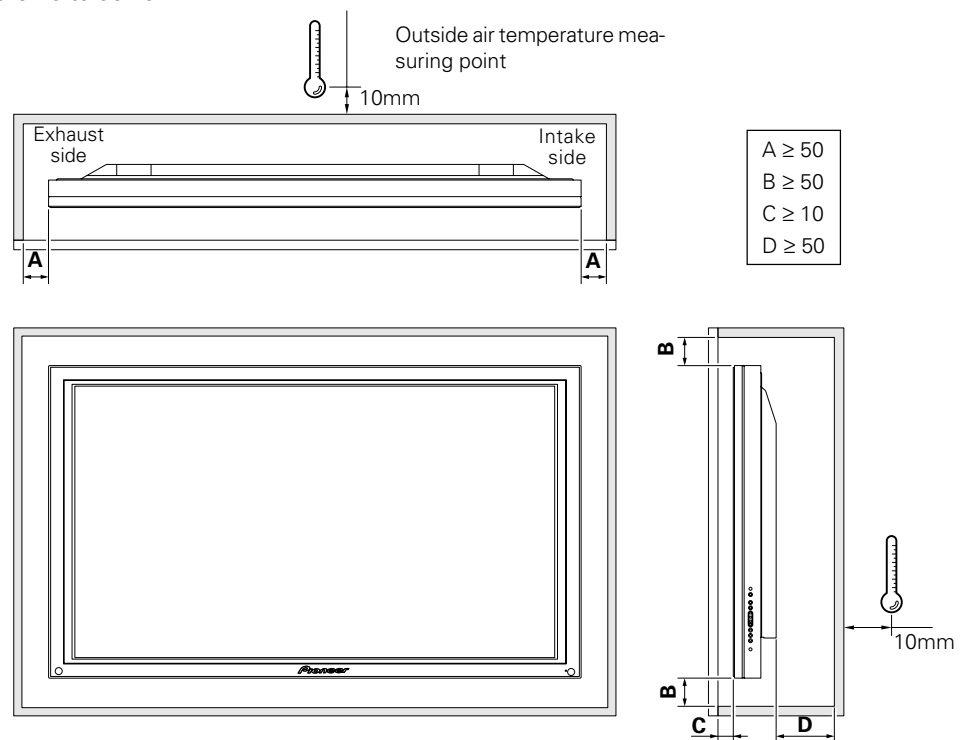
- A ≥ 50
- B ≥ 50
- C ≥ 10
- D ≥ 50

Use a mesh with aperture efficiency of 50% or more.

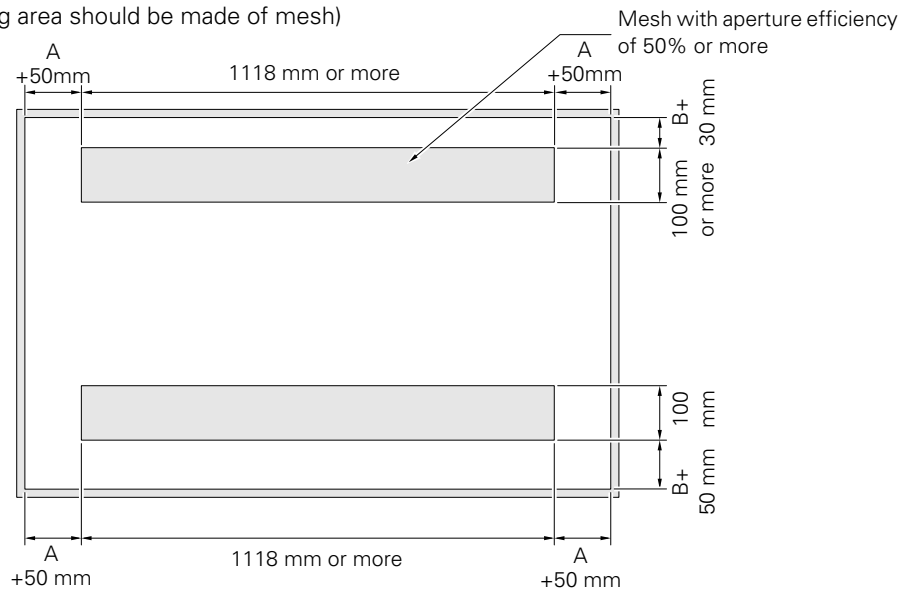
Thus, everywhere in "Y" must be kept less than the following temperature range. If hot air remains in the closed space, the temperature may rise, causing a malfunction or fire. As a precaution in case of accidents, the inner wall should have sufficient heat resistance or fire resistance.

☆ **Usage temperature conditions (BOX air temperature)**

- Ambient temperature: 0 to 35 °C

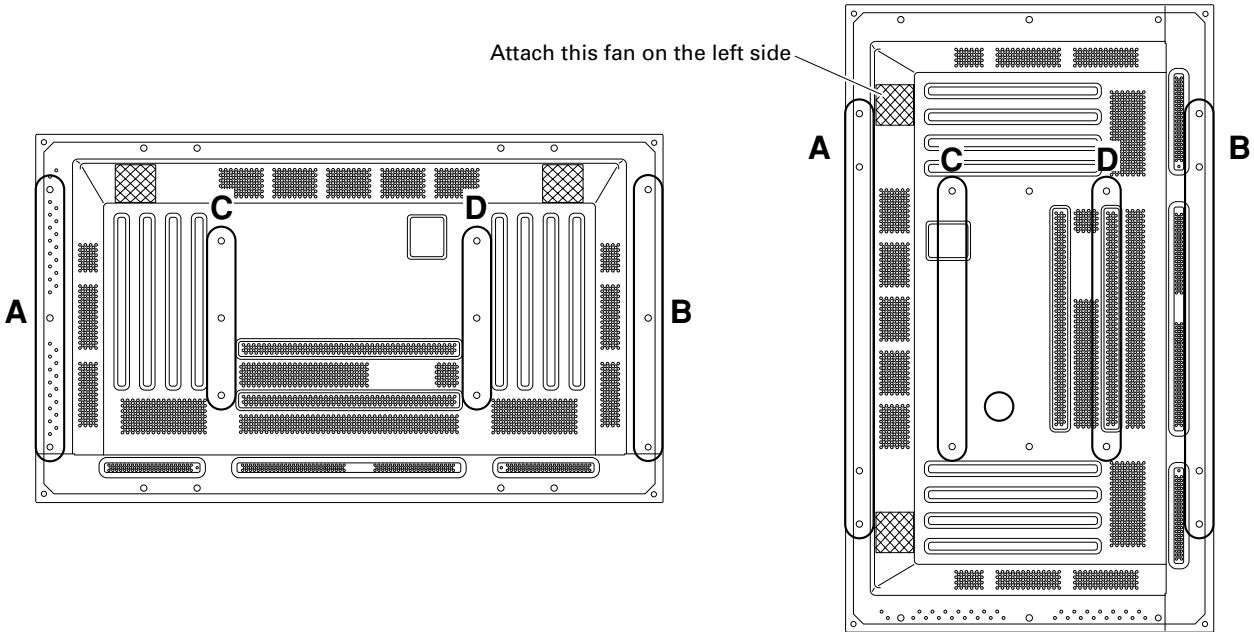


Rear view (the following area should be made of mesh)



**3.5.5 Ceiling suspension (with wires)**

When suspending from ceilings with wire, attach the unit either at rows A and B or at rows C and D to keep it from deforming forces. In addition, the unit must be attached at four or more points, with these points distributed symmetrically on opposite sides of the vertical and horizontal center lines.

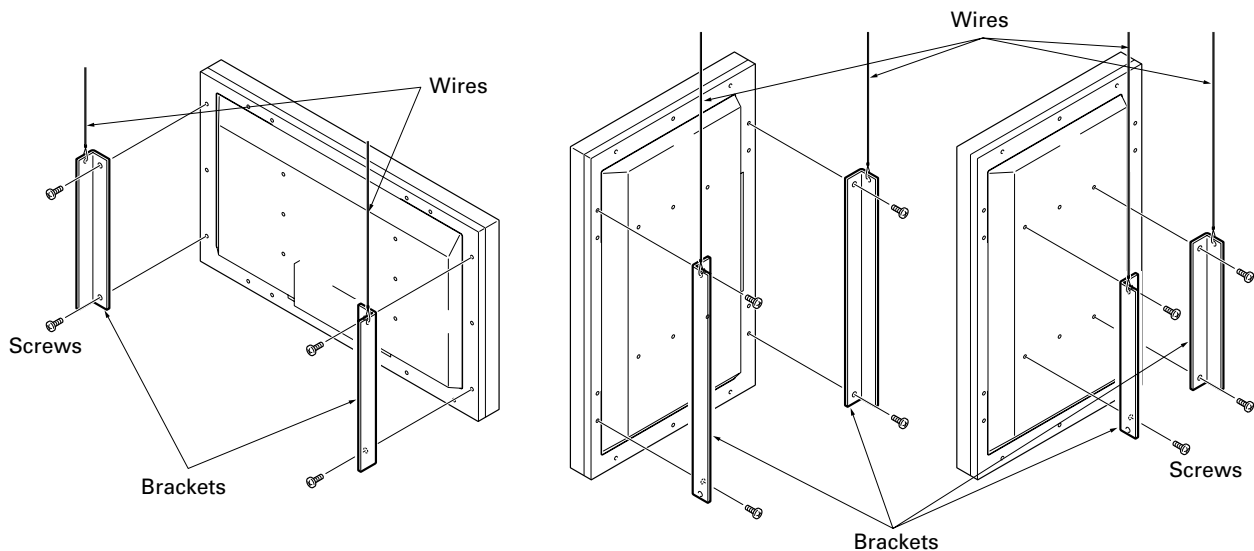


When suspending from a ceiling with wire, use the brackets shown below to prevent concentrating loads on the upper two fixing points.


For additional safety, secure the wires to separate fittings or parts of the ceiling.

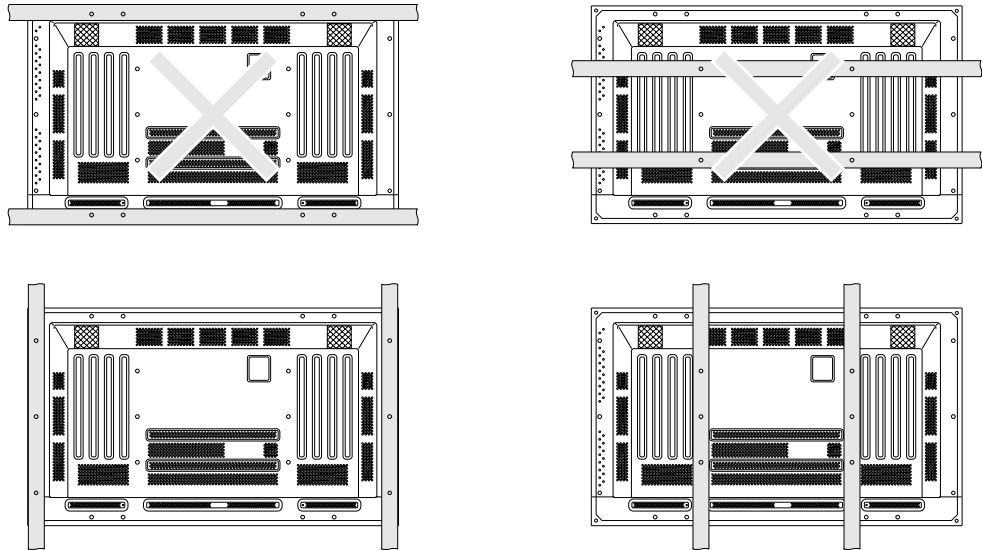
Use mounting screws of material stronger than soft steel, and use hexagonal bolts.

Use wires adequate for the combined weight of the unit 43.0 kg and the weight of the support brackets.

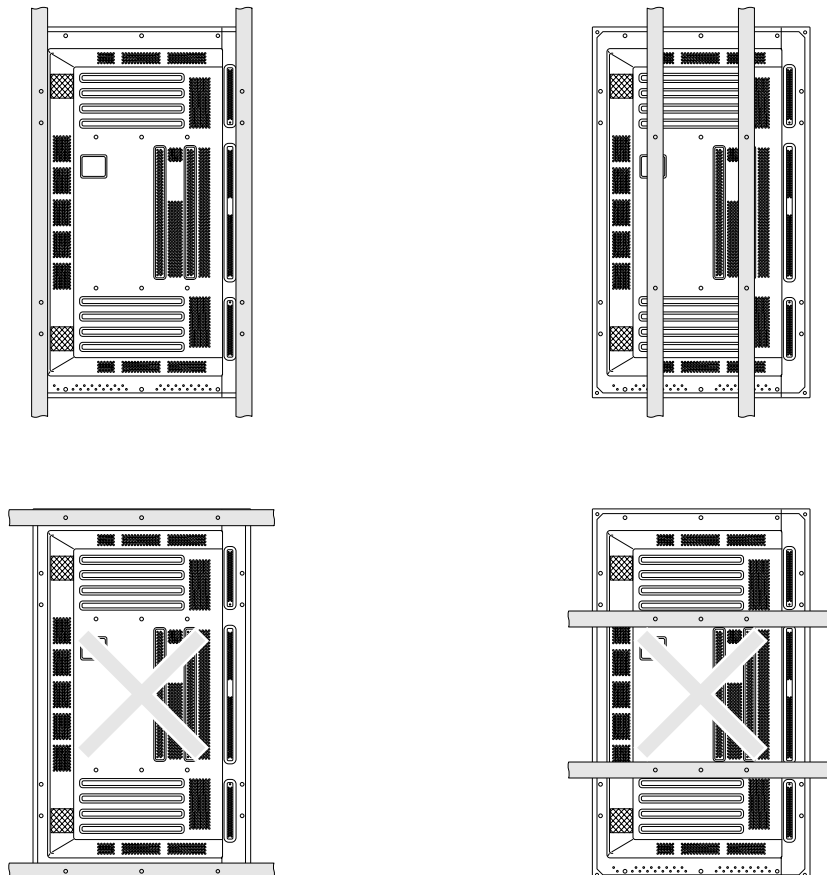


- ☆ **Operating Temperature Restrictions**
  - Ambient temperature: 0 to 40 °C
- ☆ **Operating Temperature Restrictions for Upside-Down Installations**
  - Ambient temperature: 0 to 40 °C

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The methods indicated by a large X-mark must not be used. Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct. (Also refer to 3.5.1 "Mounting to fittings".)



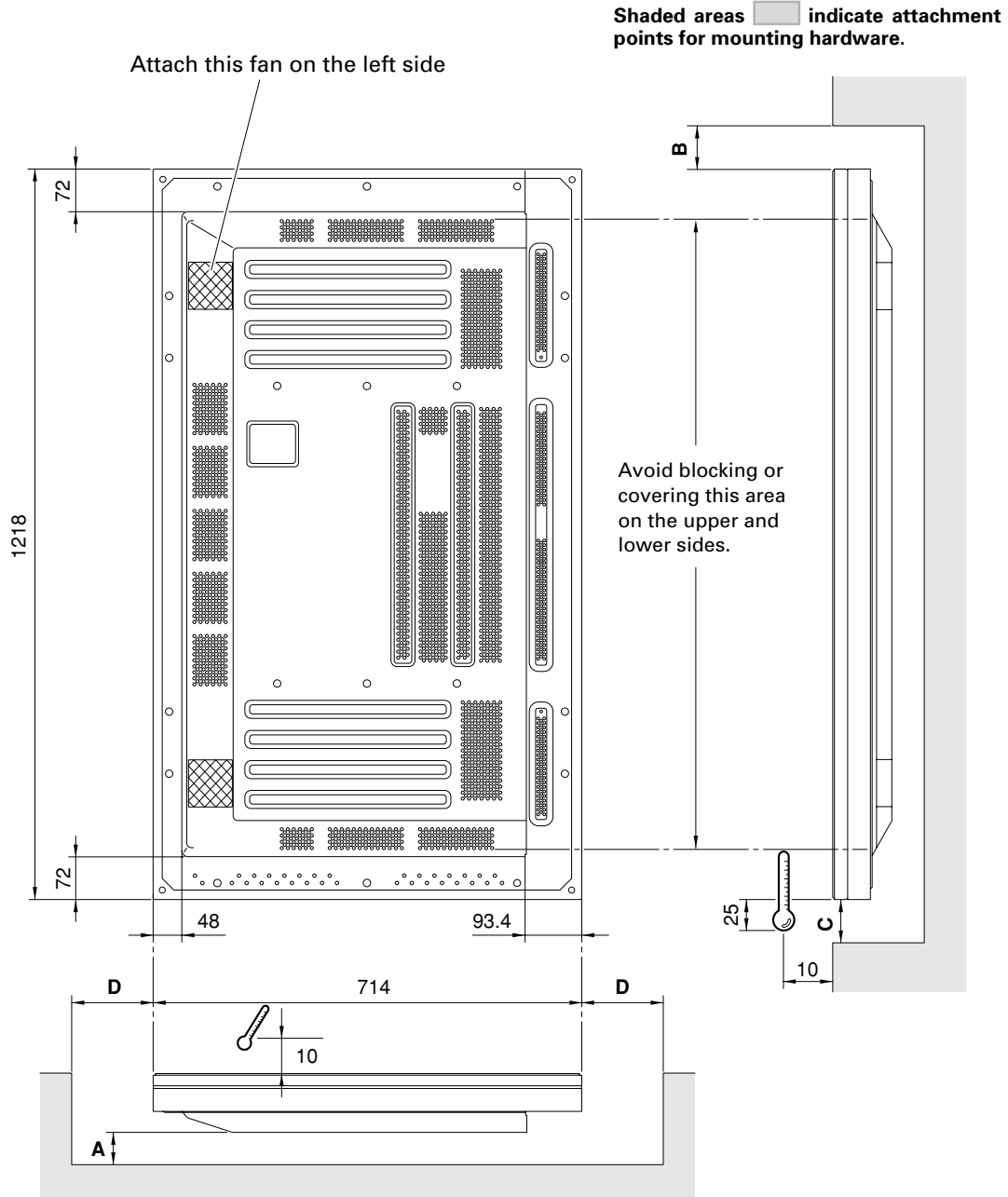
Vertical suspension



**3.5.6 Hanging on the wall (lengthwise)**


Carefully read the following before attempting to mount the unit on the wall, and observe the various limitations specified below.

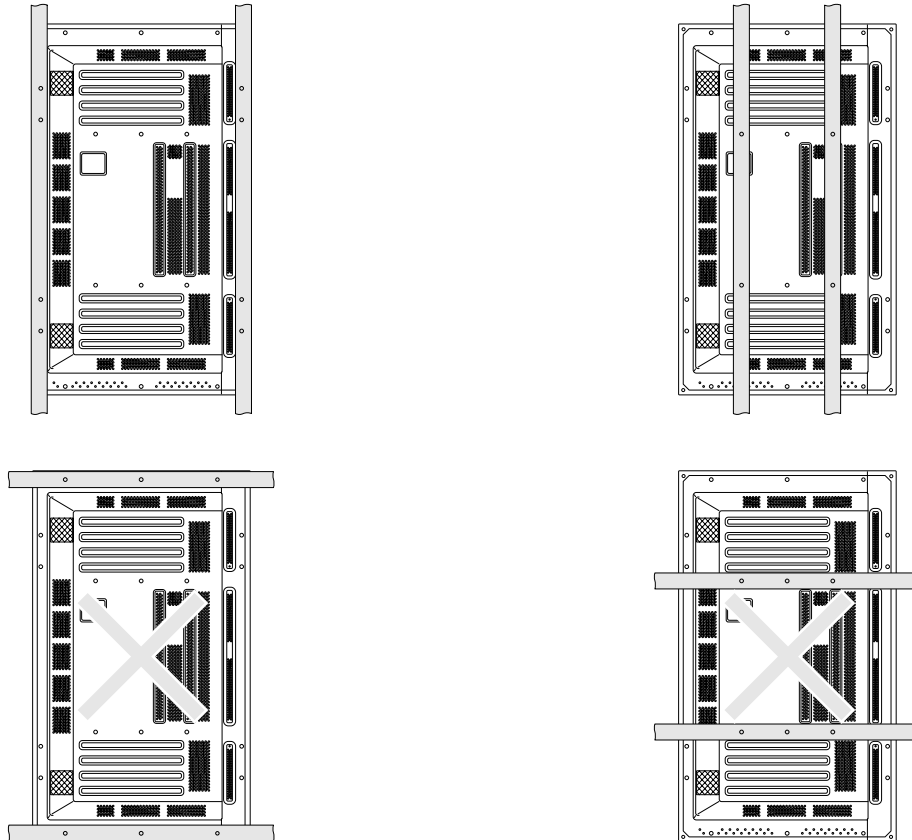
Be sure to mount the unit so that twisting, bending, or any other deformation does not exceed 4 mm.



☆ **Operating Temperature Restrictions**

Distance from wall (A)	B	C	D	Ambient temperature
50 mm or more	100 mm or more	50 mm or more	50 mm or more	0 to 40 °C

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The method indicated by a large X-mark must not be used. Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct. (Also refer to 3.5.1 "Mounting to fittings".)



**NOTE 1** Heated air is drawn off from the interior of the unit by fans. Before installation, consider the heat resistance of the wall or other surfaces behind the unit. Exhaust temperatures can be 30 °C higher than the outside temperature.

**NOTE 2** For wall-mounting, do not bundle the cables in a way that will obstruct ventilation.

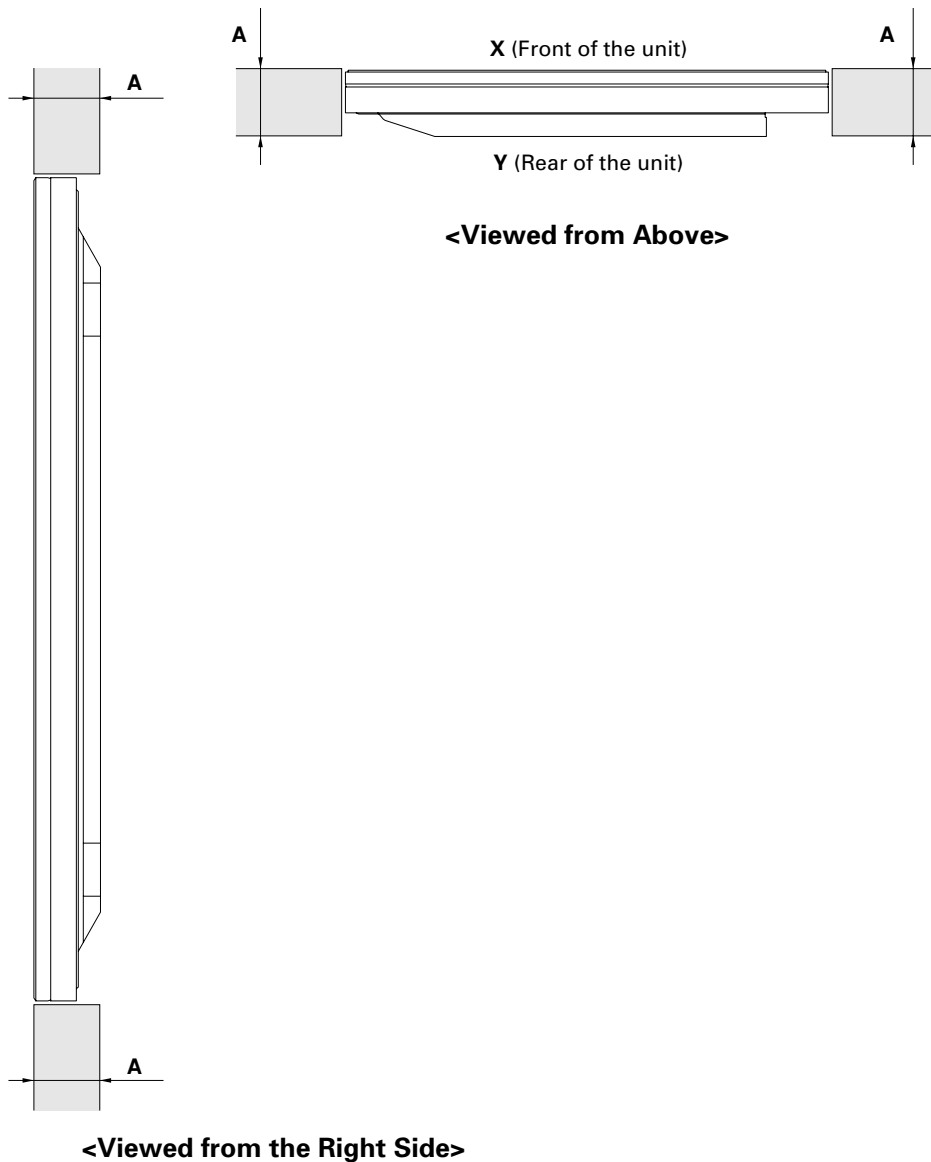
**Special Installation (Place product upright and flush into wall (embedding in the wall))**

**3.5.7 Place product upright and flush into wall (embedding in the wall)**

Carefully read the following before trying to embed the unit in a wall, and make sure to observe all the limitations specified below.

Be sure to mount the unit so that twisting, bending, or other deformation of the unit does not exceed 4 mm.


- (1) Embedding in walls with space provided behind the unit (with no obstructions within a distance of 300mm from the back surface of the unit).



☆ <b>Operating Temperature Restrictions</b>	
	Temperature in space X and Y
A: 0 to 370 mm	0 to 40 °C

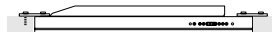
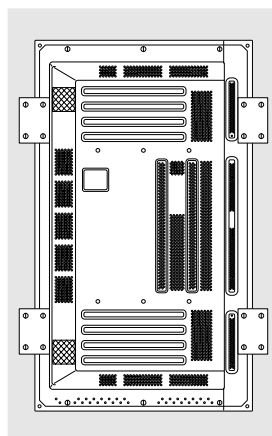
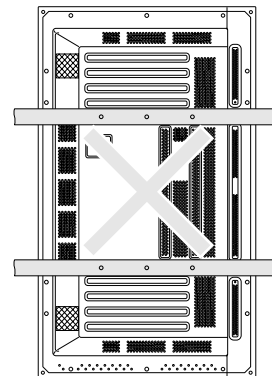
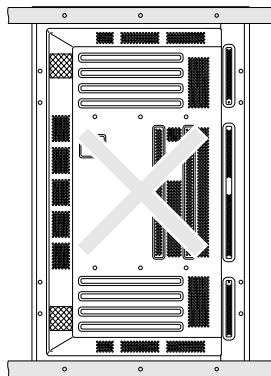
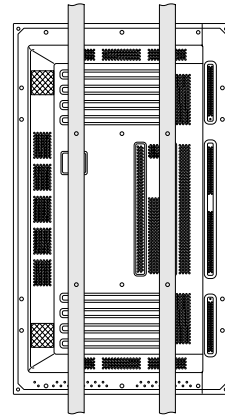
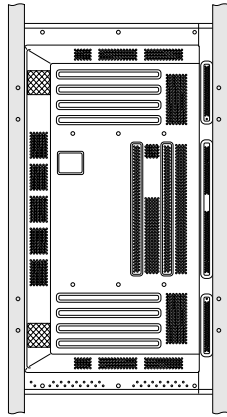
## [503CMX/503MXE]

### **Special Installation (Place product upright and flush into wall (embedding in the wall))**

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The methods indicated by a large X-mark must not be used.

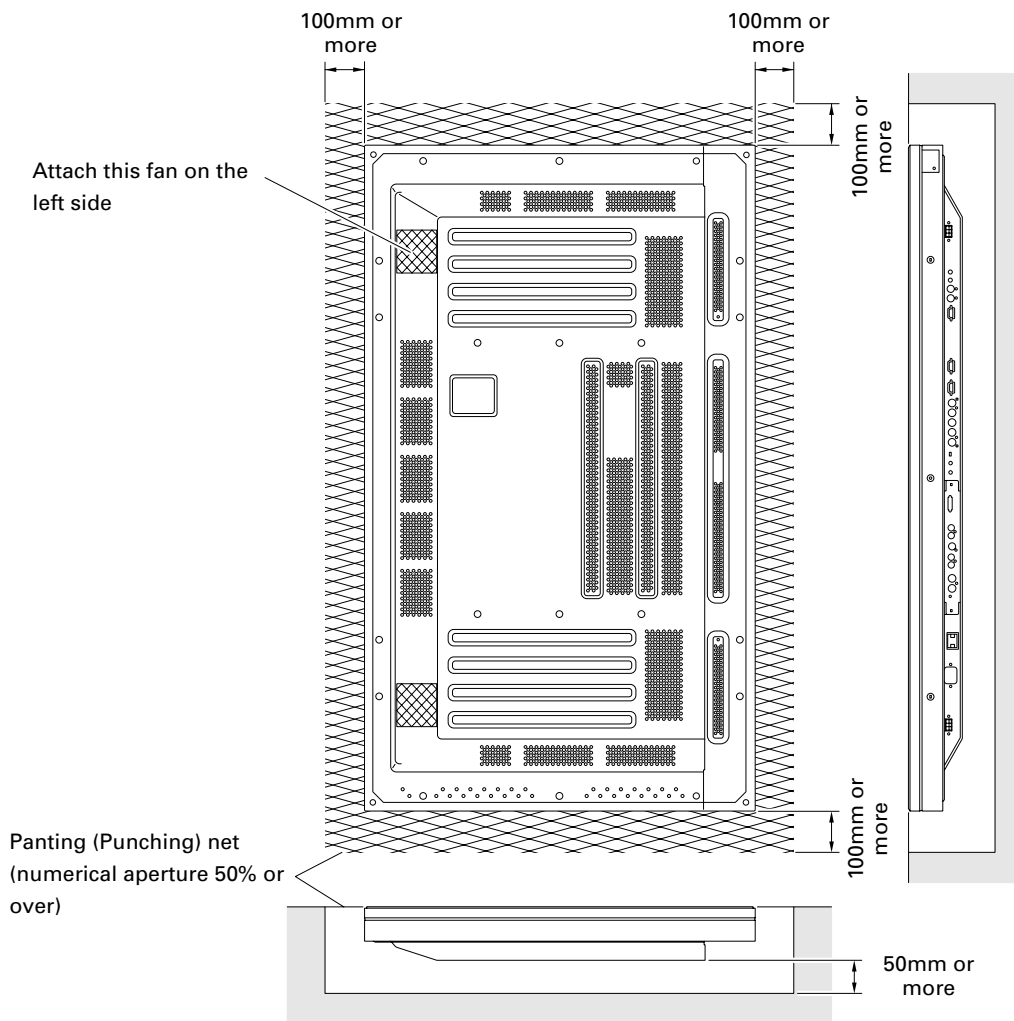
Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct.

(Also refer to 3.5.1 "Mounting to fittings".)



**Special Installation (Place product upright and flush into wall (embedding in the wall))**

(2) Embedding in walls with no space provided behind the unit.



Cation : Due to possible heat up, we do not recommend installation in narrow, enclosed areas.


☆ **Operating Temperature Restrictions**

- Ambient temperature: 0 to 35 °C



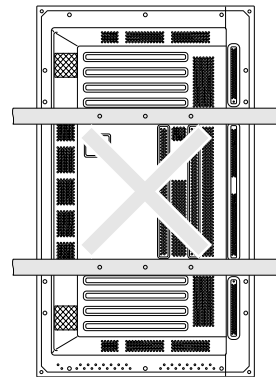
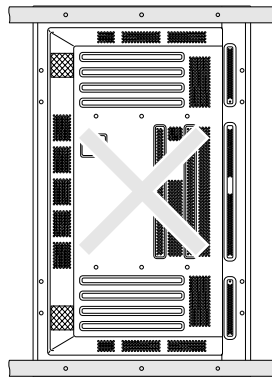
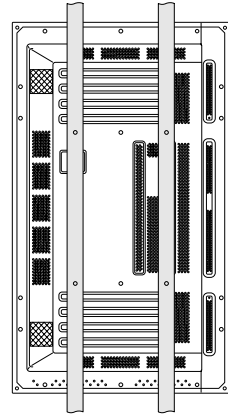
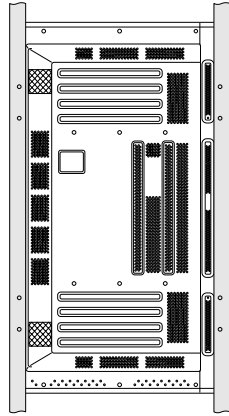
## [503CMX/503MXE]

### **Special Installation (Place product upright and flush into wall (embedding in the wall))**

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The methods indicated by a large X-mark must not be used.

Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct.

(Also refer to 3.5.1 "Mounting to fittings".)

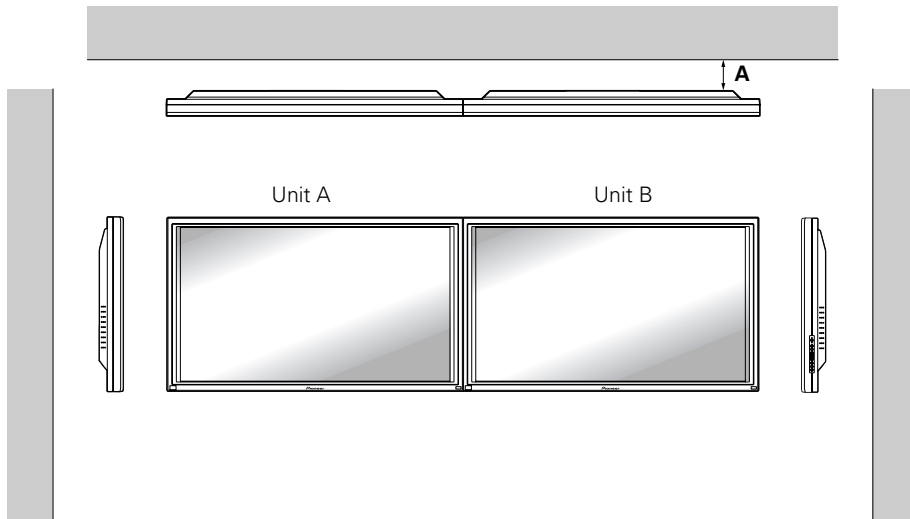


**3.5.8 Horizontal connections**

While the display is designed to accommodate side-by-side installations, keep in mind that specific installation configurations may affect ventilation. Observe the following requirements:

- ① Installation of up to two units (Horizontal connection)

The following table lists the operating temperature conditions. Use the units under conditions that keep the outside atmosphere in this range.

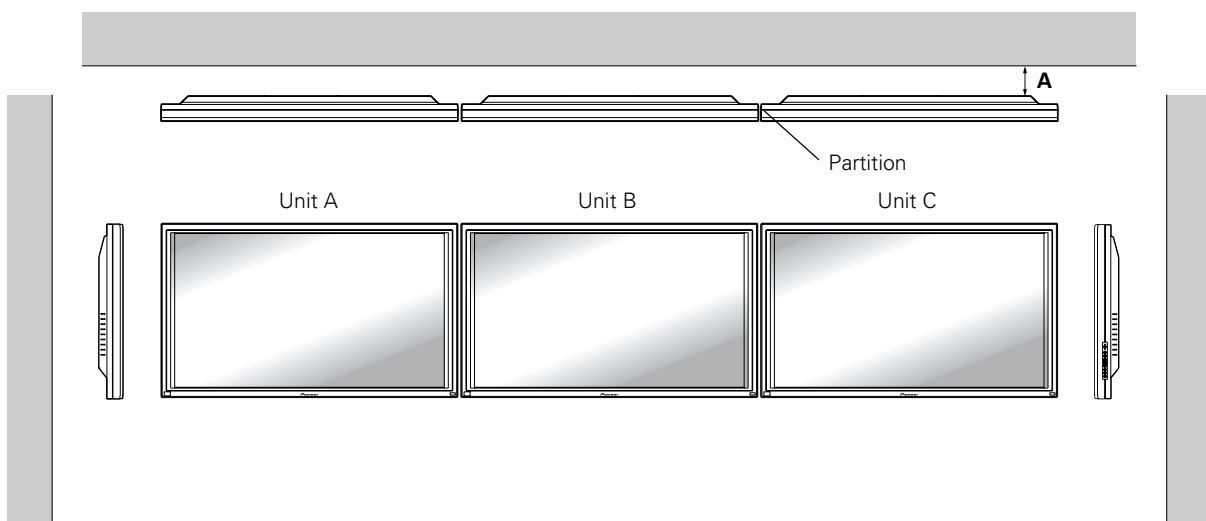


☆ **Operating Temperature Restrictions**

Distance from wall (A)	Ambient temperature
50 mm or more	0 to 40°C

- ② Installing three or more units (Horizontal connection)

The following table lists the operating temperature conditions. Use the units under conditions that keep the outside atmosphere in this range.



☆ **Operating Temperature Restrictions**

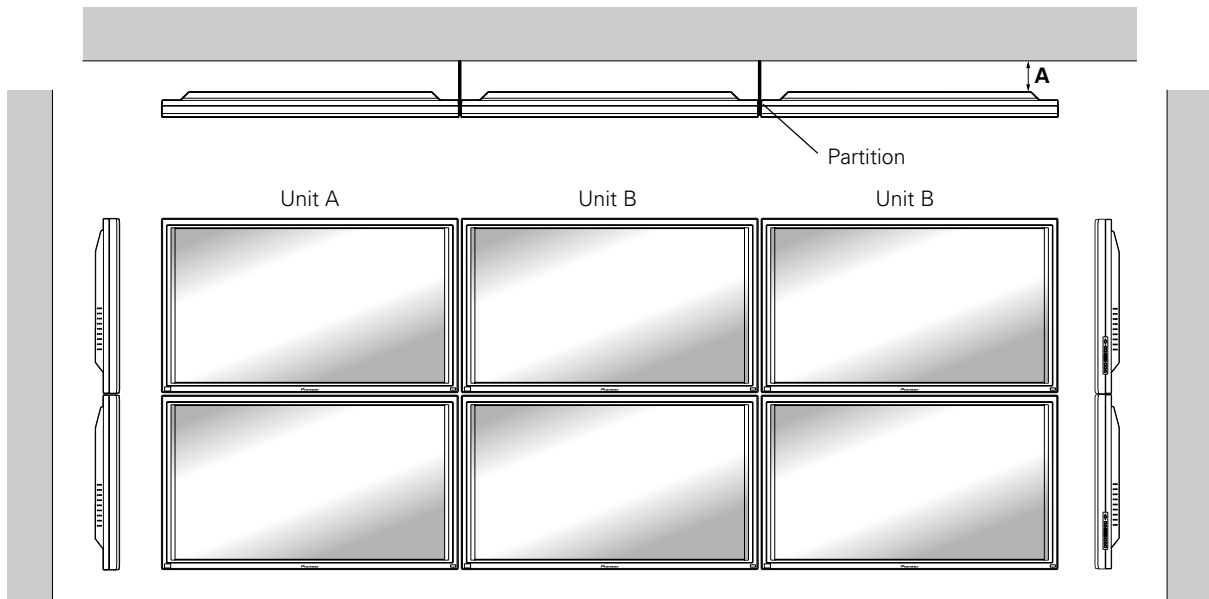
Distance from wall (A)	Ambient temperature
50 mm or more	0 to 40°C

**3.5.9 Multiple**

While the display is designed to accommodate side-by-side installations, keep in mind that specific installation configurations may affect ventilation. Observe the following requirements:

- ① Inatalling multiple (2 Vertical units)

The following table lists the operating temperature conditions. Use the units under conditions that keep the outside atmosphere in this range.



In case of lateral connections, ensure that left and right partitions are provided.

Be careful to install the partitions so that the air on the left and right backside of the set is not mixed up.

☆ **Operating Temperature Restrictions**

Distance from wall (A)	Ambient temperature
50 to 300 mm or less	0 to 35°C
300 mm or more	0 to 40°C

3.6 Special Installation (PDP-433CMX/PDP-433MXE)

The unit can be hung from or embedded in a wall, but such special installations impose additional limitations on operating temperatures and other operational factors.

Examine installation methods and the ambient conditions for your installation site, and refer to sections 3.1, 3.3, 3.4 in this manual.

Measurements discussed in this manual assume the following conditions:

- A 100 % white input is supplied.
- Sufficient aging has been completed.

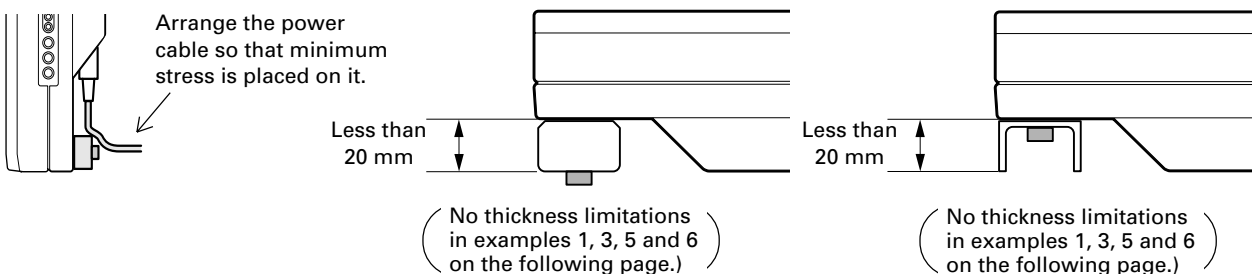
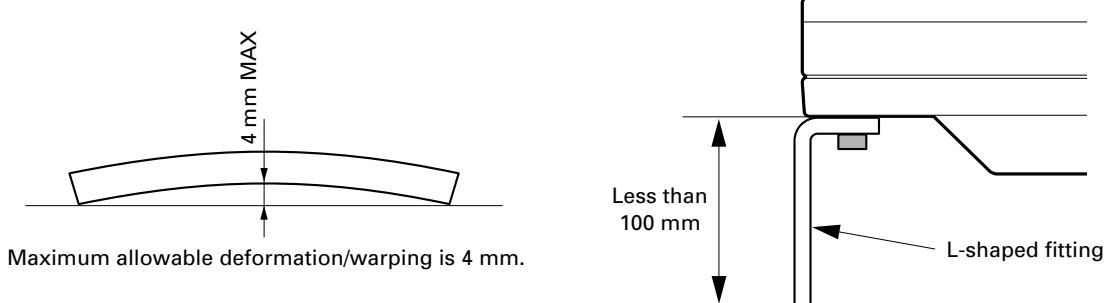
Make all measurements under identical conditions. The aging period required for correct measurement will be about two and a half hours, depending on the space available at the installation site.

3.6.1 Mounting to fittings

Observe the following guidelines when mounting the unit to fittings.

Notes ② to ⑦ apply to all cases of mounting to fitting.

- ① When mounting the unit, make sure that there are no objects around it within a distance of 300mm.
- ② Any unit deformation/warping occurring as a result of installation should be less than 4 mm.
- ③ Never block or cover openings, aside from those shown as blocked in the illustrations on the following page.
- ④ The fittings should have a thickness of less than 20 mm. (This limit does not apply to fittings in examples 1, 3, 5 and 6 on the following page.)
- ⑤ L-shaped fittings should have a thickness of less than 100 mm.
- ⑥ The strength of the fittings should be adequate to bear the weight of the display.
- ⑦ Take precautions to avoid sharply bending the power cable.



☆ Operating environment for standard installation

- Ambient Temperature: 0 to 40 °C (examples 1 to 3)

☆ Operating environment for vertical installation

0 to 40 °C (vertical installation: examples 4 to 6)

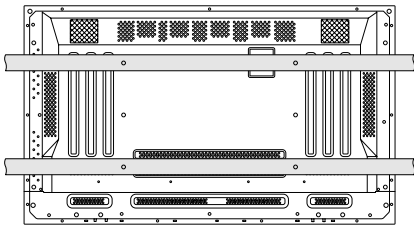
☆ Operating temperatures for Upside-Down Installations (possible only for attachment examples 1 and 2)

- Ambient temperature: 0 to 40 °C

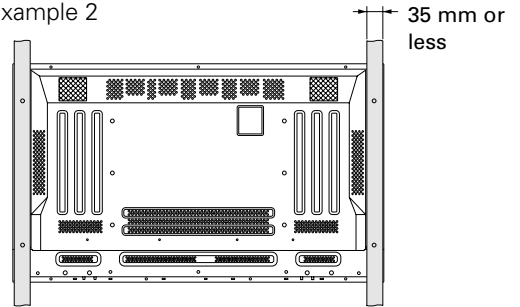
The operating temperature restrictions for the speaker system (PDP-S07-LR) are the same regardless of whether installation is horizontal or vertical.

Standard installation (Note that only Examples 1 and 2 apply in cases where top and bottom are reversed)

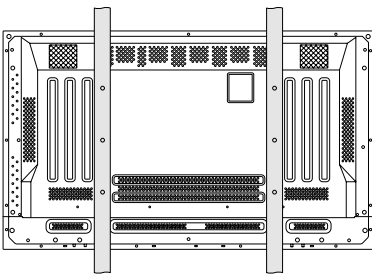
Example 1



Example 2

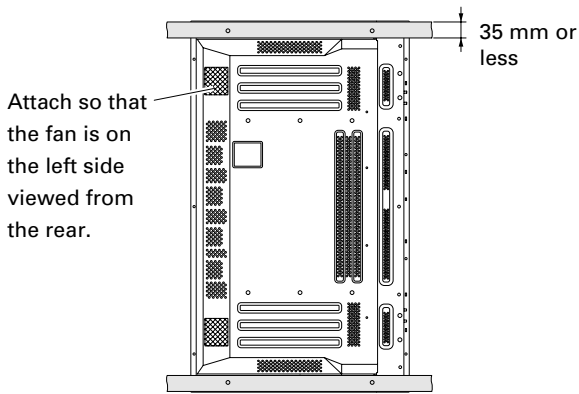


Example 3

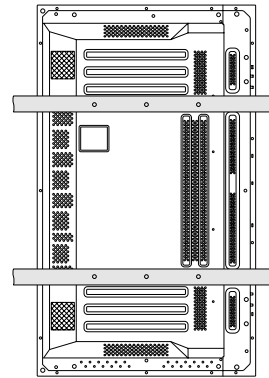


Vertical installation

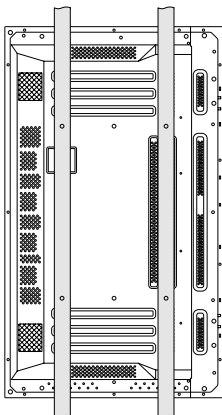
Example 4



Example 5

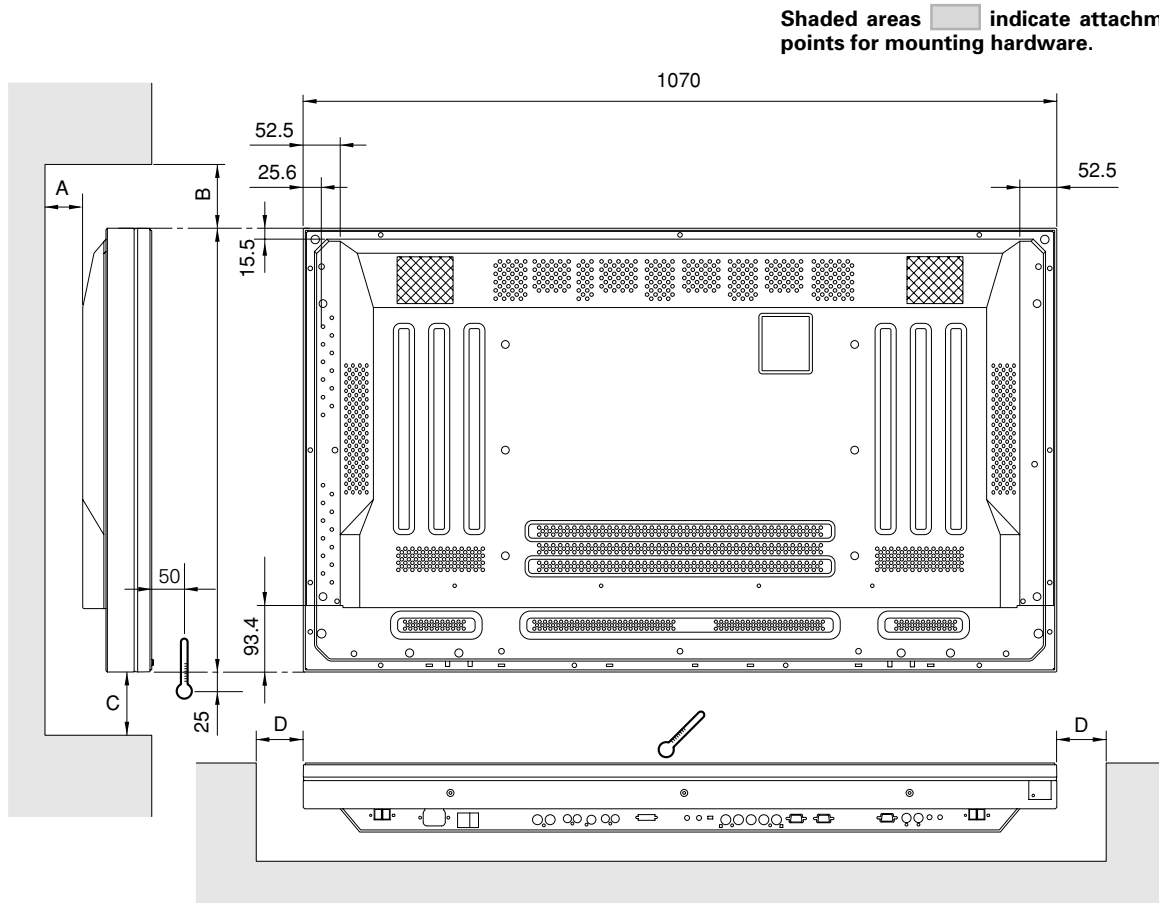


Example 6



3.6.2 Hanging on the wall

Carefully read the following before attempting to hang the unit on a wall, and observe the various limitations specified below. Be sure to mount the unit so that twisting, bending, or any other deformation does not exceed 4 mm.



Shaded areas indicate attachment points for mounting hardware.

Operating temperature restrictions

☆ Standard single-unit installation

Distance from wall (A)	B	C	D	Ambient temperature
50 mm or less	300 mm or more	300 mm or more	300 mm or more	0 to 35°C
50 mm or more	100 mm or more	50 mm or more	50 mm or more	0 to 40 °C

☆ Horizontal/vertical, left/right reverse installation (Note that only Examples 2 and 3 apply in cases where top and bottom are reversed)


\* No matter what the distance between the unit and the wall, the unit must be installed in such a way as to ensure free air flow (With no obstructions within a distance of 300 mm from the unit).

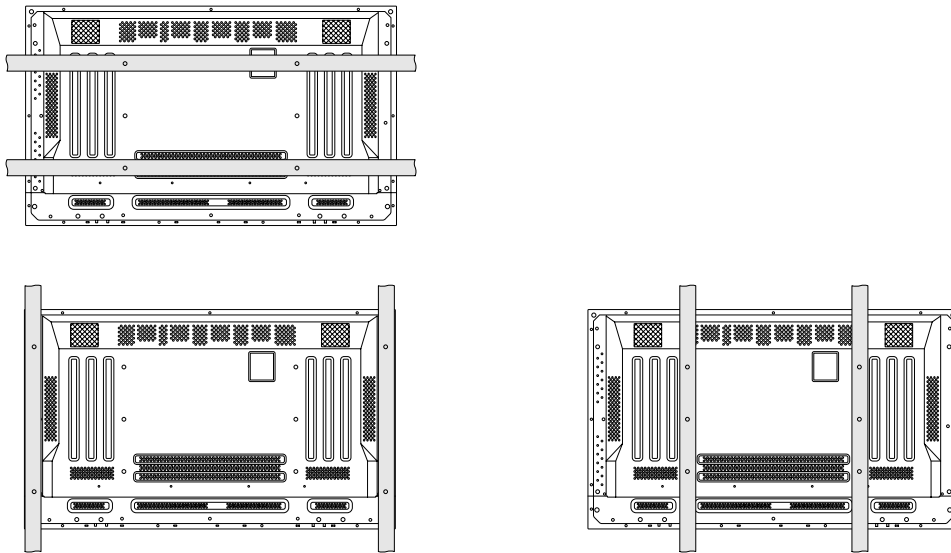
Distance from wall (A)	B	C	D	Ambient temperature
50 mm or more	300 mm or more	300 mm or more	300 mm or more	0 to 35°C

☆ Requirements when used with PDP-S07-LR speaker system

When installed as a single unit, all requirements are the same as those listed above for horizontal/vertical, left/right reverse installation. Note, however, that the figures listed above are to be interpreted as indicating the distance between the speakers and the wall.

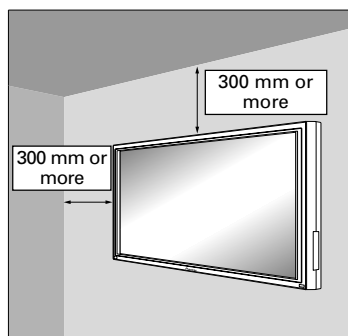
(NOTE) Different temperature restrictions apply to the PDK-5011 and PDK-5013. Refer to “4.6 Wall-mounted Tilttable Plasma Display Hardware” and “4.7 Wall-mounted Type Tilttable Fixed Plasma Display Hardware”. In wall-mounting installation, allow adequate space (a clearance of 300 mm or more) above and below the monitor set, as well as to the right and left.

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by  .  
 Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct.  
 (Also refer to 3.6.1 "Mounting to fittings".)



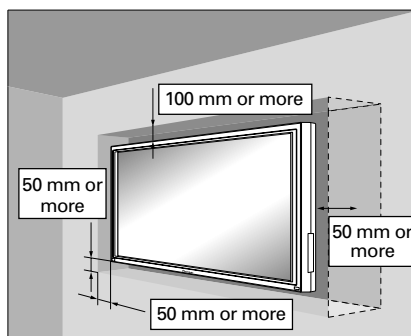
**NOTE 1** Heated air is drawn off from the interior of the unit by fans. Before installation, consider the heat resistance of the wall or other surfaces behind the unit. Exhaust temperatures can be 30 °C higher than the outside temperature.

**NOTE 2** For wall-mounting, do not bundle the cables in a way that will obstruct ventilation.



**Flush-wall installation**  
 (distance between unit and wall less than 50 mm)

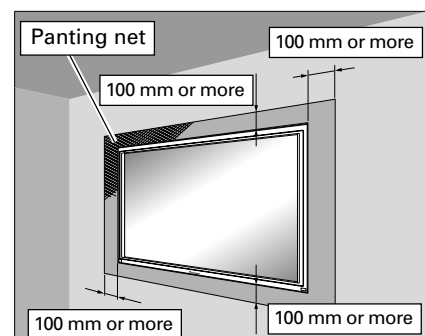
- Requirements :
- Free air flow (With no obstructions within a distance of 300 mm from the unit)
  - Temperature of 0–35°C



Ex.: Installation requirements when installed in recess in wall

**Wall-mounted installation**  
 (distance between unit and wall greater than 50 mm)

- Requirements :
- Free air flow (With no obstructions within a distance of 300 mm from the unit) around all four sides of the unit is not necessarily required when the unit is installed at a distance of greater than 50 millimeters away from the wall.
  - \* Note, however, that in such cases the unit may not be placed behind a glass panel or any other obstruction which would create a closed space.
  - Temperature of 0–40°C



Ex.: Installation when covered with a Panting net

**Wall-embedded installation**  
 (i.e., installation in closed space)  
 (distance between unit and wall greater than 50 mm)

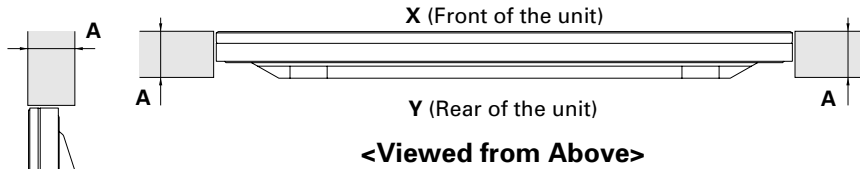
- Requirements :
- See 3.6.3 Embedding in the wall for installation requirements..
  - Temperature of 0–40°C

3.6.3 Embedding in the wall

Carefully read the following before trying to embed the unit in a wall, and make sure to observe all the limitations specified below.

Be sure to mount the unit so that twisting, bending, or other deformation of the unit does not exceed 4 mm.

- (1) Embedding in walls with space provided behind the unit (With no obstructions within a distance of 300 mm from the back surface of the unit).



☆ **Operating Temperature Restrictions**

Temperature in space X and Y	
A: 0 to 370 mm	0 to 40 °C

\* The same operating temperature restrictions apply to the speaker system (PDP-S07-LR).

☆ **Operating Temperature Restrictions for Upside-Down Installations**

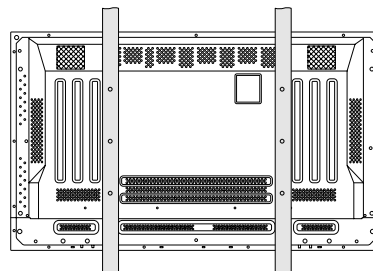
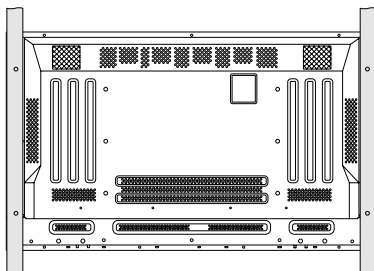
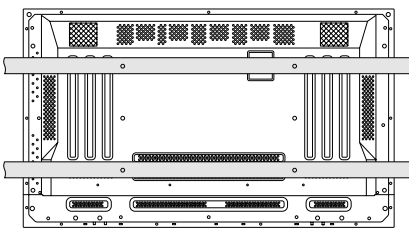
\* Upside-down mounting is unavailable when embedding this device in a wall.

**<Viewed from the Right Side>**

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by .

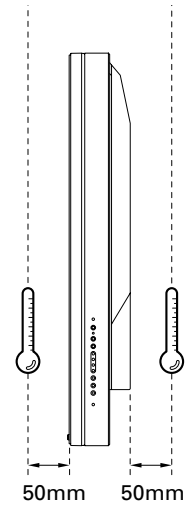
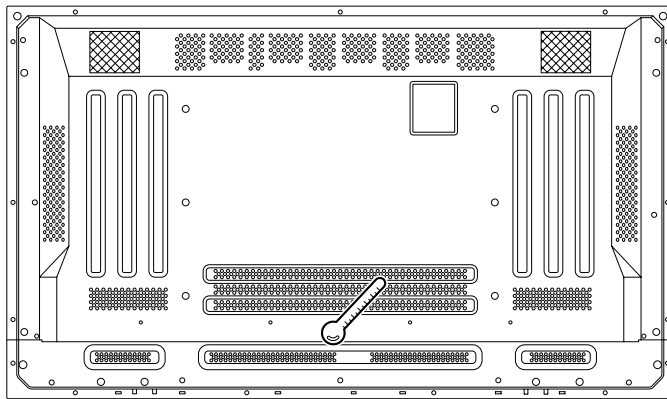
Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct.

(Also refer to 3.6.1 "Mounting to fittings".)



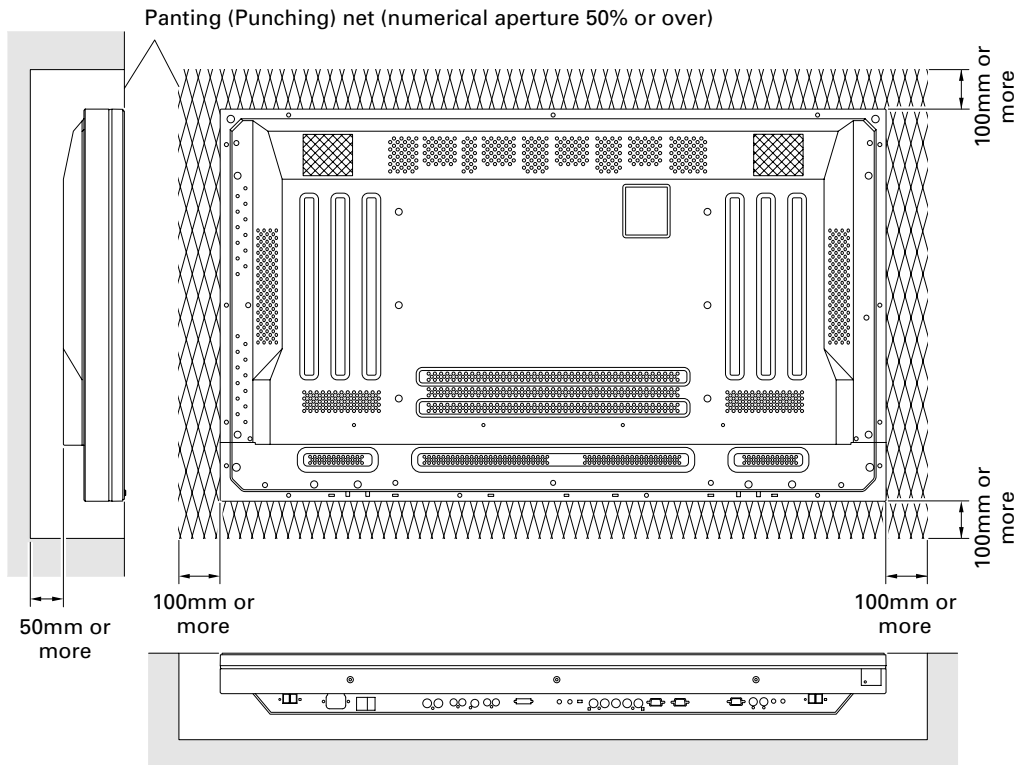


Temperature Measurement Points (Illustration for reference purposes)



- Make measurements at a distance of 5 cm from the unit, without directly subjecting the thermometer to fan exhaust.
- For spaces where temperature fluctuations are likely, gather additional measurement points for an adequate data set.

(2) Embedding in walls with no space provided behind the unit.



Cation : Due to possible heat up, we do not recommend installation in narrow, enclosed areas.

☆ **Operating Temperature Restrictions**

- Ambient temperature: 0 to 40 °C
- The same operating temperature restrictions apply to the speaker system (PDP-S07-LR).

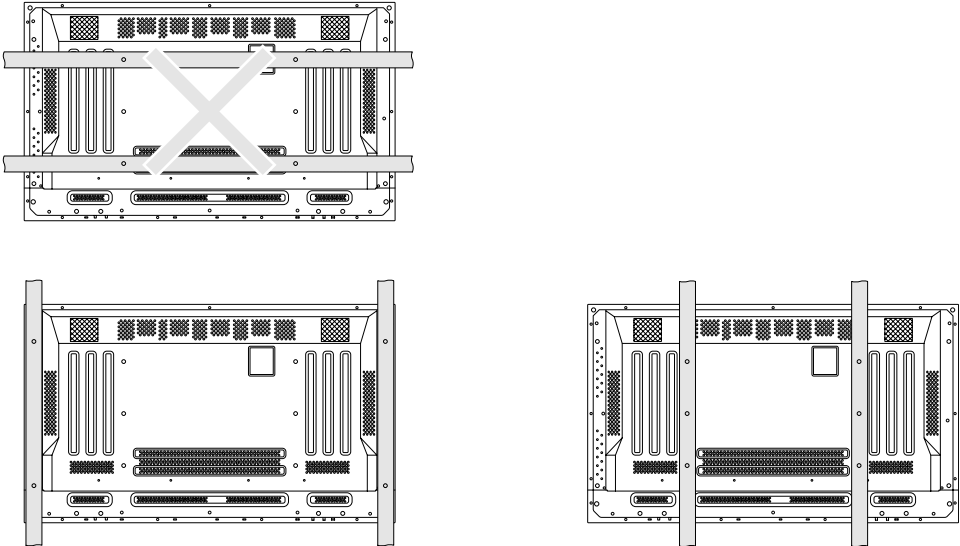
☆ **Operating Temperature Restrictions for Upside-Down Installations**

- \* Upside-down mounting is unavailable when embedding this device in a wall.

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The methods indicated by a large X-mark must not be used.

Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct.

(Also refer to 3.6.1 "Mounting to fittings".)



**3.6.4 When the display is put in a box**

Operating this display in confined spaces is not recommended.

- If the display is to be used in confined spaces, observe the following conditions shown in the drawing below in this page:

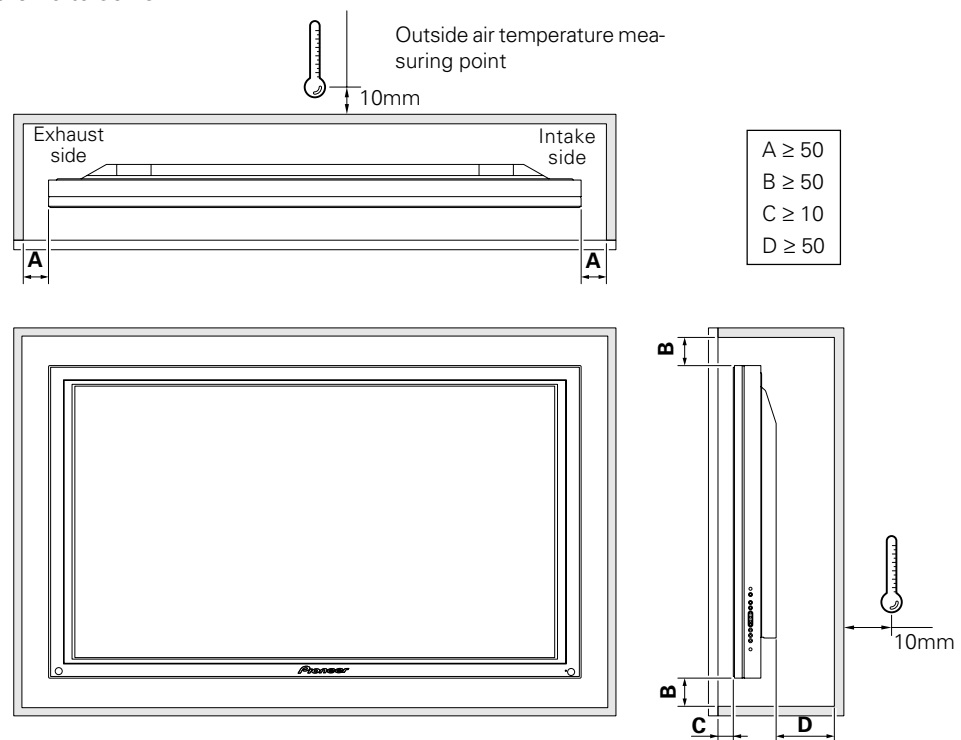
- A ≥ 50
- B ≥ 50
- C ≥ 10
- D ≥ 50

Use a mesh with aperture efficiency of 50% or more.

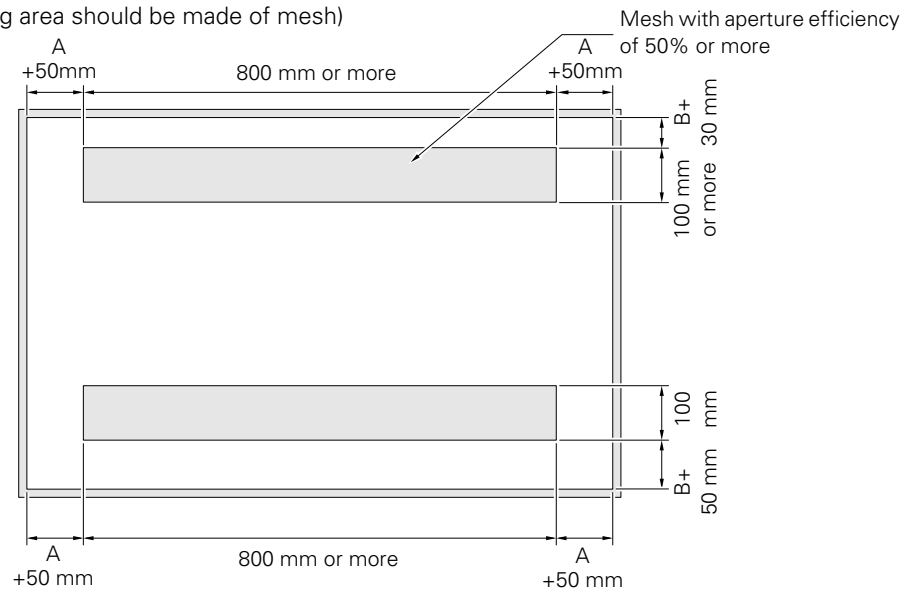
Thus, everywhere in "Y" must be kept less than the following temperature range. If hot air remains in the closed space, the temperature may rise, causing a malfunction or fire. As a precaution in case of accidents, the inner wall should have sufficient heat resistance or fire resistance.

☆ **Usage temperature conditions (BOX air temperature)**

- Ambient temperature: 0 to 35 °C

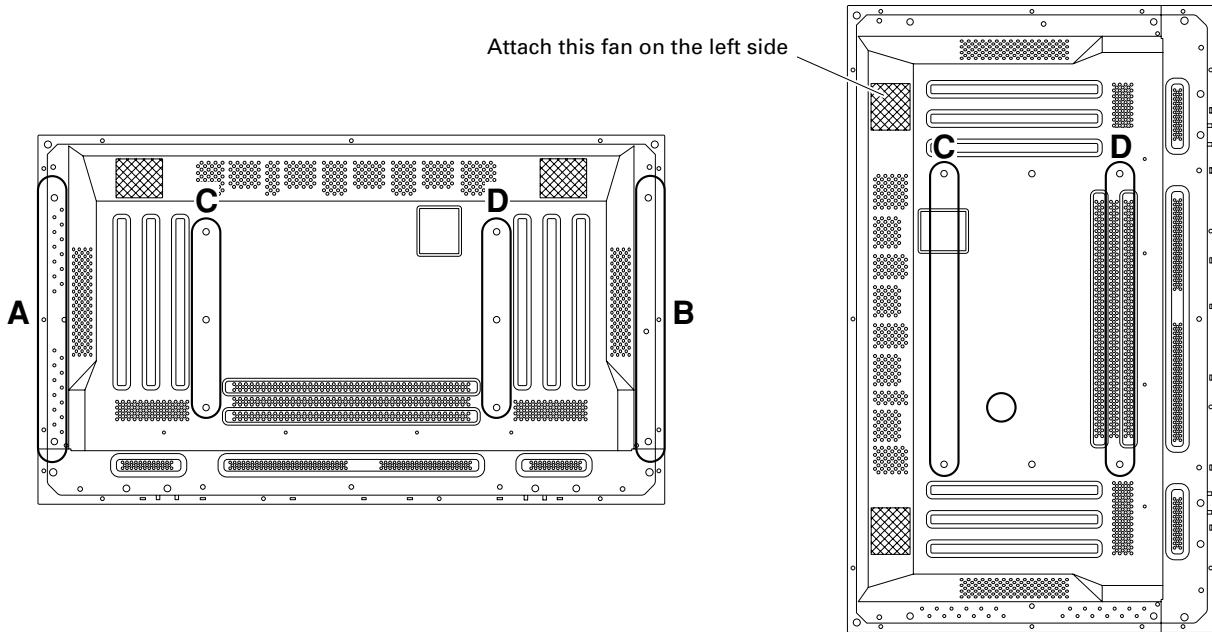


Rear view (the following area should be made of mesh)



**3.6.5 Ceiling suspension (with wires)**

When suspending from ceilings with wire, attach the unit either at rows A and B or at rows C and D to keep it from deforming forces. In addition, the unit must be attached at four or more points, with these points distributed symmetrically on opposite sides of the vertical and horizontal center lines.

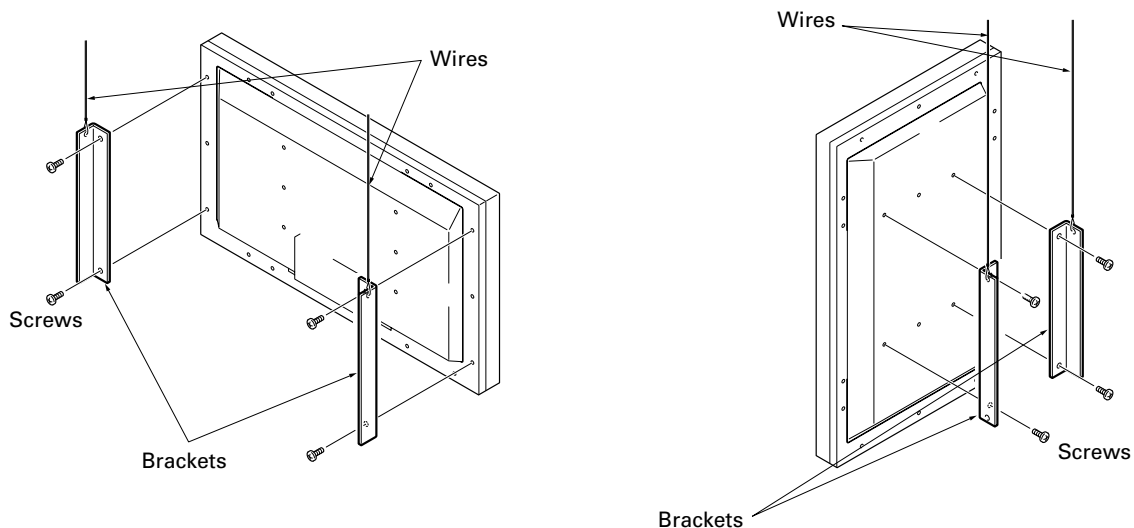


When suspending from a ceiling with wire, use the brackets shown below to prevent concentrating loads on the upper two fixing points.


For additional safety, secure the wires to separate fittings or parts of the ceiling.

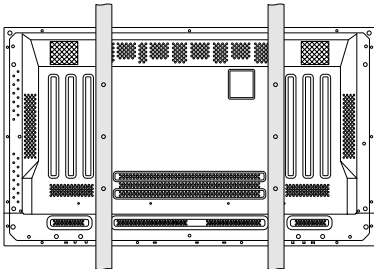
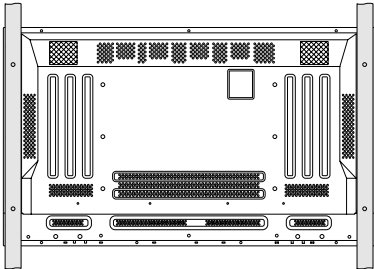
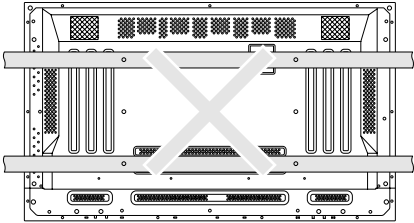
Use mounting screws of material stronger than soft steel, and use hexagonal bolts.

Use wires adequate for the combined weight of the unit 31.5 kg and the weight of the support brackets.

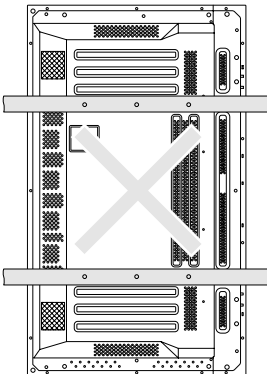
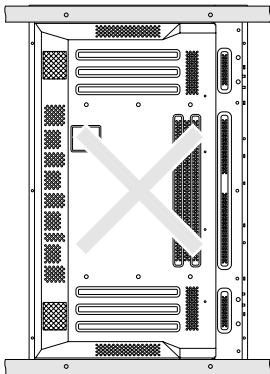
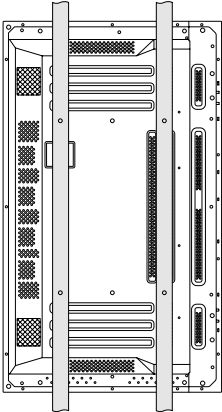


- ☆ **Operating Temperature Restrictions**
  - Ambient temperature: 0 to 40 °C
- ☆ **Operating Temperature Restrictions for Upside-Down Installations**
  - Ambient temperature: 0 to 40 °C

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The methods indicated by a large X-mark must not be used. Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct. (Also refer to 3.6.1 "Mounting to fittings".)



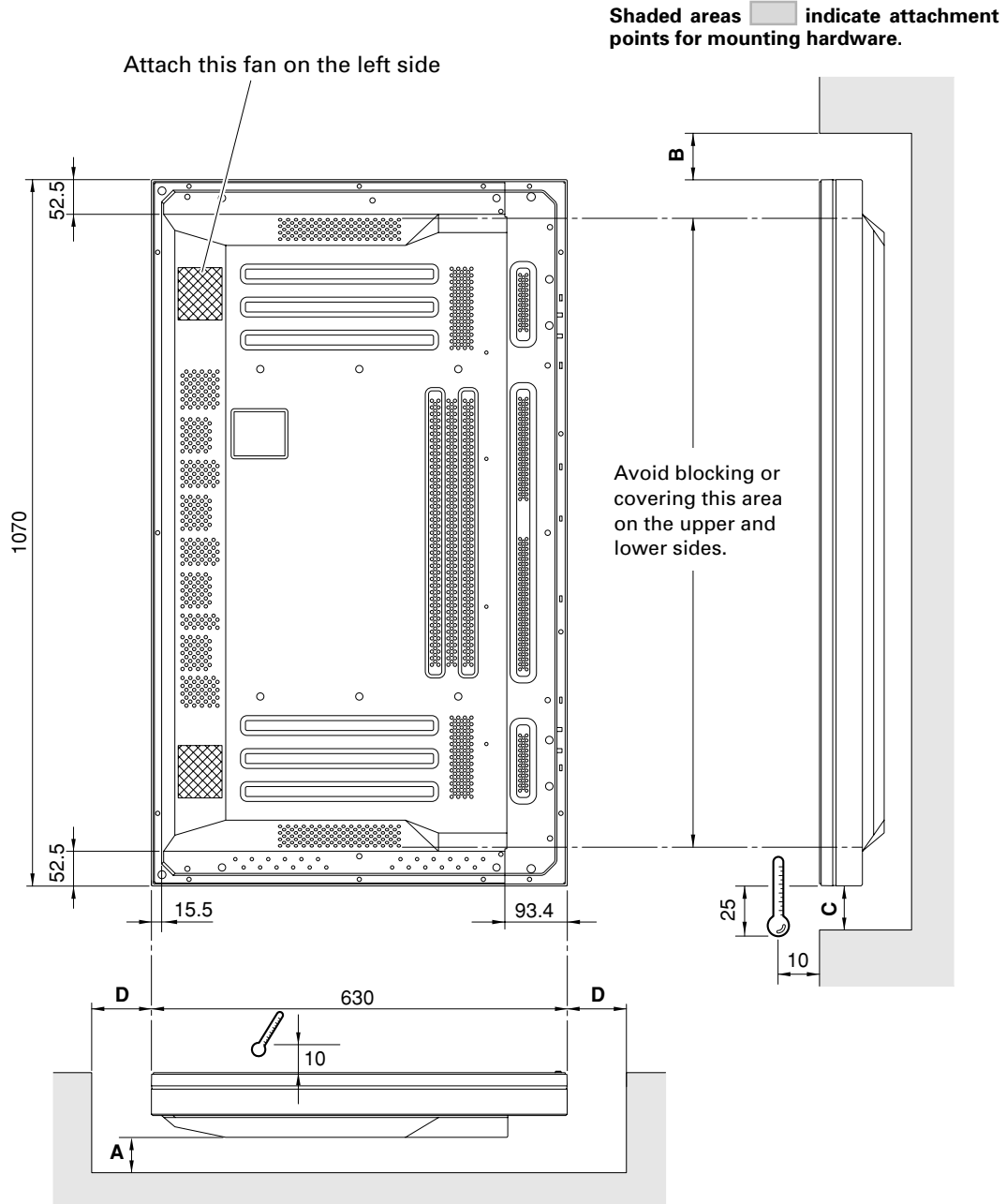
Vertical suspension



**3.6.6 Hanging on the wall (lengthwise)**


Carefully read the following before attempting to mount the unit on the wall, and observe the various limitations specified below.

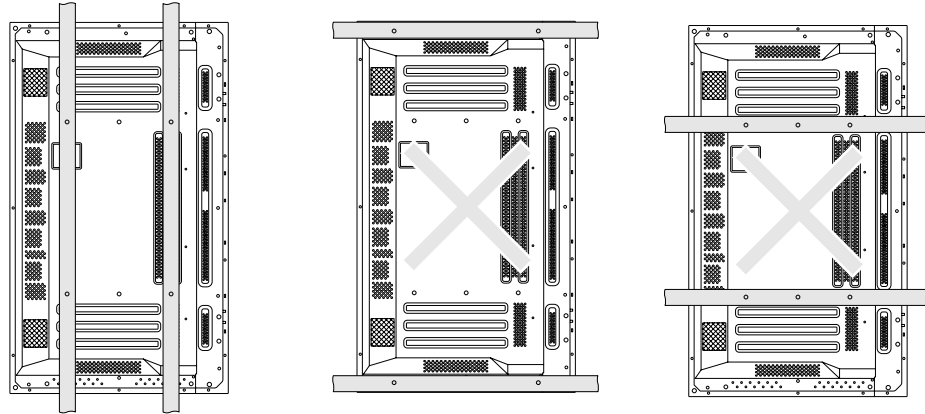
Be sure to mount the unit so that twisting, bending, or any other deformation does not exceed 4 mm.



☆ **Operating Temperature Restrictions**

Distance from wall (A)	B	C	D	Ambient temperature
50 mm or more	100 mm or more	50 mm or more	50 mm or more	0 to 40 °C

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The method indicated by a large X-mark must not be used. Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct. (Also refer to 3.6.1 "Mounting to fittings".)



**NOTE 1** — Heated air is drawn off from the interior of the unit by fans. Before installation, consider the heat resistance of the wall or other surfaces behind the unit. Exhaust temperatures can be 30 °C higher than the outside temperature.

**NOTE 2** — For wall-mounting, do not bundle the cables in a way that will obstruct ventilation.

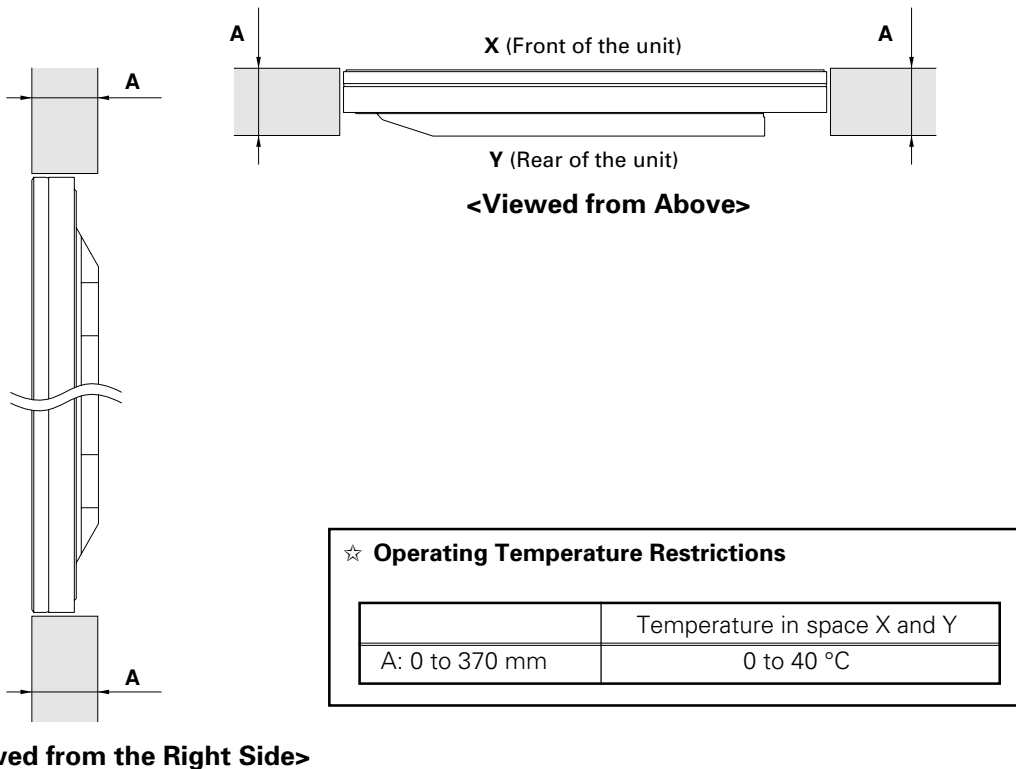
**Special Installation (Place product upright and flush into wall (embedding in the wall))**

**3.6.7 Place product upright and flush into wall (embedding in the wall)**

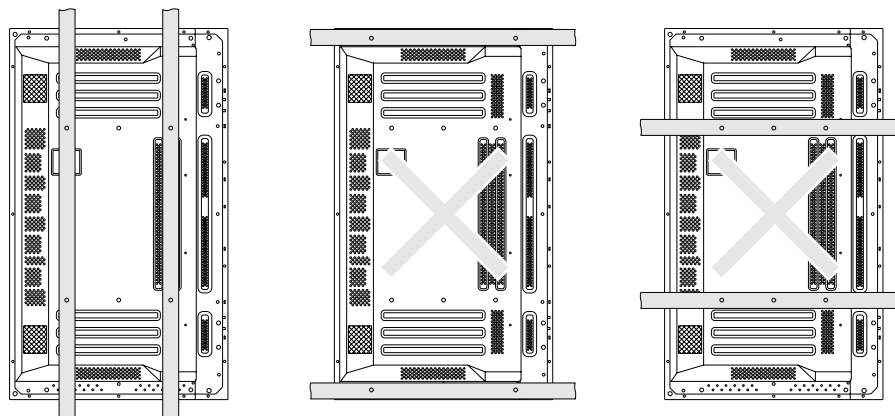
Carefully read the following before trying to embed the unit in a wall, and make sure to observe all the limitations specified below.

Be sure to mount the unit so that twisting, bending, or other deformation of the unit does not exceed 4 mm.

- (1) Embedding in walls with space provided behind the unit (with no obstructions within a distance of 300mm from the back surface of the unit).



Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The methods indicated by a large X-mark must not be used. Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct. (Also refer to 3.6.1 "Mounting to fittings".)

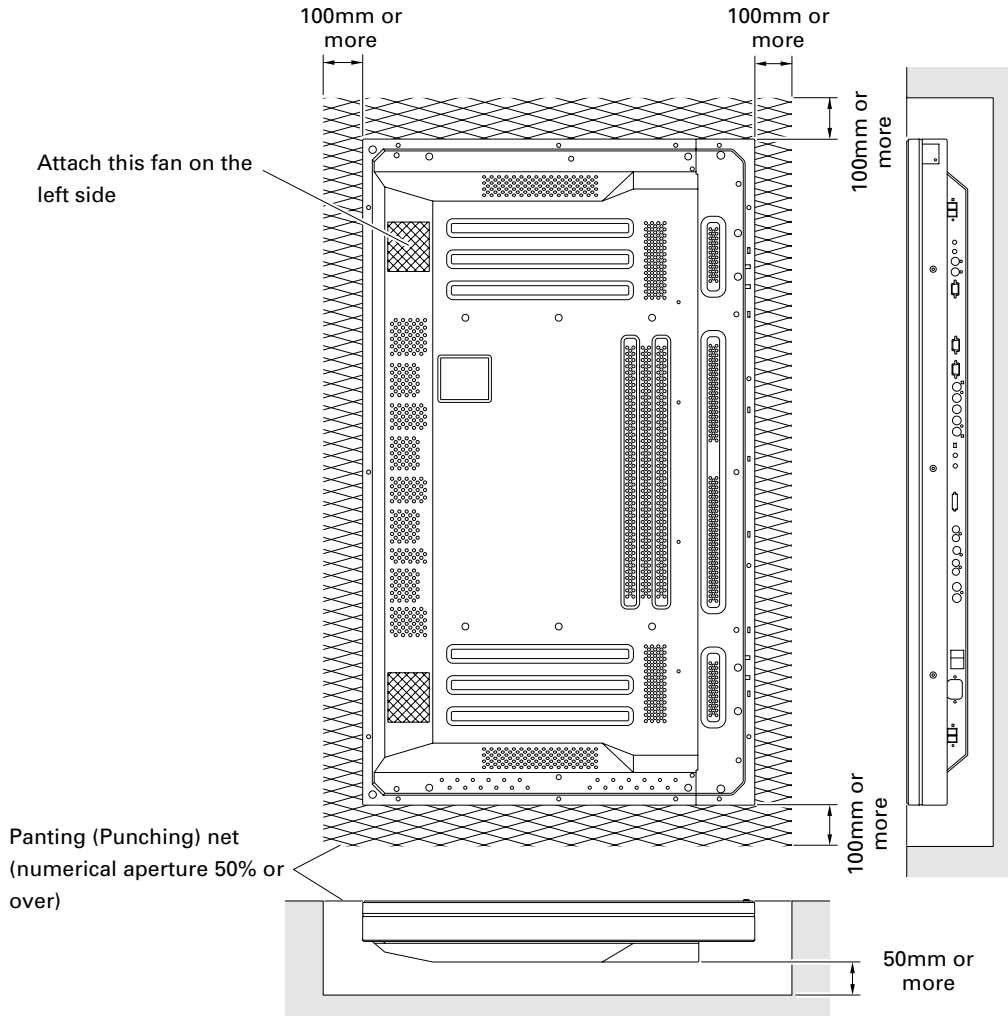




**[433CMX/433MXE]**

**Special Installation (Place product upright and flush into wall (embedding in the wall))**

(2) Embedding in walls with no space provided behind the unit.



Cation : Due to possible heat up, we do not recommend installation in narrow, enclosed areas.

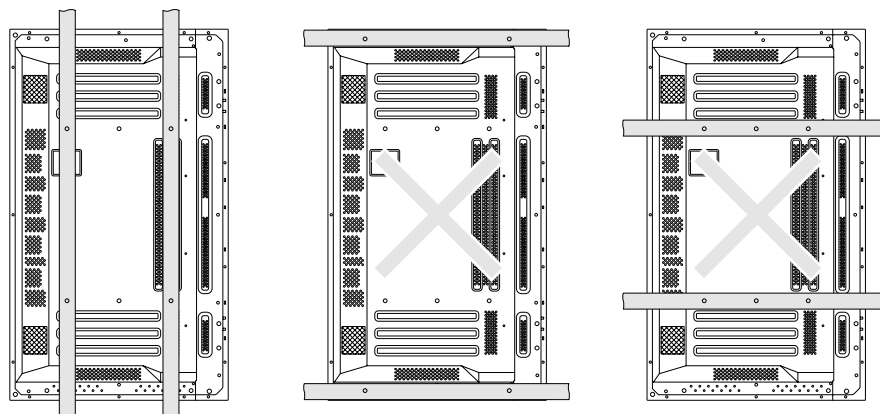
☆ **Operating Temperature Restrictions**

- Ambient temperature: 0 to 35 °C

Methods of Securing: Basic methods of securing are shown below. Avoid blocking or covering areas aside from those indicated by . The methods indicated by a large X-mark must not be used.

Before attaching the unit to fittings, double-check that the thickness and height of the fittings, and the number of fixing bolts is correct.

(Also refer to 3.6.1 "Mounting to fittings".)

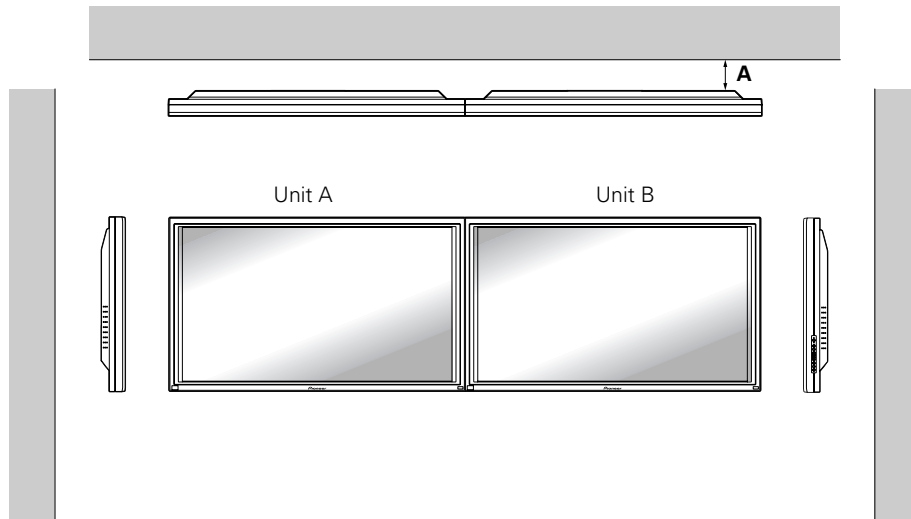


**3.6.8 Horizontal connections**

While the display is designed to accommodate side-by-side installations, keep in mind that specific installation configurations may affect ventilation. Observe the following requirements:

- ① Installation of up to two units (Horizontal connection)

The following table lists the operating temperature conditions. Use the units under conditions that keep the outside atmosphere in this range.

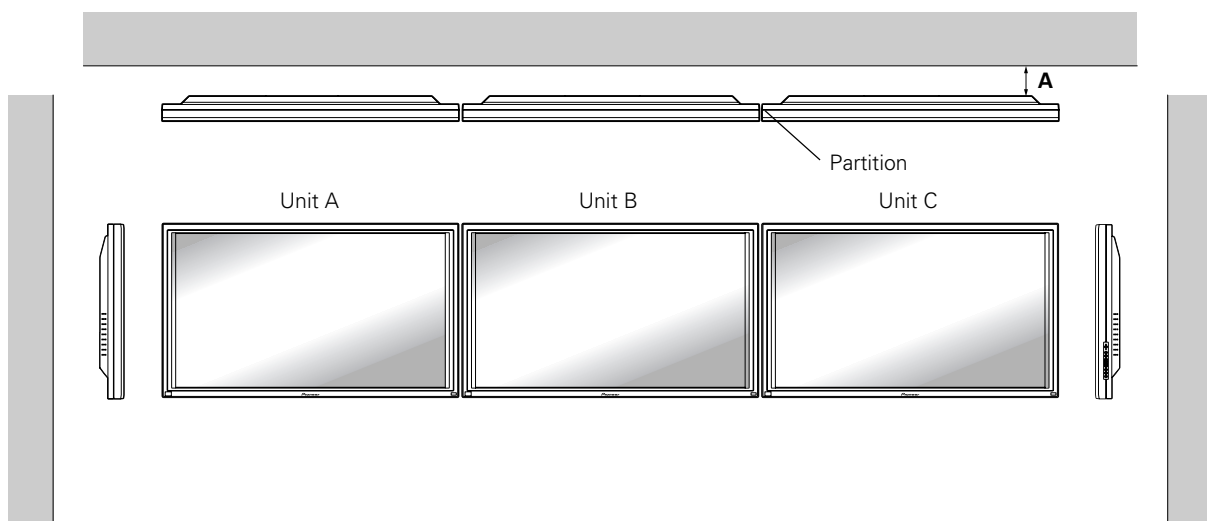


☆ **Operating Temperature Restrictions**

Distance from wall (A)	Ambient temperature
50 mm or more	0 to 40°C

- ② Installing three or more units (Horizontal connection)

The following table lists the operating temperature conditions. Use the units under conditions that keep the outside atmosphere in this range.



☆ **Operating Temperature Restrictions**

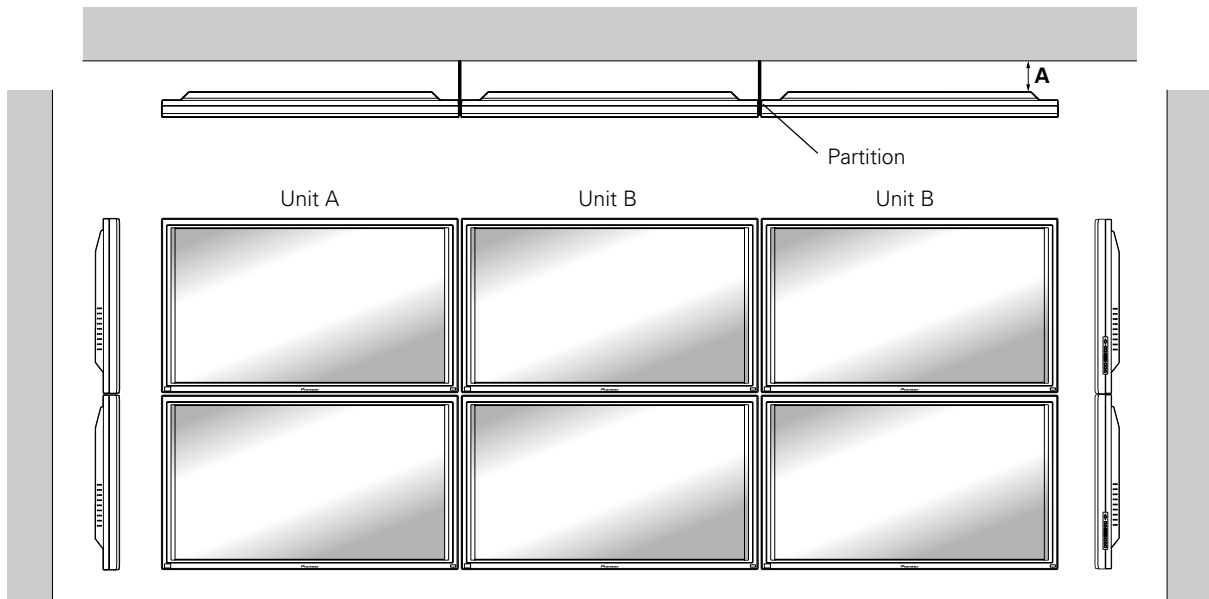
Distance from wall (A)	Ambient temperature
50 mm or more	0 to 40°C

**3.6.9 Multiple**

While the display is designed to accommodate side-by-side installations, keep in mind that specific installation configurations may affect ventilation. Observe the following requirements:

- ① Inatalling multiple (2 Vertical units)

The following table lists the operating temperature conditions. Use the units under conditions that keep the outside atmosphere in this range.



In case of lateral connections, ensure that left and right partitions are provided.

Be careful to install the partitions so that the air on the left and right backside of the set is not mixed up.

☆ **Operating Temperature Restrictions**

Distance from wall (A)	Ambient temperature
50 to 300 mm or less	0 to 35°C
300 mm or more	0 to 40°C

## How to use the standard mounting components

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### 4.1 Standard Mounting Components Features and Characteristics

In addition to reliability and the vivid display resulting from its large screen area, brightness, and image quality, the plasma display (PDP-503CMX/PDP-503MXE and PDP-433CMX/PDP-433MXE) is thin and lightweight, enabling mounting in locations not possible for conventional displays.

We considered various mounting patterns and operating conditions during the design of the plasma display (PDP-503CMX/PDP-503MXE and PDP-433CMX/PDP-433MXE). A wide range of standard mounting hardware is available for easy mounting.

- **Video card: PDA-5002**

This is the video card needed for video input and RGB input. This product has three input systems: the component 1 system, S input 1 system, and the digital RGB input 1 system. And the component input and S input are compatible with various audio inputs, and have a wide range of uses including visual display and visual performance.

- **Table-top Stand: PDK-TS01**

This on-board support designed for the plasma display enables vertical placement of the unit.

- **Tiltable wall-mount Hardware: PDK-5011**

Permits tilting of the display downward from the horizontal by up to 25 degrees. Mount depth is 143 mm or less (in vertical position, without optional speaker). This hardware permits a wide range of viewing angles.

- **Tiltable wall-mount Hardware: PDK-5013**

Distance from the rear surface of the plasma display to the wall is 32 mm.

It is provided with many installation holes for various hypothetical walls and it is constructed so that it can be easily attached to the main unit.

- **Plasma Display Ceiling Suspension Hardware: PDK-5012**

Simple rod-type mounting hardware permitting display panning over a range of 45 degrees, and up to 25-degree downward tilting from the horizontal. This hardware enables installation of the unit in a wide range of locations.

- **Mobile Cart: PDK-5014**

This is an extremely stable movable stand that one person can use to freely move the plasma display.

It can also be used to adjust the screen height and the screen angle of tilt to match the line of sight according to its use.

- **PDP Bracket: PDK-5005 (Can be used only with the PDP-503CMX/PDP-503MXE)**

Can be used as a handle when moving the unit, or as a frame when wire-suspending it or hanging it on the wall. Most suitable for temporary use when quick, easy, and safe attachment is necessary.

- **Cable cover: PDA-P01**

It completely conceals the complex cable arrangements to present a neat external appearance.

- **Speaker system: PDP-S05-LR (Can be used only with the PDP-503CMX/PDP-503MXE)  
PDP-S07-LR (Can be used only with the PDP-433CMX/PDP-433MXE)**

This vertical twin-speaker system, with a newly developed elliptical unit 4.5 cm wide on top and bottom with a 2.5-cm dome cone tweeter in between, provides improved sound-field localization. Despite its compact 7.4-cm cabinet, the speaker system is capable of offering powerful dynamic sound reproduction. (Note that when the speaker is mounted to the main unit itself, the operation panel of the main unit is inaccessible.)

## 4.2 Handling the Standard Mounting Components

### 4.2.1 Handling precautions

This section of the manual discusses ways to mount, install, and handle the mounting hardware exclusively designed for our plasma displays. Mounting should be performed by qualified experts.

Refer all installation and mounting work to qualified persons, or request assistance from a Pioneer dealer.

### 4.2.2 Precautions for installation contractors

#### 1) Before installation

Observe the specifications supplied in 3.1 "Installation Site Requirements".

#### 2) During Installation

Carefully read and observe the contents of this section of the manual.

The installation work should be performed by two or more people.

#### 3) After installation

After installation the mounting hardware, check for adequate strength and properly tightened screws. Repeat this inspection after mounting the display.

#### 4) Delivering to the customer

##### (1) Explaining mounting precautions

We ask that the mounting contractor explain the following precautions to the customer after mounting and installation work is completed. Even if the particulars of an installation are letter-perfect, your work may be perceived as inadequate unless you patiently and thoroughly explain these precautions so that the customer fully understands them.

● **The following are highly dangerous and must be avoided at all times:**

- **Any sudden application of force, including pushing and pulling**
- **Splashing water on the unit**
- **Placing any object on the unit**
- **Touching mount screws and other mounting hardware**

● **For worry-free use of the unit:**

- If any problem arises, the user should immediately ask the installation contractor to conduct inspection and repair.
- To guard against accidents, ask the customer not to make any tilt or height adjustments. Such work should be referred to the installation contractor.

##### (2) Mounting contractor contact form

We ask the mounting and installation contractor to complete the contractor contact form supplied with the unit and give it to the end-user after post-installation inspections are complete and the above precautions have been explained.

##### (3) Periodic inspections

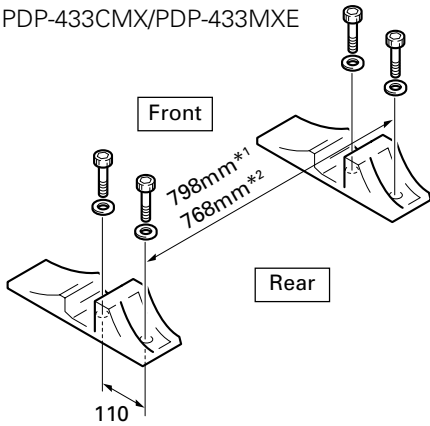
Over time, aging of various components of the suspension/mounting hardware that are not readily visible may render the installation unreliable. This may possibly lead to the display breaking free of its mounting. Please recommend periodic inspections.

4.3 Installation of the Attachment Stand

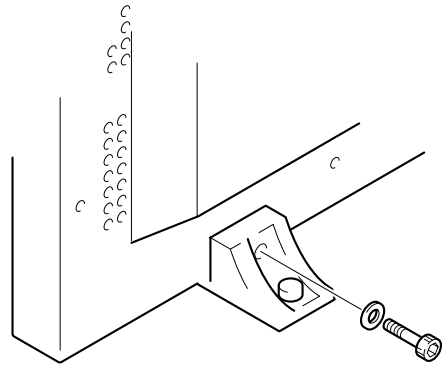
1. Make sure to secure the attachment stand to the display platform using M8 bolts (commercially available) 25 mm longer than the thickness of the platform.

\*1: PDP-503CMX/PDP-503MXE

\*2: PDP-433CMX/PDP-433MXE

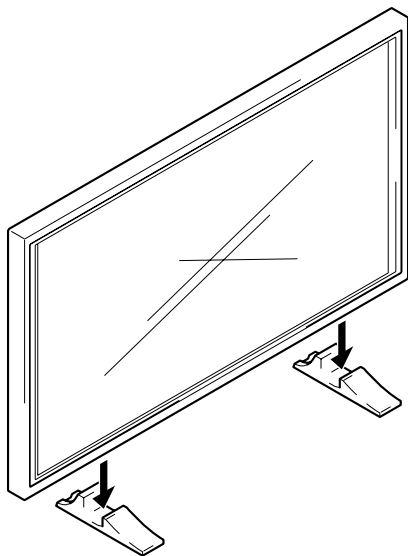



3. Tighten the bolt against the washer so as to secure the unit.



Use a 6 mm hexagonal wrench to tighten the bolt.

2. Insert the unit into the stand.



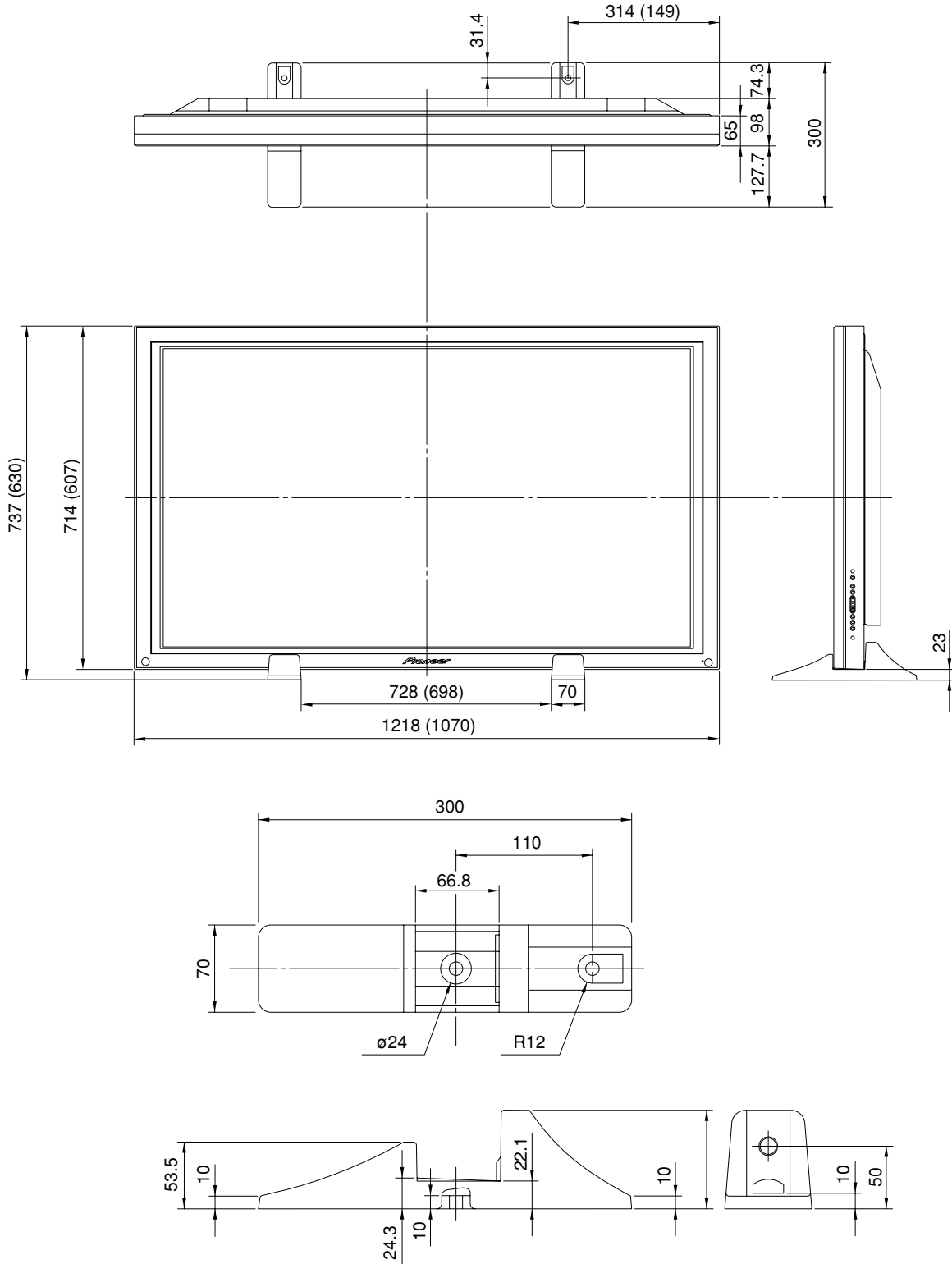


**CAUTION** The unit weights 30 kg. or more, and its thinness makes it unstable. Therefore, it should be unpacked, carried and installed by two or more persons.

**Dimensions**

(Unit: mm)

Dimensions in ( ) are the dimensions for the PDP-433CMX/PDP-433MXE



### 4.4 Video card: PDA-5002

#### 4.4.1 Specifications

**External dimensions** ..... 243.8 (W) × 27.6 (H) × 148.9 (D) mm (9-19/32 (W) × 1-1/16 (H) × 5-7/8 (D) in.)  
**Weight** ..... 0.3 kg (0.7 lbs.)  
**Dimensions of packaging** ..... 294 (W) × 56 (H) × 234 (D) mm (11-9/16 (W) × 2-3/16 (H) × 9-3/16 (D) in.)  
**Package weight** ..... 1.4 kg (3.1 lbs.)

#### Input/Output

##### Video

INPUT3  Input S terminal (MiniDIN 4 pin)  
 INPUT4  Input BNC jack (Composite video signal ..... 1 Vp-p/75Ω/negative sync)  
 Output BNC jack ..... 75Ω/with buffer)  
 INPUT5  Input Digital RGB DVI-D24 pin

##### Audio

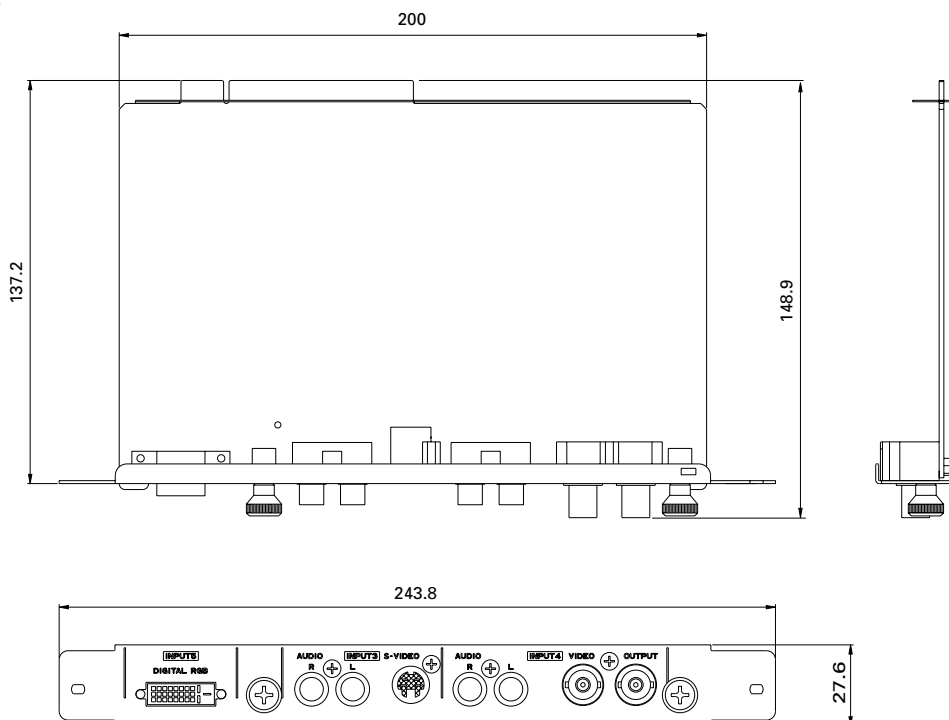
INPUT3  Input Pin jack (× 2)  
 L/R ..... 500 mVrms/more than 10 kΩ  
 INPUT4  Input Pin jack (× 2)  
 L/R ..... 500 mVrms/more than 10 kΩ

#### Accessories

Label for remote control unit ..... × 1  
 BNC/Pin conversion adaptor ..... × 1  
 Connector indicator label ..... × 1  
 Screw (3 × 8) ..... × 2  
 Operating instructions ..... × 2  
 Warranty ..... × 1

#### 4.4.2 External Dimensions

(Unit: mm)





**4.4.3 Installing procedures**

Installation instructions are noted below. When installing the unit, if a screw or other object should drop inside the plasma display, immediately consult your nearest Pioneer Service Center. Continuing operation may result in malfunction.

This device has been designed for installation on the Pioneer Plasma Display PDP-503CMX/PDP-503MXE and PDP-433CMX/PDP-433MXE. Installation procedures are as follows:

Confirm the following before installing this video card:

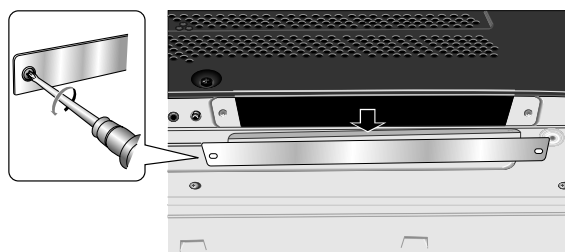
- Disconnect the plasma display from computer or other components.
- Disconnect the plasma display's power cord from its outlet.

**! Installation Notes:**

- When opening the installation cover, take care not to drop screws or other objects in the opening. Objects dropped inside the display may cause damage or malfunction.
- When installing the video card, if the plasma display is laid with its screen side facing down, the work surface should be flat and level, and either the packing material, a blanket, or other soft material should be spread on the work surface first to protect the screen. Take care to prevent scratches or other damage to the unit from tools or other objects. Never rest the display on a surface in such a way that weight or pressure is placed only on the screen surface.
- This video card has been designed for exclusive use with the Pioneer Plasma Display PDP-503CMX/PDP-503MXE and PDP-433CMX/PDP-433MXE. Do not attempt unauthorized modifications or alterations since malfunction or damage may result.
- Take care not to modify or damage the card's internal devices in any way.
- Before installation, take precautions to eliminate static electricity on your body. Do not touch the card's circuitry or devices.
- This device has not been designed to allow reinstallation or removal; after the card has once been installed on the plasma display, do not attempt to remove it since damage may result.

**Installation**

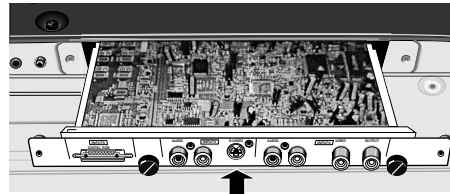
- 1 Remove the protective cover over the video card slot on the plasma display's terminal panel.



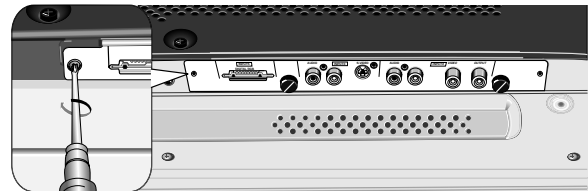
- 2 Insert the video card gently and evenly in alignment with the two rails visible inside the installation port.

**Note**

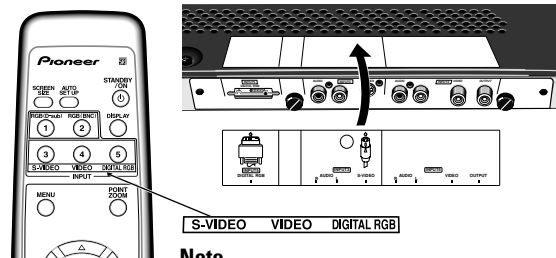
Be very careful when inserting the card. Insert straight! The card or display may be damaged if the card is inserted crooked or with excessive force.



- 3 After inserting the video card all the way into the slot, confirm that it is seated securely, then use the screws removed in step 1 to secure the card in place.



- 4 Affix the accessory connector indicator label to the plasma display, and affix the remote control unit label to the remote control unit furnished with the plasma display.

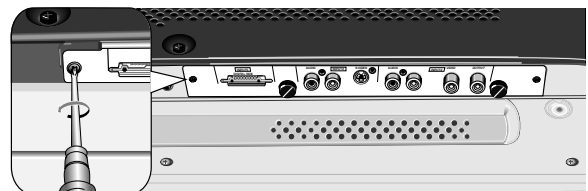


**Note**

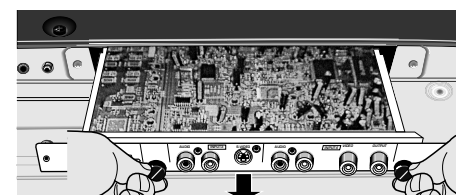
Use a soft cloth to gently wipe any dust from the surface before affixing the label.

**Video Card Removal (In principle, removal of the video card should not be attempted).**

- 1 Remove the two screws holding the video card.



- 2 Holding the inside tabs, pull the video card out straight.



**4.5 Tabletop Stand: PDK-TS01**

**4.5.1 Specifications**

<b>External dimensions</b> .....	566 (W) × 508 (H) × 339 (D) mm (22-9/32 (W) × 20 (H) × 13-11/32 (D) in.)
<b>Weight</b> .....	4.0 kg (8.82 lbs.) (mounting hardware only) 42.9 kg (94.58 lbs.) (mounting hardware and plasma display monitor <when using PDP-503CMX or PDP-503MXE>) 35.5 kg (78.27 lbs.) (mounting hardware and plasma display monitor <when using PDP-433CMX or PDP-433MXE>)
<b>Materials</b> .....	Base: plastic (ABS); Stand pipes: general structural steel tubes (STKMR-D)
<b>Finish</b> .....	Finish: Base: paint (Pioneer original color); Stand pipes: semi-matt black paint
<b>Package dimensions</b> .....	640 (W) × 214 (H) × 415 (D) mm (25-3/16 (W) × 8-7/16 (H) × 16-11/32 (D) in.)
<b>Package weight</b> .....	6.3 kg (13.9 lbs.)

**Accessories**

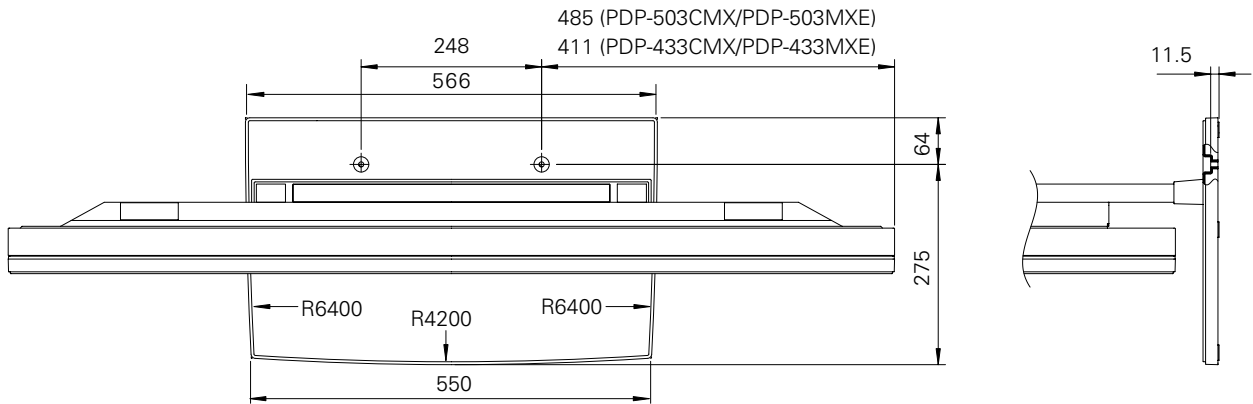
Base cover .....	× 1
Stand pipes (left and right interchangeable) .....	× 2
Screw (4 × 8) .....	× 4
Installation bolt ① (M8 × 20) .....	× 2
Installation bolt ② (M8 × 40) .....	× 2
Hexagonal wrench .....	× 1
Stabilization bolts .....	× 2
Operating instructions .....	× 1

<p>☆ <b>Operating Temperature Restrictions</b></p> <ul style="list-style-type: none"> <li>• Ambient Temperature: 0 to 40 °C</li> </ul> <p>☆ <b>Operating temperature restrictions for when the speaker system (PDP-S05-LR, PDP-S07-LR) is attached.</b></p> <ul style="list-style-type: none"> <li>• Ambient temperature: 0 to 40 °C</li> </ul> <p>☆ <b>Other factors</b></p> <ul style="list-style-type: none"> <li>• Maintain sufficient clearance between the display and the wall (at least 100 mm)</li> </ul>
--

**4.5.2 Installation coordinates for screws used to stabilize the stand to the floor**

\* When stabilizing the stand to the floor, use M6 with a length above 20 mm.

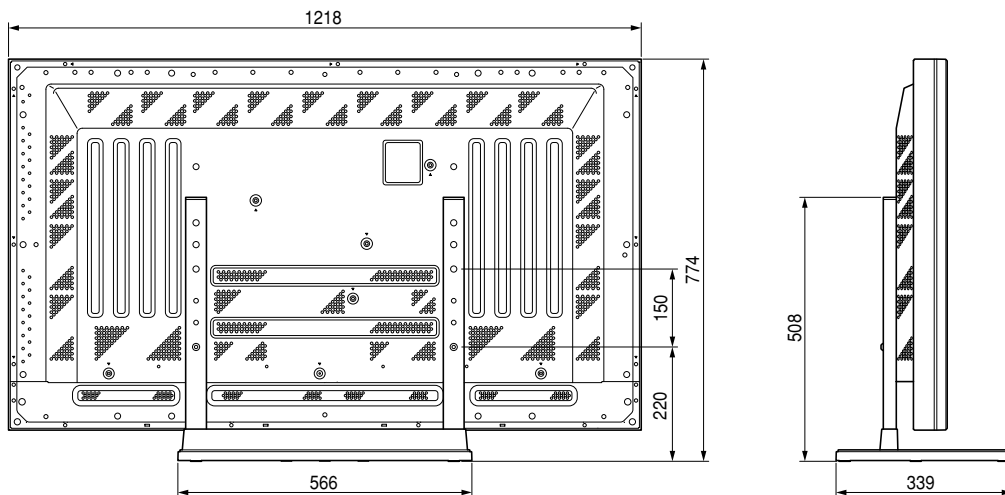
(Unit: mm)



**4.5.3 External Dimensions**

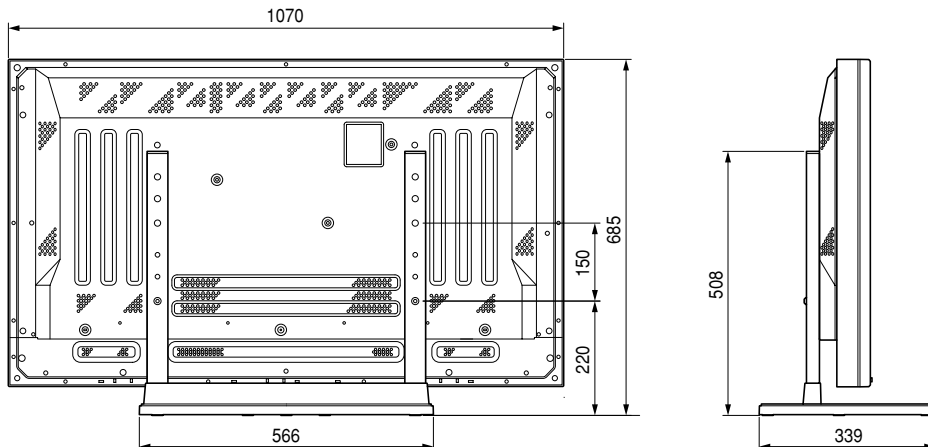
■ When using plasma display monitor PDP-503CMX or PDP-503MXE

(Unit: mm)



■ When using plasma display monitor PDP-433CMX or PDP-433MXE

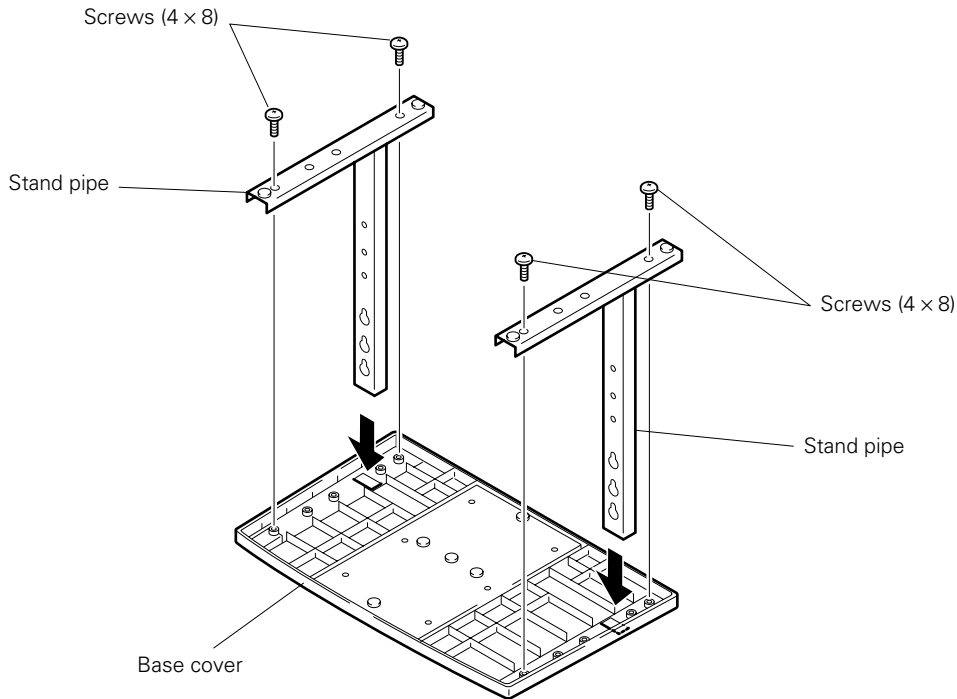
(Unit: mm)



**4.5.4 Stand assembling**

**1) Assembling Steps**

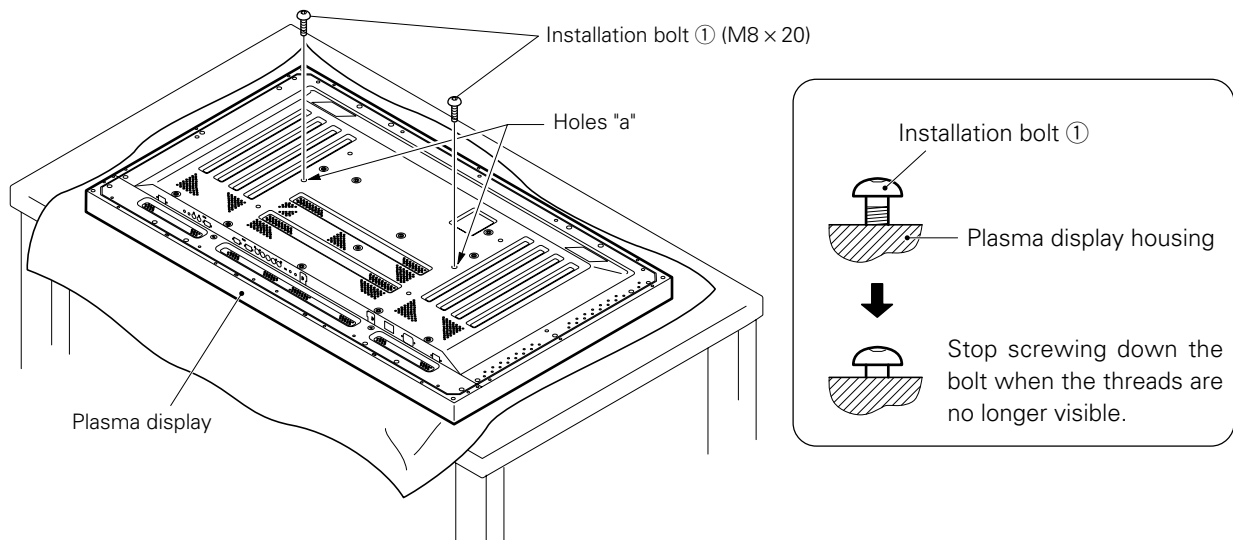
- ① Turn the base cover over so the underside is facing up.
- ② Insert the stand pipes into the base cover.
- ③ Use the included screws to stabilize the stand pipes.



**4.5.5 Stand attaching to the Plasma Display**

**1) Normal Installation**

- ① With the plasma display lying flat, insert and secure the two Installation bolts ① (M8 x 20) in the holes "a" located in the plasma display housing.  
At this point, tighten these bolts ① only until the threads are no longer visible when viewed from the side (you will be unable to attach the display if the bolts are screwed in completely).

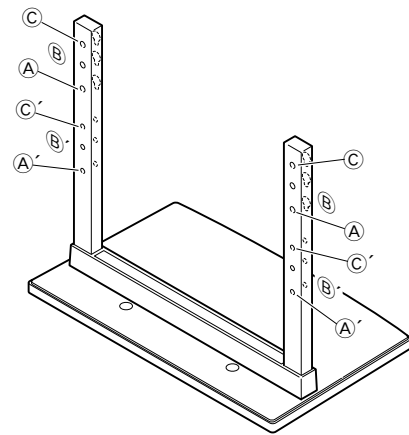


**Regarding the stand pipe screw holes when the stand is used as a desktop stand**

Stand pipe screw holes when the stand is used as a desktop stand

- Specifications ..... Normal use
- Screw holes used with stand orientation  
 ..... (B), (B') (PDP-503CMX/PDP-503MXE)  
 ..... (A), (A') (PDP-433CMX/PDP-433MXE)

**Note:** Screw holes (C) and (C') are for attaching options available separately.

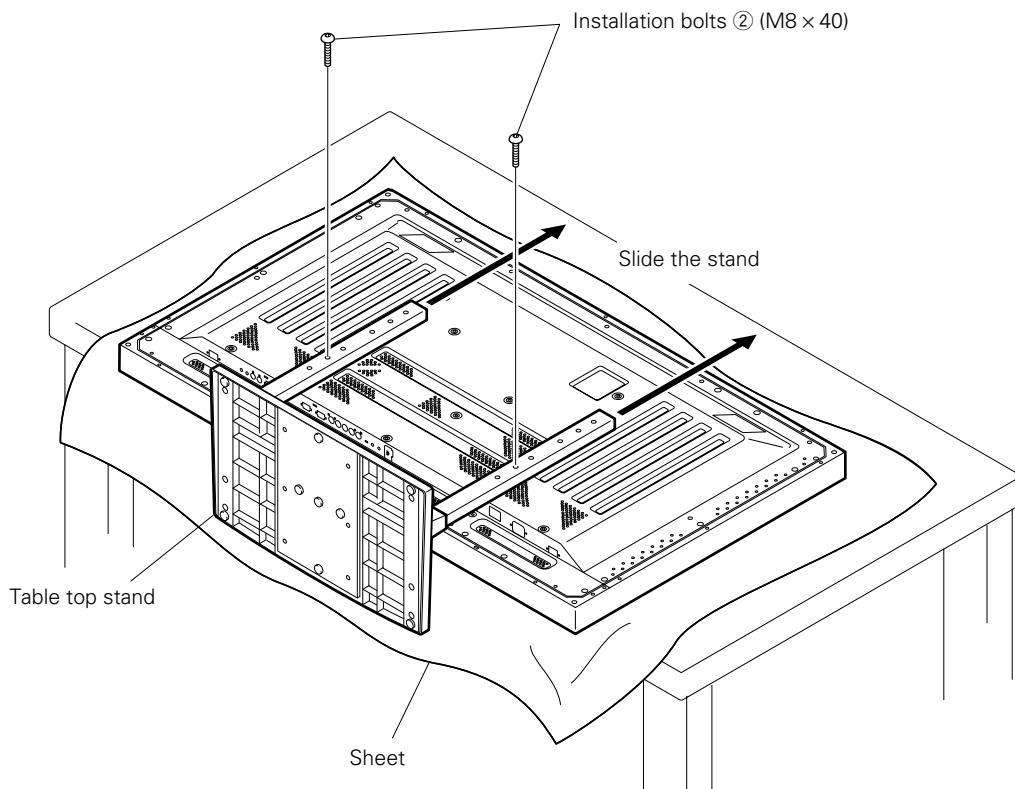


- ② Hook the stand pipe holes (B) (PDP-503CMX/PDP-503MXE) or holes (A) (PDP-433CMX/PDP-433MXE) onto the screw heads of the installation bolts ①, then slide the stand upwards to the main plasma display until it engages the installation bolts ① (once put together with the display, the stand will slides no more than 19 mm).
- ③ Pass the installation bolts ② (M8 × 40) through the stand pipes and tighten the installation bolts securely with the included hexagonal wrench (holes should be used in the proper, (B), (B')).
- ④ Tighten the installation bolts ① securely with the hexagonal wrench provided.



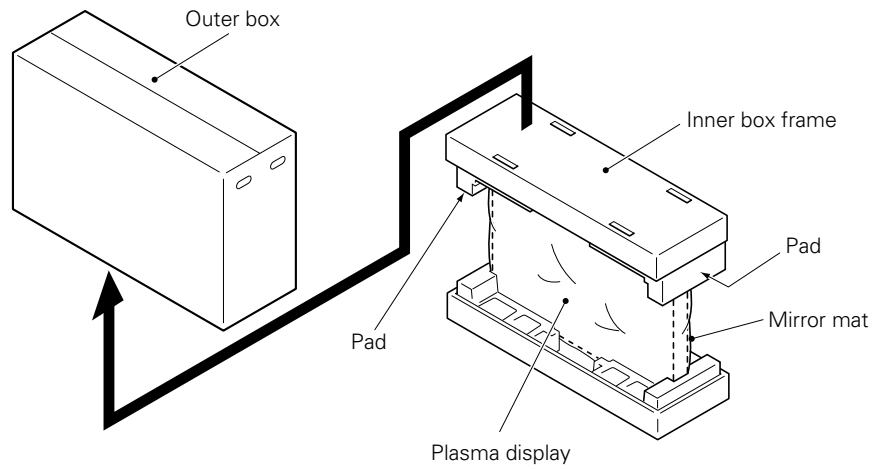
**Notes**

1. Place a sheet or protective cover to protect the display from scratches or damage.
2. Assemble only with the plasma display lying flat on a table or similar surface.
3. Do not apply excessive pressure and tighten the bolts more than necessary.
4. Move the stand so that the stand screw holes and the nuts that connect the main display line up correctly.
5. The display weighs approximately 30 kilograms (66 lb.) or more and has little depth, making the display very unstable. For this reason at least two people are necessary for its setup and installation.

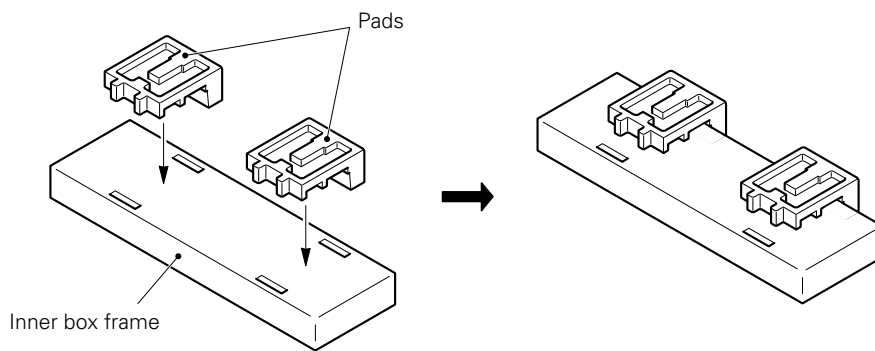


2) Instructions for using the main display packing material as a stand for the working on the display

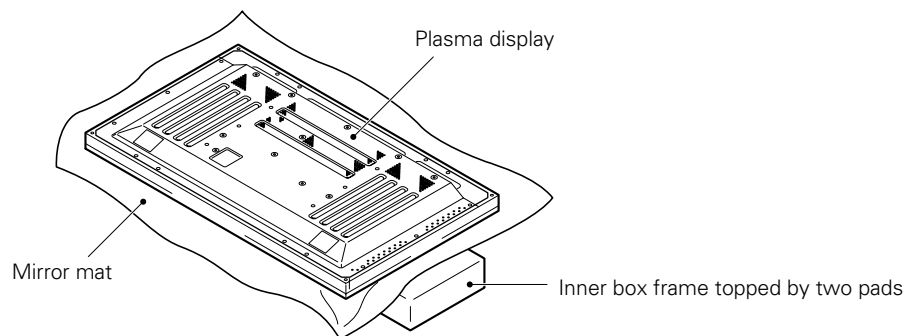
Main plasma display packaging setup



① Construct the stand for the plasma display using the inner box frame and pads shown in the figure above.

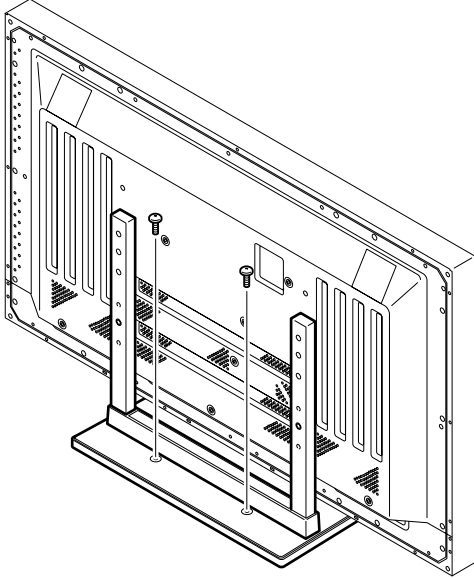
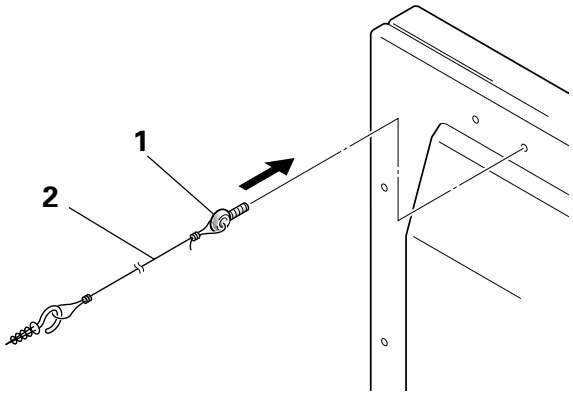


② Set the plasma display down on the pads as shown in the figure below.



③ Follow the instructions in Steps 1-4 in "Normal Installation" to attach the stand to the plasma display.

After assembling, connect the stand to the floor to prevent from falling over.

■ Stabilizing to the floor	■ How to use the stabilization bolts
<ul style="list-style-type: none"><li>● Use screws (sold separately) to attach and stabilize the stand.</li></ul> 	<ol style="list-style-type: none"><li>1. Attach the included bolts that prevent the display from falling over.</li><li>2. Stabilize the display by connecting to a wall or standing beam with a strong cord. (Repeat the same steps in the laterally direction to stabilize the assembly to the left and right.)</li></ol> <p>Use cord and hooks that are available on the market (sold separately).</p>  <p>The panel shown is PDP-503CMX/PDP-503MXE.</p>

**Wall-mounted tiltable plasma display hardware PDK-5011**

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**4.6 Wall-mounted tiltable plasma display hardware PDK-5011**

**4.6.1 Specifications**

<b>External dimensions</b> .....	1218 (W) × 714 (H) × 143 (D) mm (47-15/16 (W) × 28-1/8 (H) × 5-5/8 (D) in.) (when using PDP-503CMX or PDP-503MXE) 1070(W) × 630 (H) × 143 (D) mm (42-1/8 (W) × 24-13/16 (H) × 5-5/8 (D) in.) (when using PDP-433CMX or PDP-433MXE)
<b>Weight</b> .....	13.8 kg (30.4 lbs.) (mounting hardware only) 52.7 kg (116.2 lbs.) (mounting hardware and plasma display monitor <when using PDP-503CMX or PDP-503MXE>) 45.3 kg (99.9 lbs.) (mounting hardware and plasma display monitor <when using PDP-433CMX or PDP-433MXE>)
<b>Materials</b> .....	General structural steel tubes (STK-MR)
<b>Finish</b> .....	Semi-matte black paint on rear (Original Pioneer color)
<b>Dimensions of packaging</b> .....	890 (W) × 120 (H) × 700 (D) mm (35-1/32 (W) × 4-23/32 (H) × 27-9/16 (D) in.)
<b>Package weight</b> .....	18.0 kg (39.7 lbs.)
<b>Layers of packing</b> .....	20 layers

**Components**

Hung on wall unit .....	× 1
Bolt M8 .....	× 6
Hexagonal wrench .....	× 1

<p>☆ <b>Operating Temperature Restrictions</b></p> <ul style="list-style-type: none"> <li>• Ambient temperature: 0 to 40 °C</li> </ul> <p>☆ <b>Operating Temperature Restrictions for Upside-Down Installations</b></p> <ul style="list-style-type: none"> <li>* Upside-Down Installation is unavailable with the PDK-5011.</li> </ul> <p>☆ <b>Operating temperature restrictions for when the speaker system (PDP-S05-LR, PDP-S07-LR) is attached.</b></p> <ul style="list-style-type: none"> <li>• Ambient temperature: 0 to 40 °C</li> </ul>
---

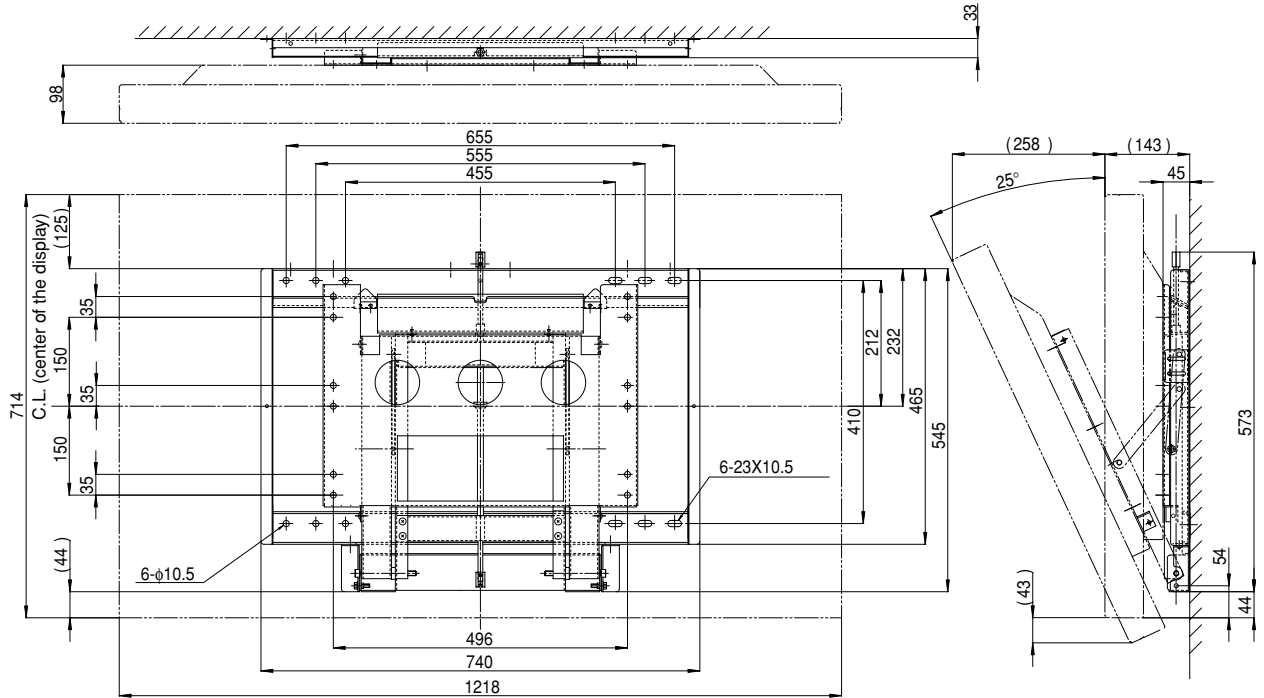
In wall-mounting installation allow adequate space (a clearance of 300 mm or more) above and below the monitor set, as well as on the right and the left.



4.6.2 External Dimensions

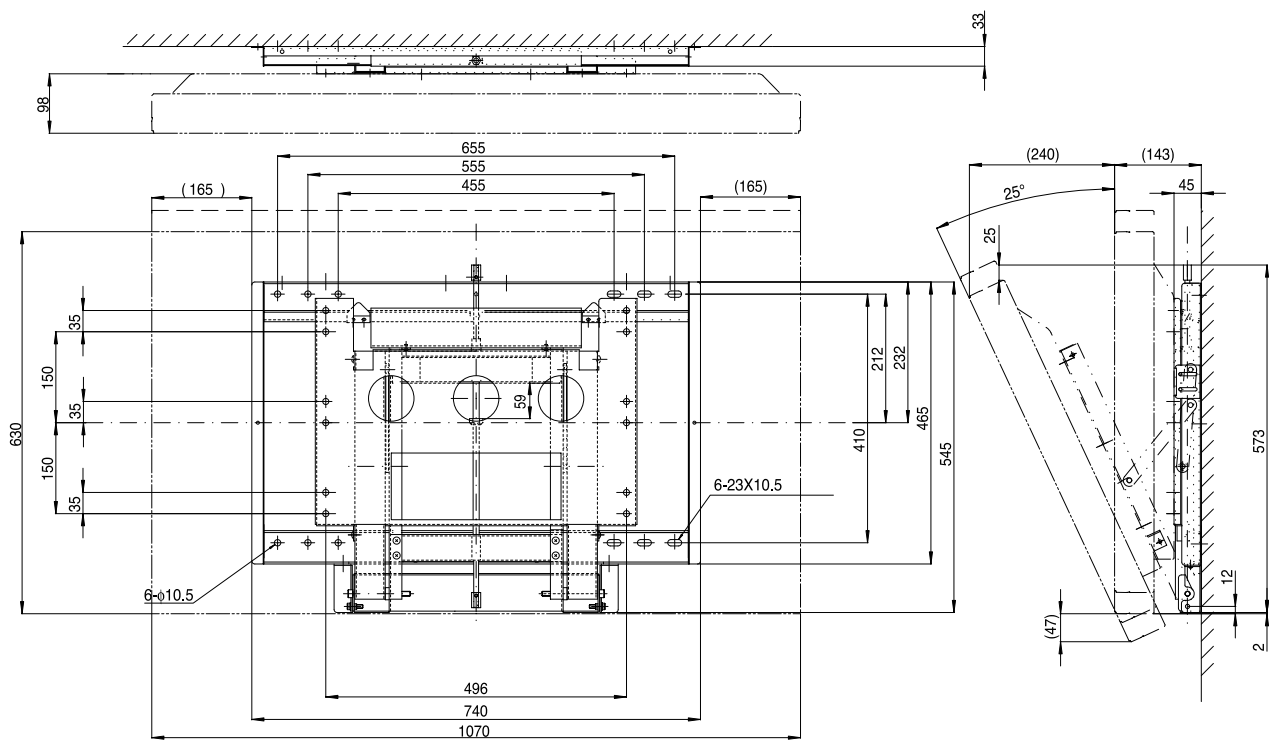
■ When using plasma display monitor PDP-503CMX or PDP-503MXE

(Units: mm)



■ When using plasma display monitor PDP-433CMX or PDP-433MXE

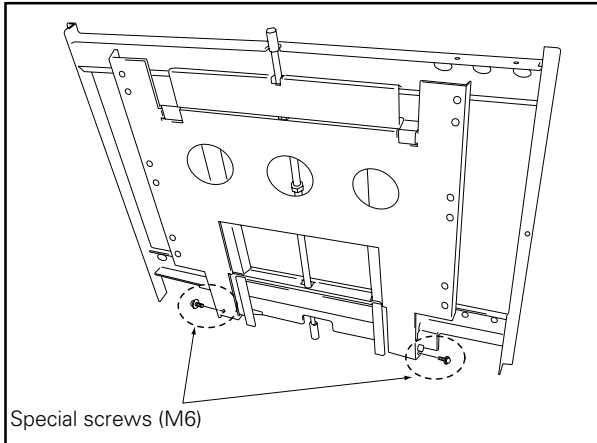
(Units: mm)



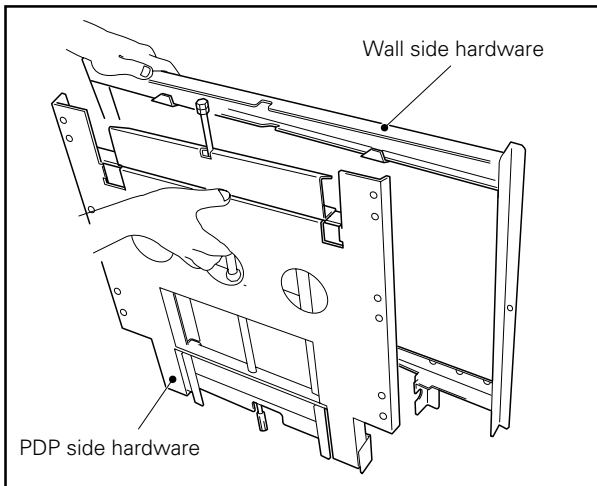
## Wall-mounted tiltable plasma display hardware PDK-5011

### 4.6.3 Assembling the mounting hardware and mounting the plasma display

- ① Remove the special screws (2 locations) from the bottom of the hung on wall unit.



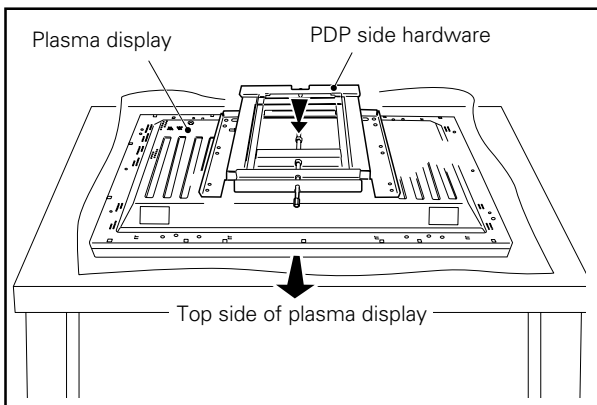
- ② Remove the hardware on the wall side and the hardware on the PDP side.



- ③ Attach the PDP side hardware to the plasma display.

**Warning**

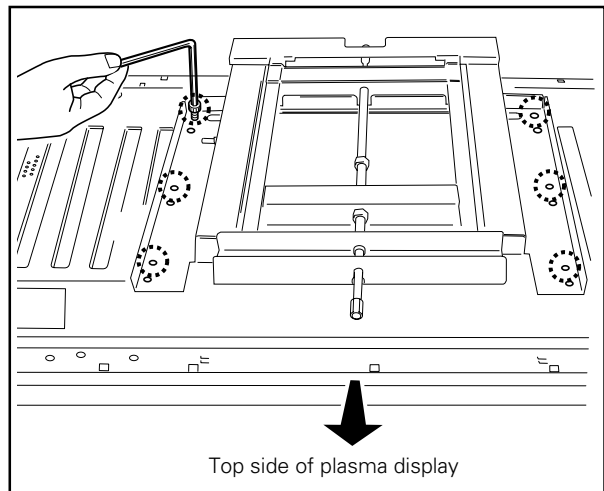
- Cover the display with a sheet or similar protective material to protect it from scratches or other damage.
- Be sure to attach it on top of a flat table or similar surface.



- ④ Fix the plasma display to the PDP side hardware with bolt M8 (6 locations).

Usually, use the holes marked with the red triangle "△".

If the 43-inch model is installed with an inclination of 18° or more, the top part of the screw used to adjust the angle may be visible from a horizontal position in front of the screen. In this case, you can hide the top of the screw by using the holes without a red triangle mark "△".



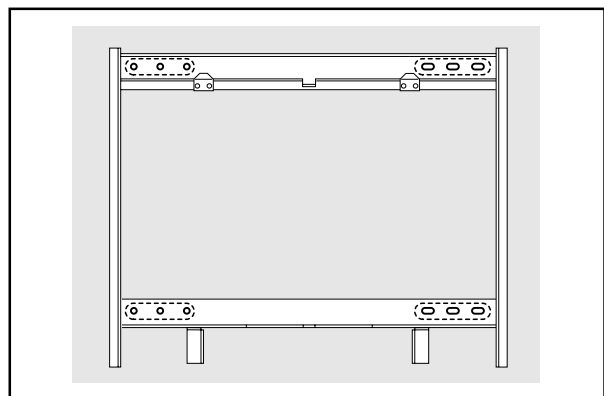
**Warning**

Be sure to install the speaker at this stage. For the installation method, refer to the speaker instruction manual.

- ⑤ Attach the wall side hardware to the wall. Install the wall side hardware (4 locations) symmetrically on the left and right side (one at each location from the center of the ( )). Because the screws and bolts used to do this are different according to the wall strength and wall material, purchase suitable screws and bolts separately.

**Warning**

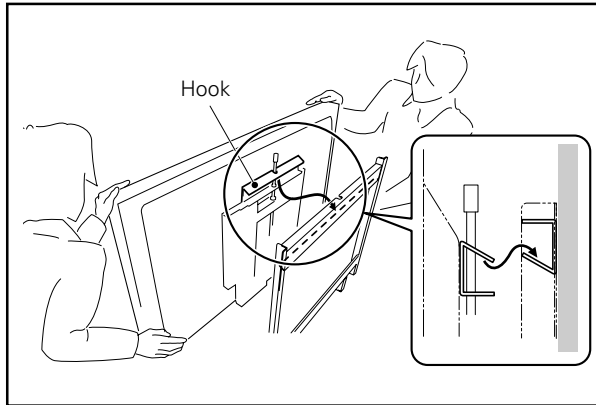
Check the strength of the wall and beams before installing the display.



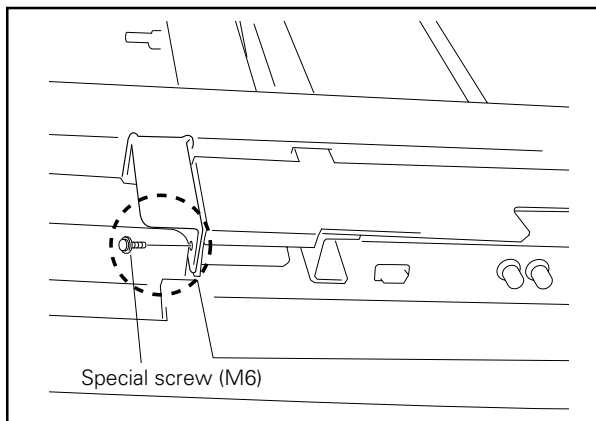
- ⑥ Attach the hook on the PDP side hardware to the wall side hardware.

**Warning**

Do not hold the speakers during the installation work.



- ⑦ Fix the bottom of the hardware with the special screws removed at step 1 (one on the left and one on the right).



**Wall-mounted tiltable plasma display hardware PDK-5011**

**4.6.4 Angle setup**

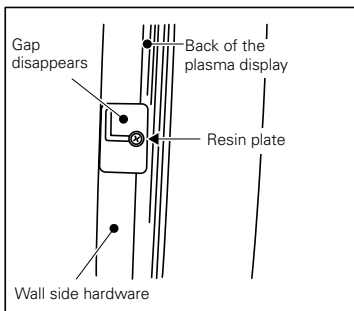
This installation hardware allows the display to be directed downwards freely at any angle from the vertical to 25°. This adjustment must always be done by 2 people.

Adjust the angle by rotating the screws at the center top and center bottom of the wall side hardware to the left or right.

**Warning**

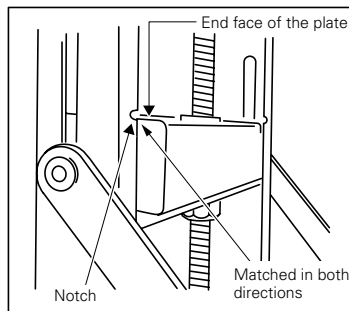
- If the angle is increased while you are adjusting the angle using the screw at the center of the bottom, it is difficult to turn the screw. When this happens, adjust it at the center of the upper.
- Turn the screws very carefully to avoid damaging the wall.
- When a screw becomes tight at either end of the adjustment range, do not turn the adjustment screw any further, because if you do, you will apply excessive force, deforming the screw.

**A Criterion for the vertical location**

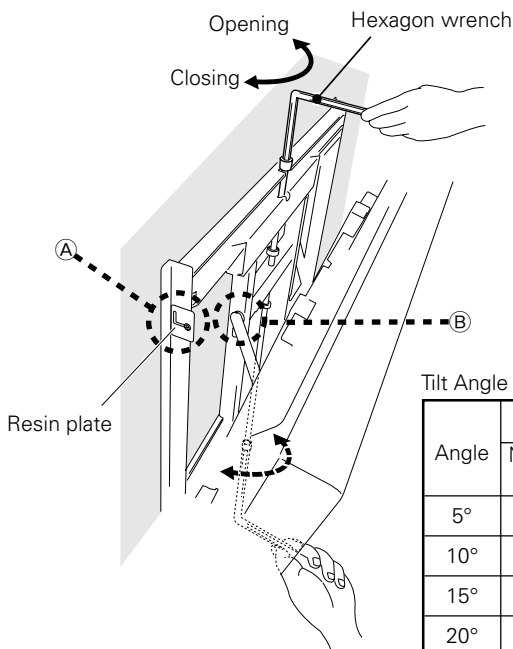


When it is in this state, do not turn the adjustment screw any further in the closing direction.

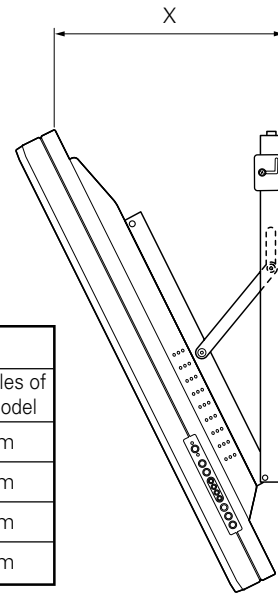
**B Criterion when its angle is 25°**



When it is in this state, do not turn the adjustment screw any further in the opening direction.



Measuring the opening distance X enables approximate angle values to be determined.



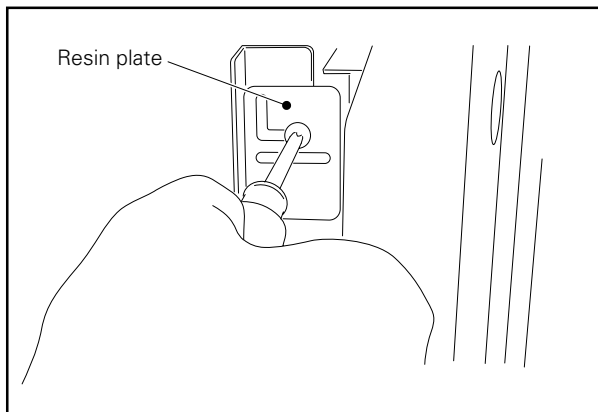
Tilt Angle Criteria

Angle	X		
	Normal holes of 50-inch model	Normal holes of 43-inch model	Topside holes of 43-inch model
5°	133mm	130mm	133mm
10°	188mm	181mm	187mm
15°	241mm	231mm	240mm
20°	291mm	279mm	291mm

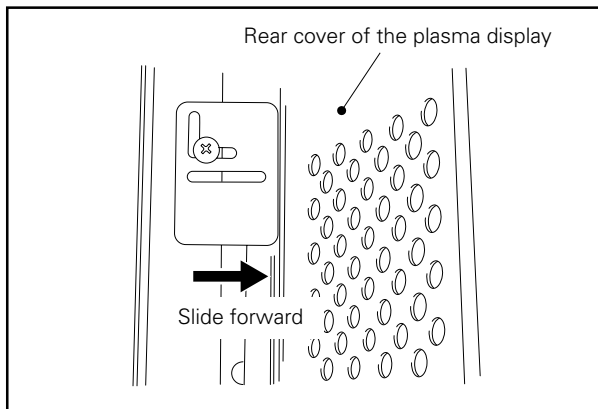
**4.6.5 Measure to prevent shakiness when the unit is installed at a slight inclination**

With this installation hardware, for structural reasons, shakiness occurs in the forward -backward direction at the top of the Plasma Display when the unit is installed at a slight inclination up to 5° from the vertical position. If this shakiness is a problem, reduce it by following the instructions provided below.

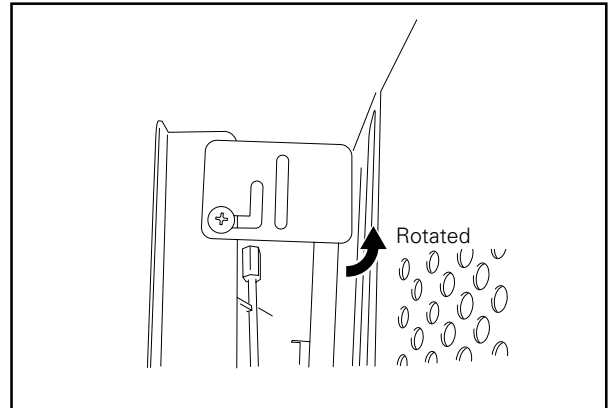
- ① Use a Philips driver (+) to loosen (left, right) the installation screws on the resin plate used as a guideline when installing it vertically (left, right) so that the resin plate can move freely.



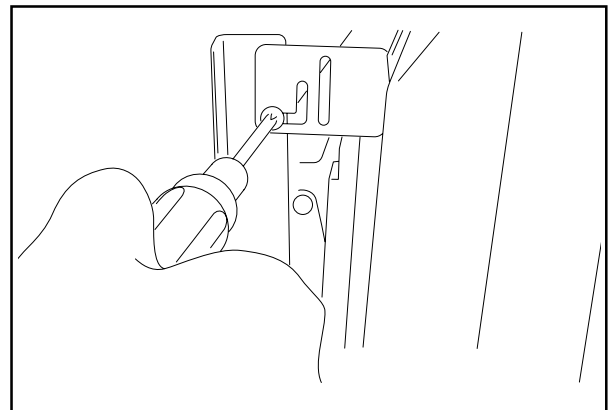
- ② Slide the resin plate (left, right) forward along the slit to the rear cover of the plasma display.



- ③ If, when it is moved only forward, the distance is too short, rotate the resin plate to use the long-side direction.



- ④ After setting the resin plate (left, right) in position, retighten the screws that you loosened at step (1).



You can use above method to reduce the shakiness that occurs when it is installed at a slight angle.

**Wall-mounted type tiltable fixed plasma display hardware PDK-5013**

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**4.7 Wall-mounted type tiltable fixed plasma display hardware PDK-5013**

**4.7.1 Specifications**

<b>External dimensions</b> .....	1218 (W) × 714 (H) × 130 (D) mm (47-15/16 (W) × 28-1/8 (H) × 5-1/8 (D) in.) (when using PDP-503CMX or PDP-503MXE) 1070 (W) × 630 (H) × 130 (D) mm (42-1/8 (W) × 24-13/16 (H) × 5-1/8 (D) in.) (when using PDP-433CMX or PDP-433MXE)
<b>Weight</b> .....	8.9 kg (19.6 lbs.) (mounting hardware only) 47.8 kg (105.4 lbs.) (mounting hardware and plasma display monitor <when using PDP-503CMX or PDP-503MXE>) 40.4 kg (88.2 lbs.) (mounting hardware and plasma display monitor <when using PDP-433CMX or PDP-433MXE>)
<b>Materials</b> .....	General structural steel tubes (STK-MR)
<b>Finish</b> .....	Semi-matte black paint on rear (Original Pioneer color)
<b>Dimensions of packaging</b> .....	1070 (W) × 90 (H) 590 (D) × mm (42-1/8 (W) × 3-17/32 (H) × 23-7/32 (D) in.)
<b>Package weight</b> .....	12.0 kg (26.5 lbs.)
<b>Layers of packing</b> .....	30 layers

**Components**

Hung on wall unit .....	× 1
Bolt M8 .....	× 6
Hexagonal wrench (Opposite side 6 mm for M8 use) .....	× 1
Stencil .....	× 1

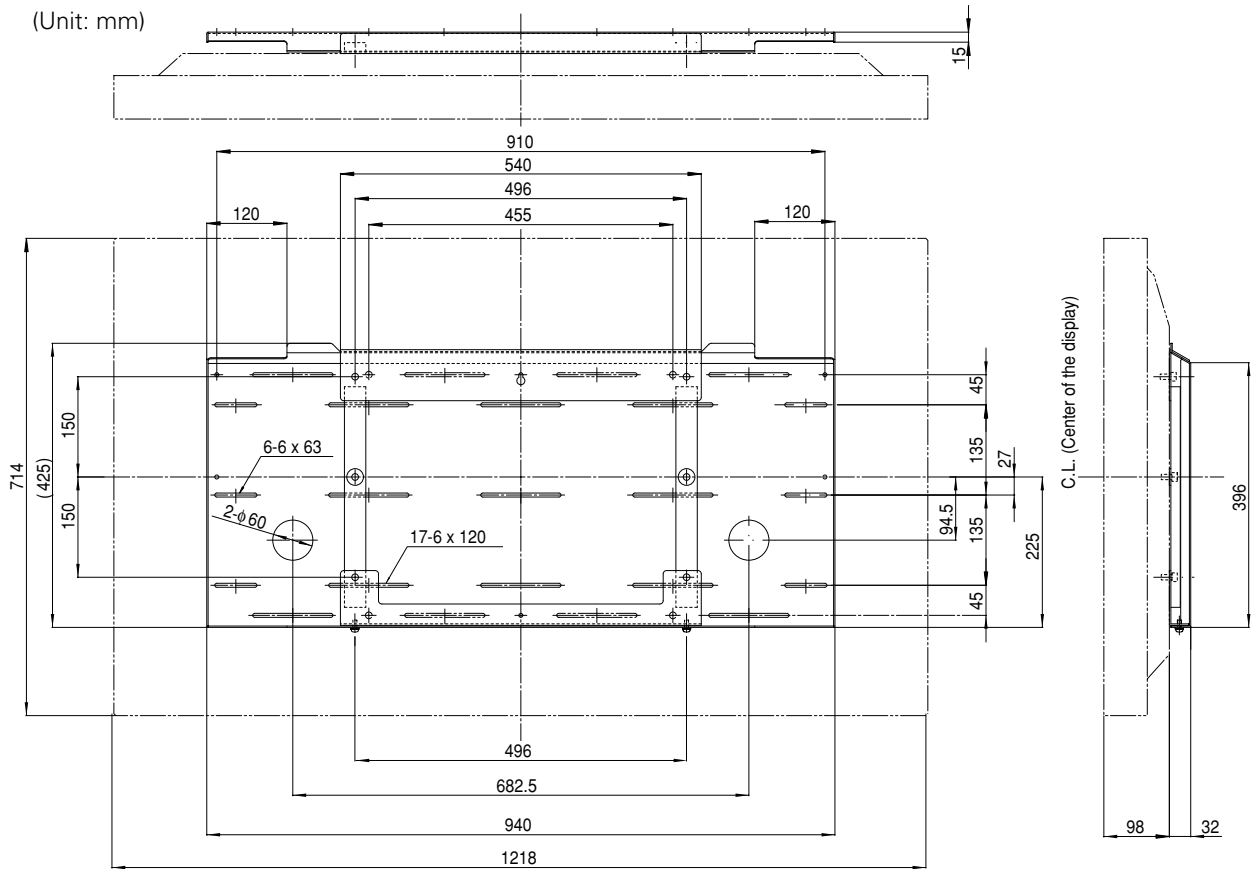
<p>☆ <b>Operating Temperature Restrictions</b></p> <ul style="list-style-type: none"> <li>• Ambient temperature: 0 to 40 °C</li> </ul> <p>☆ <b>Operating Temperature Restrictions for Upside-Down Installations</b></p> <ul style="list-style-type: none"> <li>* Upside-Down Installation is unavailable with the PDK-5013.</li> </ul> <p>☆ <b>Operating temperature restrictions for when the speaker system (PDP-S05-LR, PDP-S07-LR) is attached.</b></p> <ul style="list-style-type: none"> <li>• Ambient temperature: 0 to 40 °C</li> </ul>
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In wall-mounting installation allow adequate space (a clearance of 300 mm or more) above and below the monitor set, as well as on the right and the left.

4.7.2 External Dimensions

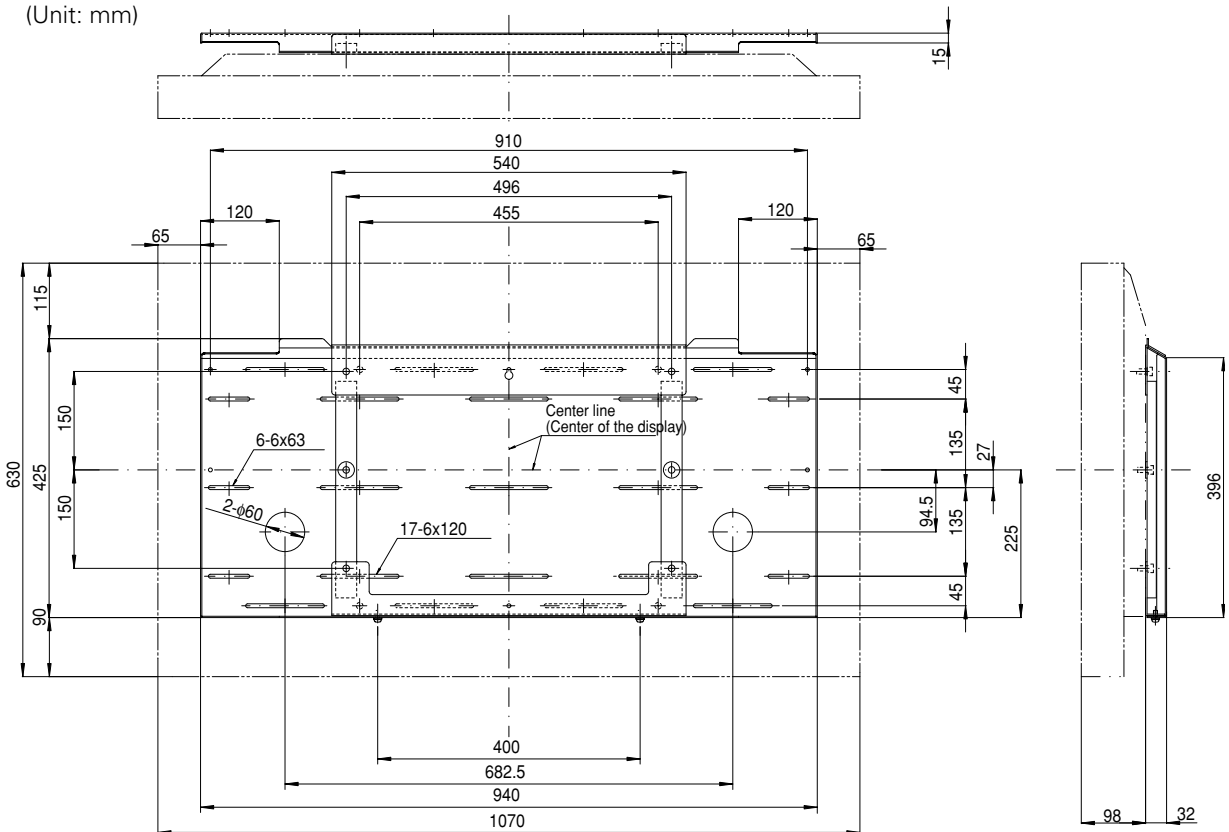
■ When using plasma display monitor PDP-503CMX or PDP-503MXE

(Unit: mm)



■ When using plasma display monitor PDP-433CMX or PDP-433MXE

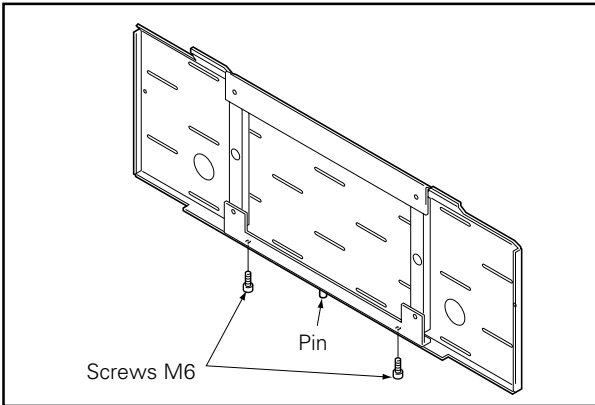
(Unit: mm)



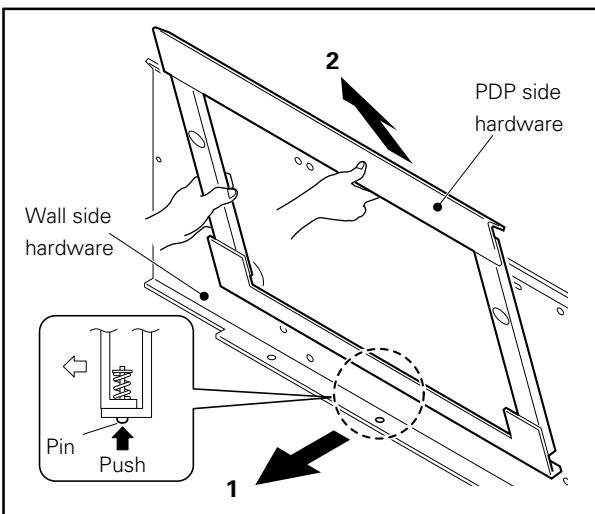
**Wall-mounted type tiltable fixed plasma display hardware PDK-5013**

**4.7.3 Assembling the mounting hardware and mounting the display**

- ① Remove the screws (2 locations) from the bottom of the hung on wall unit with a Phillips head (+) screw driver.



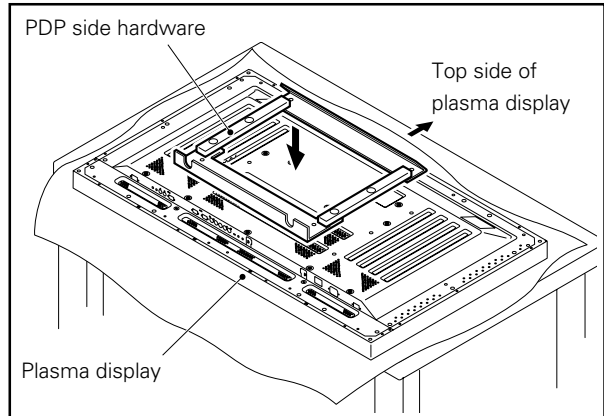
- ② Remove the hardware on the wall side and the hardware on the PDP side.
1. Push the pin on the bottom side and pull out the bottom side of the PDP side hardware.
  2. Lift up and remove the PDP side hardware.



- ③ Attach the PDP side hardware to the plasma display.

**Warning**

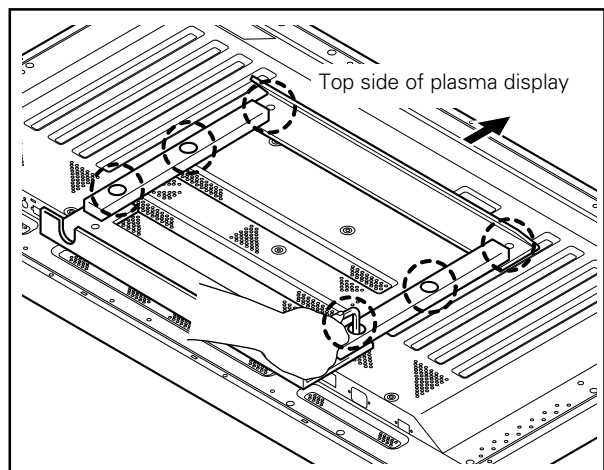
- Cover the display with a sheet or similar protective material to protect it from scratches or other damage.
- Be sure to attach it on top of a flat table or similar surface.



- ④ Fix the plasma display to the PDP side hardware with bolt M8 (6 locations).

**Warning**

- Be sure to install the speaker at this stage.  
For the installation method, refer to the speaker instruction manual.





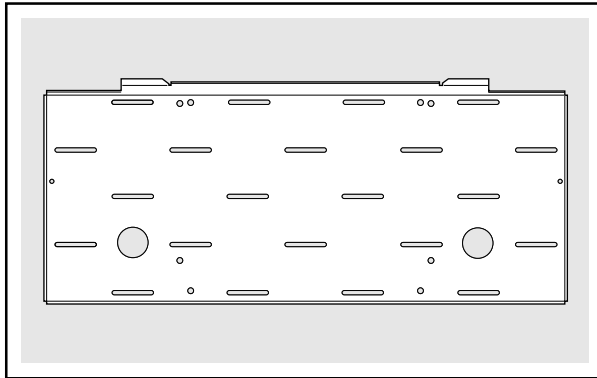
Wall-mounted type tiltable fixed plasma display hardware PDK-5013

- ⑤ Attach the wall side hardware to the wall.

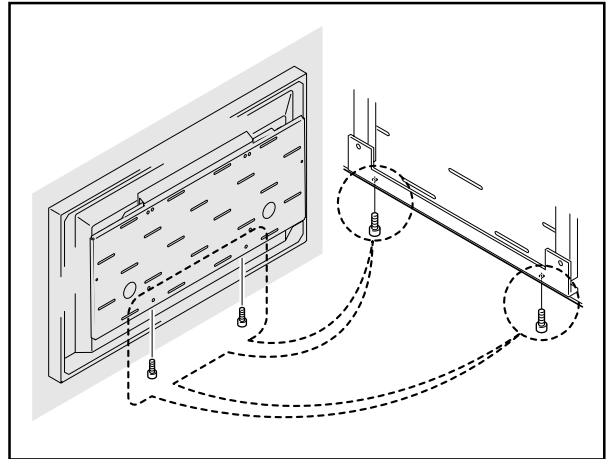
Fix the unit with screws (at 4 or more locations) symmetrically on the left and right side. Because the screws and bolts used to do this are different according to the wall strength and wall material, purchase suitable screws and bolts separately.

**Warning**

Check the strength of the wall and beams before installing the display.



- ⑦ Fix the bottom of the hardware with the screws removed at step 1 (one on the left and one on the right).

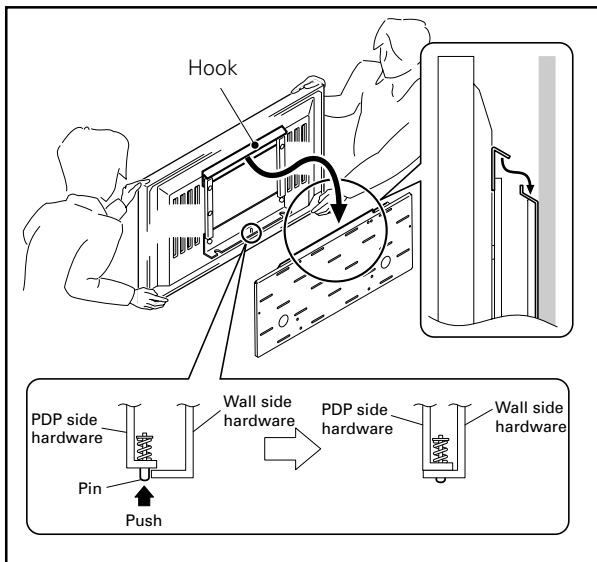


- ⑥ Attach the hook on the PDP side hardware to the wall side hardware.

While it is hooked, the pin on the bottom side does not go in, so push the pin in.

**Warning**

Do not hold the speakers during the installation work.



**Plasma Display Ceiling Suspension Hardware: PDK-5012**

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**4.8 Plasma Display Ceiling Suspension Hardware: PDK-5012**

**4.8.1 Specifications**

<b>External dimensions</b> .....	1218 (W) × 1157 (H) × 300 (D) mm (47-15/16 (W) × 45-9/16 (H) × 11-13/16 (D) in.) (when using PDP-503CMX or PDP-503MXE) 1070 (W) × 1073 (H) × 300 (D) mm (42-1/8 (W) × 42-1/4 (H) × 11-13/16 (D) in.) (when using PDP-433CMX or PDP-433MXE) (with plastic display in horizontal position)
<b>Weight</b> .....	14.5 kg (32.0 lbs.) (mounting hardware only) 53.4 kg (117.7 lbs.) (mounting hardware and plasma display monitor <when using PDP-503CMX or PDP-503MXE>) 45.8 kg (101.01 lbs.) (mounting hardware and plasma display monitor <when using PDP-433CMX or PDP-433MXE>)
<b>Adjustable range of angles</b> .....	Horizontal to 25 degrees below horizontal, 45 degrees left/right
<b>Material</b> .....	Steel pipe for general structure (STK-MR)
<b>Finish</b> .....	Semi-matte black paint (Original Pioneer color)
<b>Package dimensions</b> .....	1035 (W) × 360 (H) × 540 (D) mm (40-3/4 (W) × 14-3/16 (H) × 21-1/4 (D) in.)
<b>Package weight</b> .....	23.5 kg (51.8 lbs.)
<b>Layers of packing</b> .....	10 layers

**Components**

PDP bracket .....	× 1
Bolt M8 .....	× 6
Special screw .....	× 4
Stencil (printed on the wrapping material that is inside) .....	× 1
Installer's contact information (Japan only) .....	× 1
Operating instructions .....	× 1

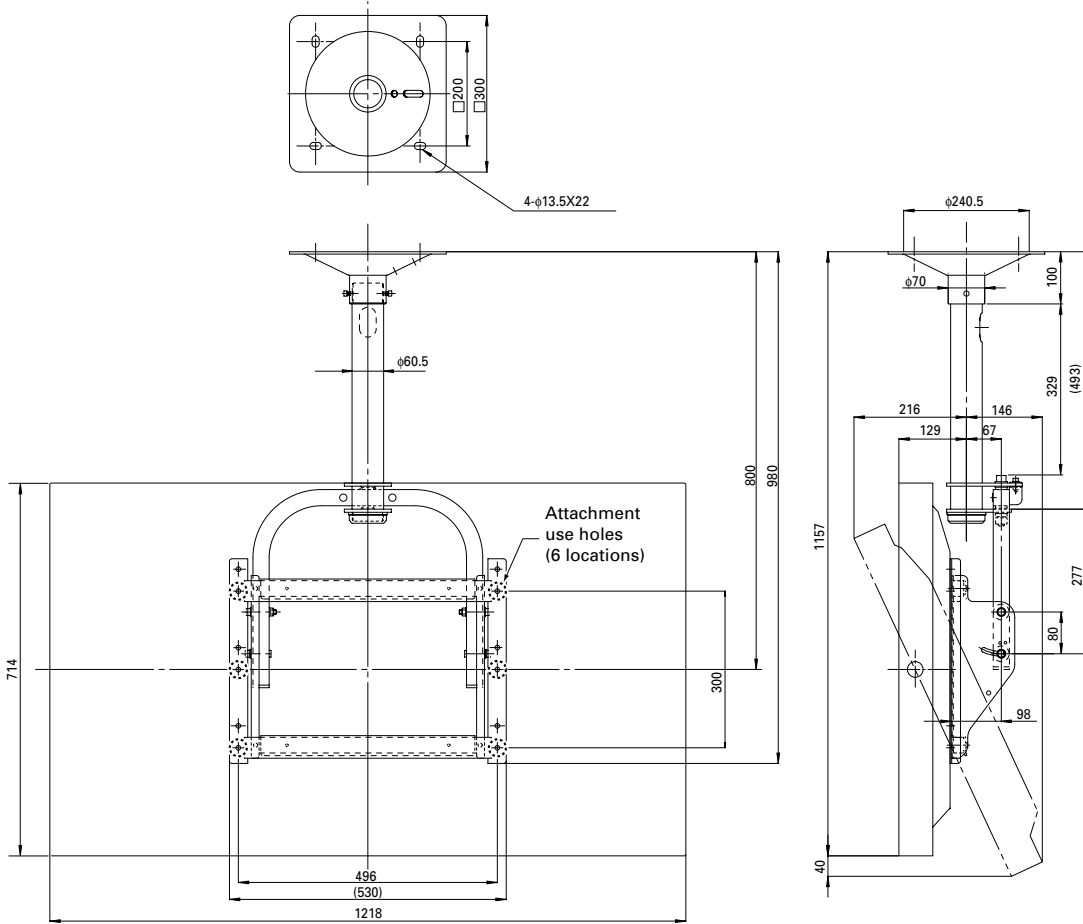
The appropriate types of screws and other mounting hardware will depend on the strength and composition of the ceiling. Prepare them separately.

<p>☆ <b>Operating Temperature Restrictions</b></p> <ul style="list-style-type: none"> <li>• Ambient Temperature: 0 to 40 °C</li> </ul> <p>☆ <b>Operating Temperature Restrictions for Upside-Down Installations</b></p> <ul style="list-style-type: none"> <li>• Ambient temperature: 0 to 40 °C</li> <li>• Other factors: Maintain sufficient clearance between the display and the wall (at least 300 mm)</li> </ul> <p>☆ <b>Operating temperature restrictions for when the speaker system (PDP-S05-LR, PDP-S07-LR) is attached.</b></p> <ul style="list-style-type: none"> <li>• Ambient temperature: 0 to 40 °C</li> </ul>
---

4.8.2 External Dimensions

■ When using plasma display monitor PDP-503CMX or PDP-503MXE

(Unit: mm)



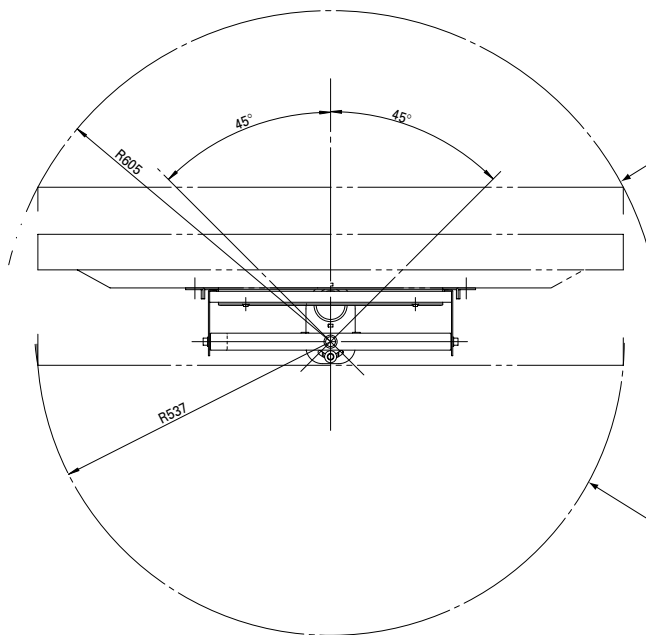
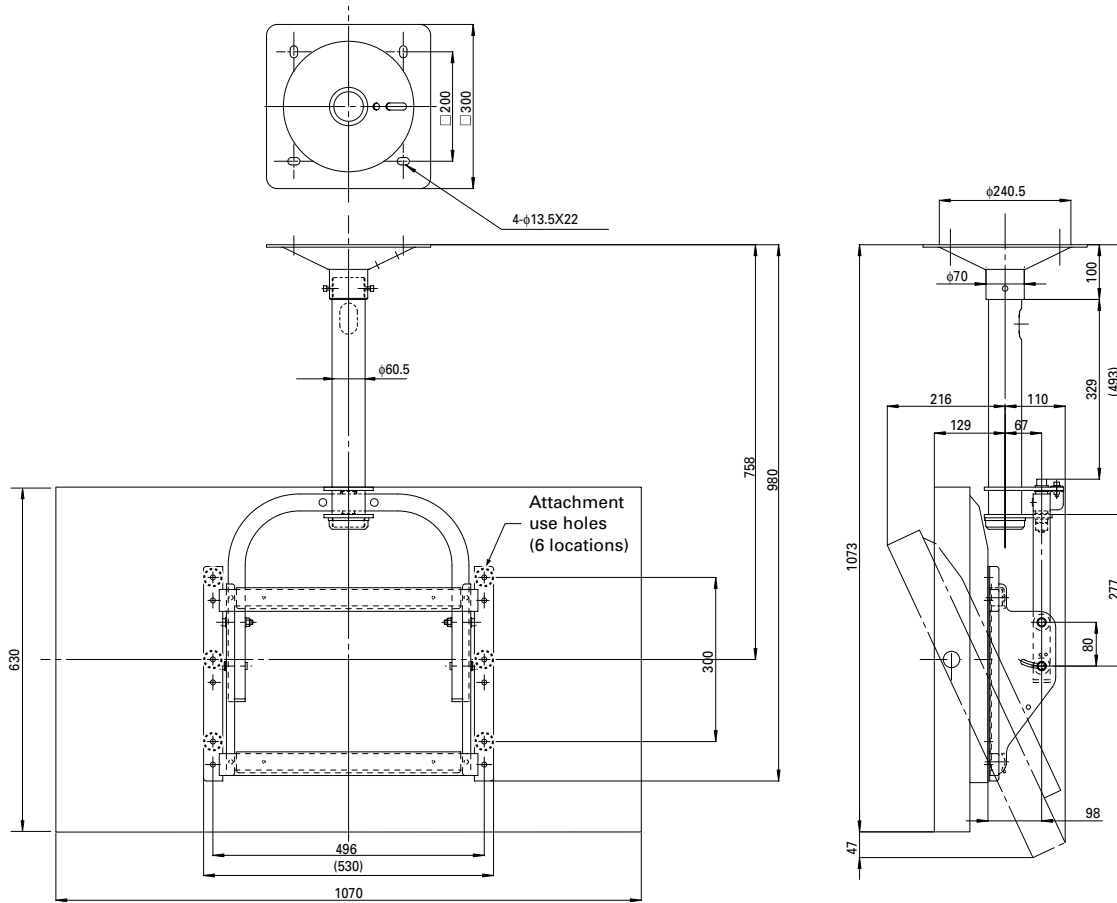
This circle shows the path that the outermost part of the plasma display follows when it is rotated about a vertical axis after having been tilted sideways by 25°.

This circle shows the path that the outermost part of the plasma display follows when it is rotated about a vertical axis after having been tilted sideways by 25°.

Plasma Display Ceiling Suspension Hardware: PDK-5012

■ When using plasma display monitor PDP-433CMX or PDP-433MXE

(Unit: mm)



This circle shows the path that the outermost part of the plasma display follows when it is rotated about a vertical axis after having been titled sideways by 25°.

This circle shows the path that the outermost part of the plasma display follows when it is rotated about a vertical axis after having been titled sideways by 25°.

### 4.8.3 Assembling and Installing the mounting hardware and mounting the plasma display

#### 1) Preparations

You will need the following tools. Make sure you have them at hand before beginning work.

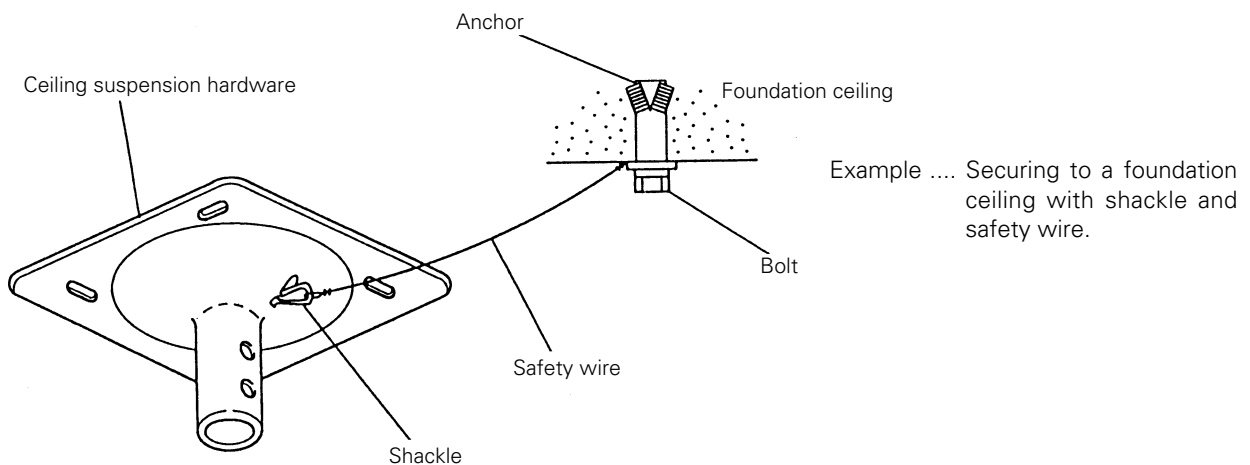
- Plus driver
- Hexagonal wrench (subtense 5 mm, for M6 bolts)
- Hexagonal wrench (subtense 6 mm, for M8 bolts)

You'll also need tools for ceiling work.

#### 2) Installing the mounting hardware

Select the installation site, then apply the supplied pattern to the ceiling, drill the holes, and mount the ceiling suspension hardware. The appropriate types of screws and other display/mounting hardware will depend on the strength and composition of the particular ceiling.

- Firmly tight all bolts.
- After mounting the mounting hardware but before mounting the plasma display, confirm the strength of the mount portion of the ceiling.
- For additional safety, use the holes in the ceiling suspension hardware as shown.  
[Use parts strong enough to support the weight of the display.]



(NOTE) Safety wires serve as important backups in keeping the unit securely mounted.

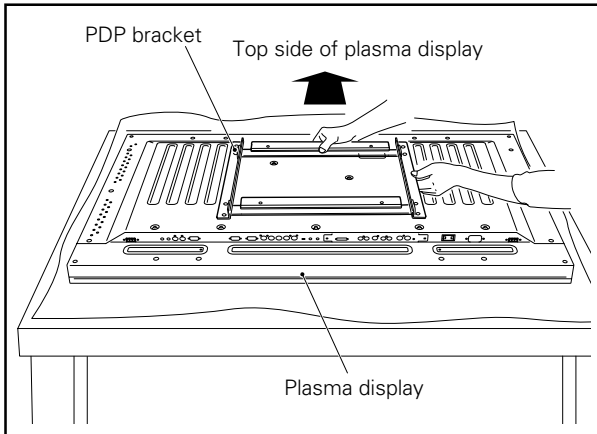
**Plasma Display Ceiling Suspension Hardware: PDK-5012**

**4.8.4 Assembly procedure**

① Attach the PDP bracket to the plasma display.

**Warning**

- Cover the display with a sheet or similar protective material to protect it from scratches or other damage.
- Be sure to attach it on top of a flat table or similar surface.
- Be careful that the PDP bracket is not upside down.



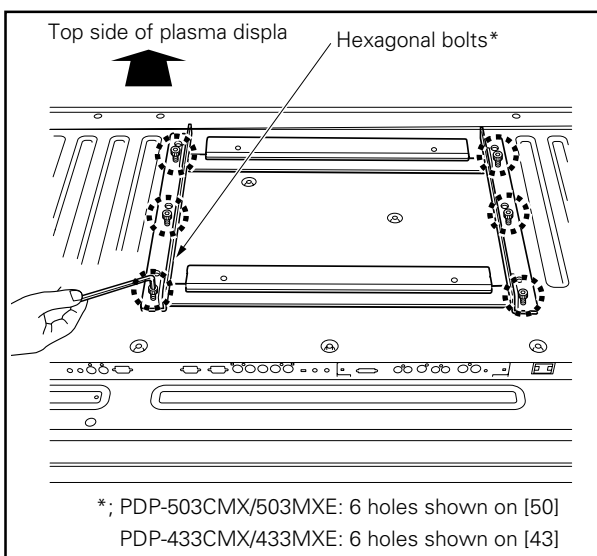
② Fix the plasma display to the PDP bracket with screws (6 locations).

**Warning**

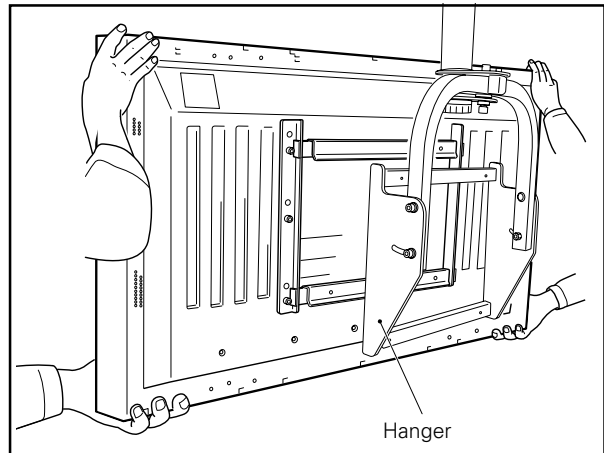
Be sure to use the holes (hole positions on the diagram) shown on [50] to attach the PDP-503CMX or PDP-503MXE.

Be sure to use the holes shown on [43] to attach the PDP-433CMX/PDP-433MXE. But if the cable cover is attached, use the holes shown on [50], because at this location, it will interfere with the PDP bracket.

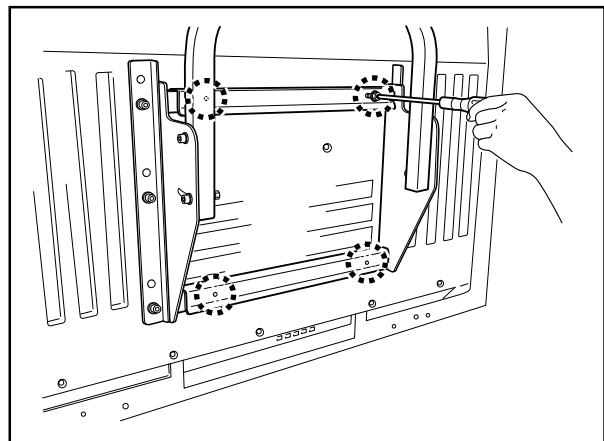
If you attempt to attach the PDP-503CMX/PDP-503MXE using the holes shown in [43], the support pipe will interfere with the plasma display.



③ Attach the plasma display to the hanger.  
 (The attachment shown in the figure is that used with the PDP-503CMX/PDP503MXE.)



④ Screw the plasma display to the hanger (at 4 locations).  
 (The attachment shown in the figure is that used with the PDP-503CMX/PDP503MXE.)

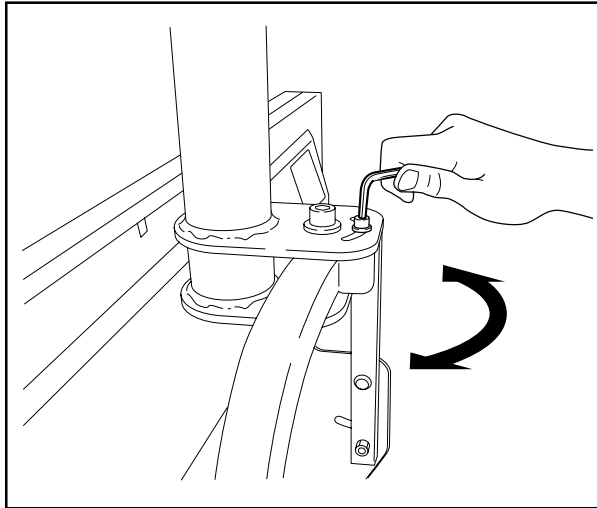


### 4.8.5 Angle setup

#### Left-right Adjustment

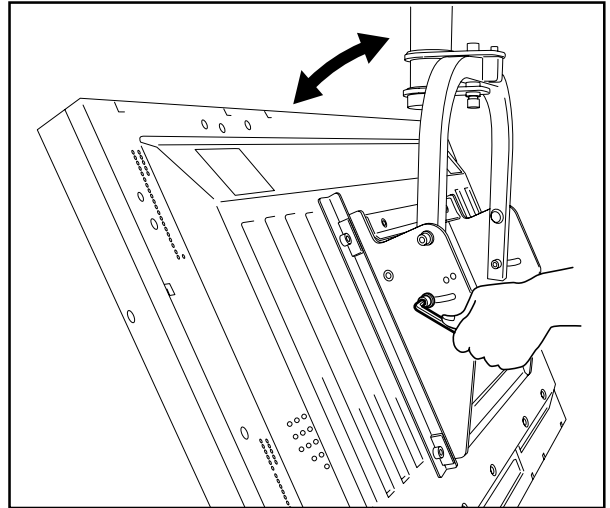
You can adjust it 45° to the left or right by loosening the top screw.

Set the desired angle, then tighten the screw.



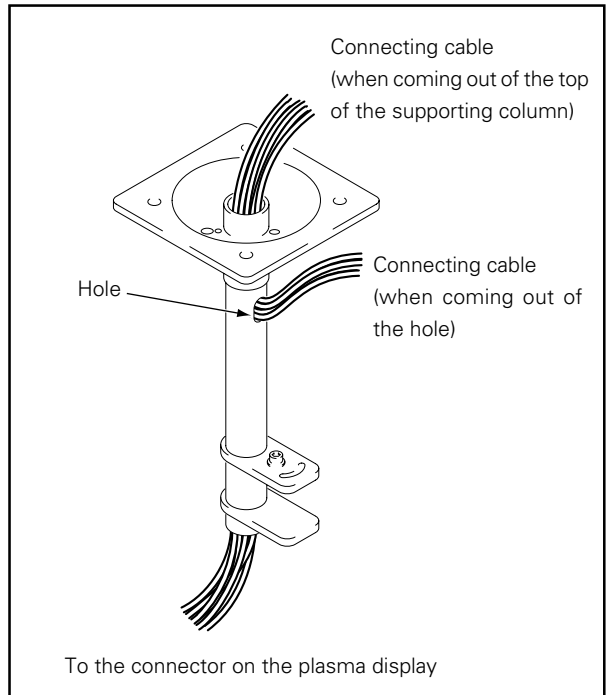
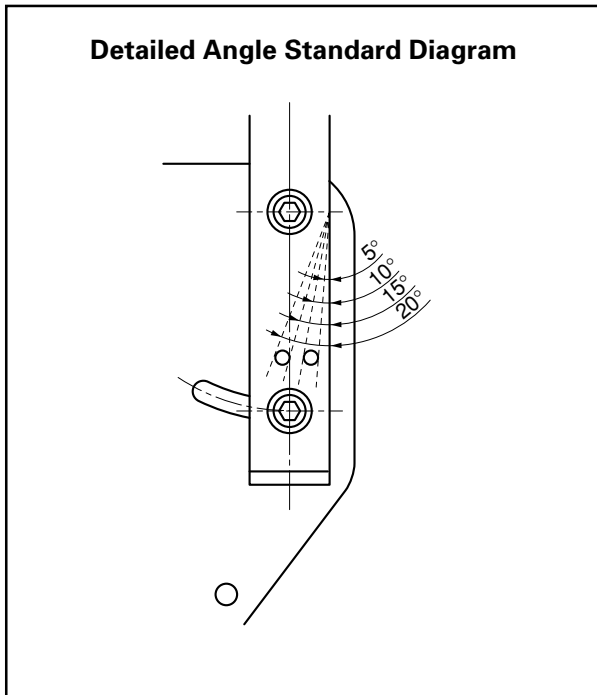
#### Vertical Adjustment

You can adjust its vertical angle by loosening the screws on the left and right sides. (You can adjust it a maximum of 25° downwards from the vertical position.)



Set it to the desired angles while supporting the plasma display and retighten the loosened screws on the left and right sides. The hole on the side indicates the angle. (5° units).

#### Detailed Angle Standard Diagram



## 4.9 Mobile Cart: PDK-5014

### 4.9.1 Specifications

<b>External dimensions</b> .....	1218 (W) × 1707 (H) × 720 (D) mm (47-15/16 (W) × 67-7/32 (H) × 28-11/32 (D) in.) (when using PDP-503CMX or PDP-503MXE) 1070 (W) × 1665 (H) × 720 (D) mm (42-1/8 (W) × 65-9/16 (H) × 28-11/32 (D) in.) (when using PDP-433CMX or PDP-433MXE)
<b>Weight</b> .....	43.0 kg (94.8 lbs.) (stand only) 81.9 kg (180.6 lbs.) (stand and plasma display monitor <when using PDP-503CMX or PDP-503MXE>) 74.5 kg (164.2 lbs.) (stand and plasma display monitor <when using PDP-433CMX or PDP-433MXE>)
<b>Materials</b> .....	STKM (steel pipe) SPCC and SS41
<b>Finish</b> .....	Melamine baking finish (silver metallic)
<b>Dimensions of packaging</b> .....	1465 (W) × 200 (H) × 790 (D) mm (67-11/16 (W) × 7-7/8 (H) × 31-3/32 (D) in.) (bracket, display stand section) 810 (W) × 295 (H) × 810 (D) mm (31-7/8 (W) × 11-15/16 (H) × 31-7/8 (D) in.) (stand shelf, leg section)
<b>Package weight</b> .....	38 kg (83.8 lbs.) (bracket, display stand section) 21 kg (46.3 lbs.) (stand shelf, leg section)
<b>Layers of packing</b> .....	10 layers

#### Components

Display stand .....	× 1
Rear cover .....	× 1
Leg base .....	× 1
Bracket .....	× 1
Stand shelf .....	× 1
Hexagonal bored bolts (M8 × 20) .....	× 10
Hexagonal bored bolts (M8 × 60) .....	× 4
Hexagonal wrench .....	× 1
Washer .....	× 4
Plate spring washer .....	× 4

#### ☆ Operating Temperature Restrictions

- Ambient Temperature: 0 to 40 °C

#### ☆ Operating temperature restrictions for when the speaker system (PDP-S05-LR, PDP-S07-LR) is attached.

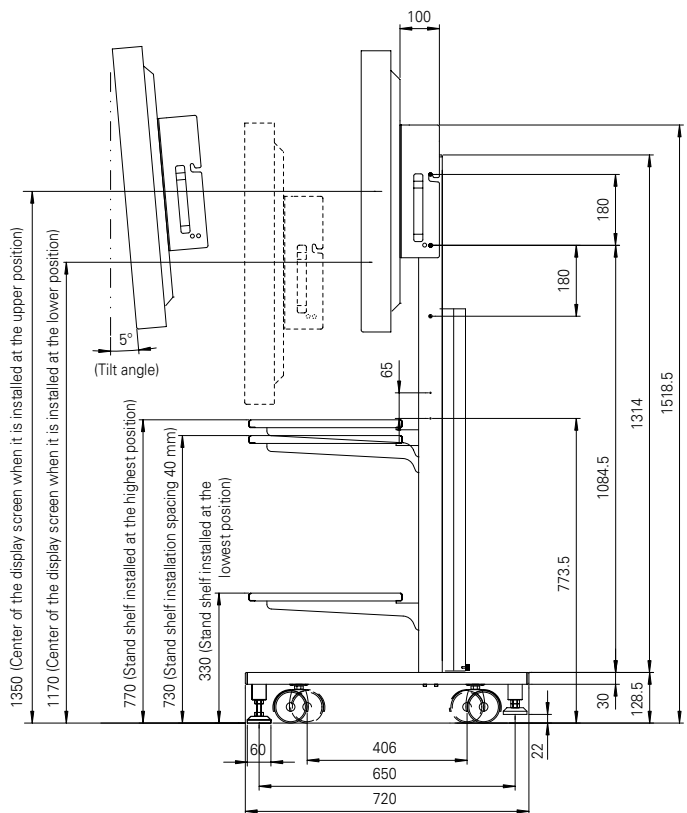
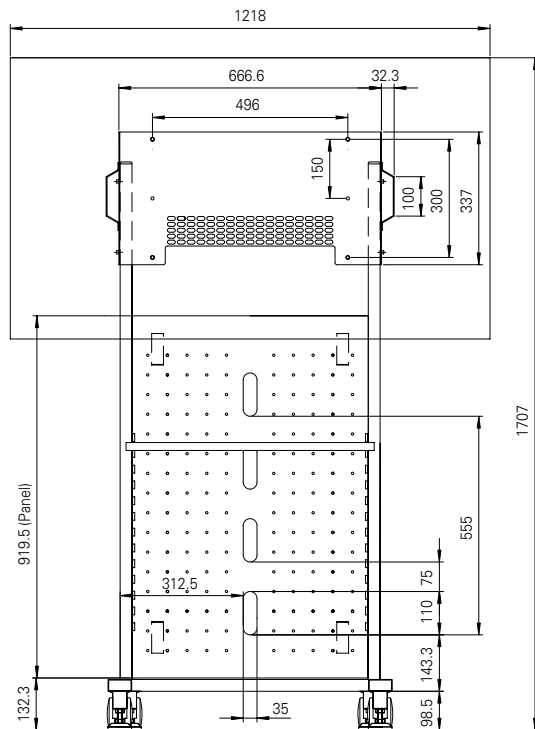
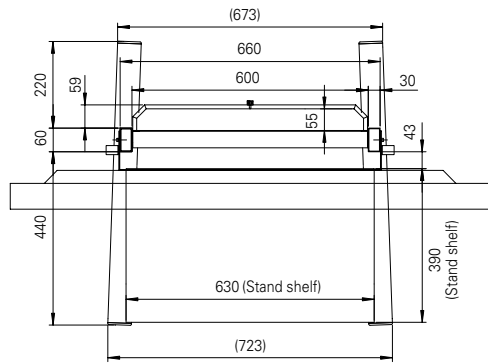
- Ambient temperature: 0 to 40 °C



4.9.2 External Dimensions

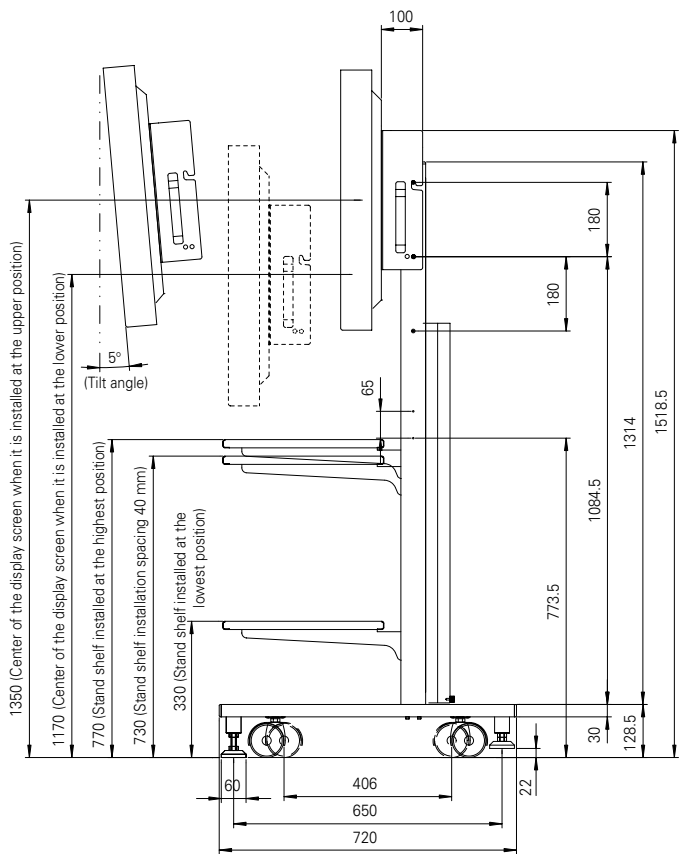
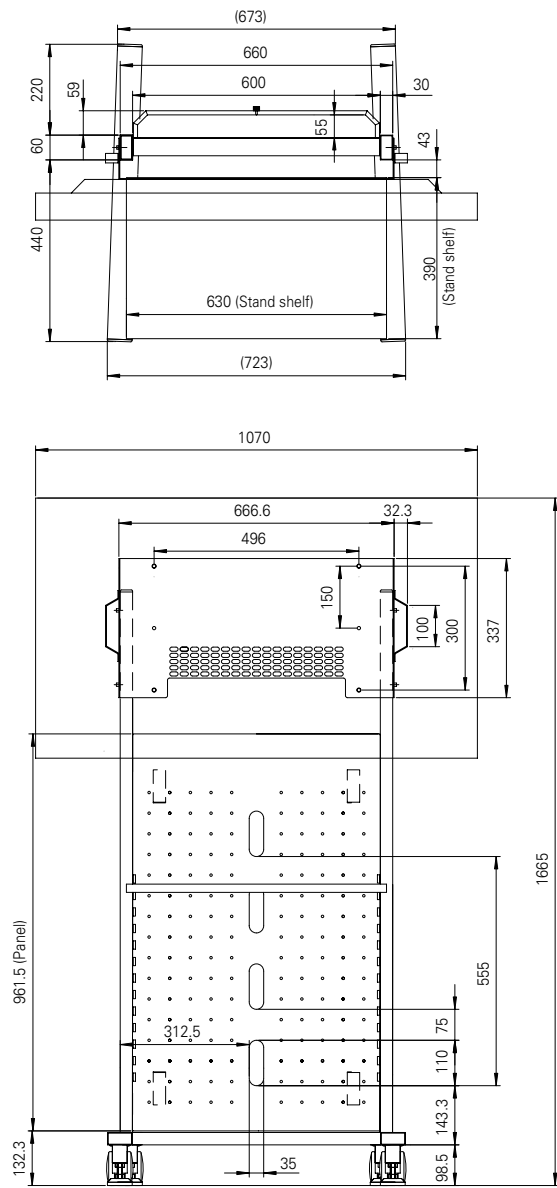
■ When using plasma display monitor PDP-503CMX or PDP-503MXE

(Units: mm)



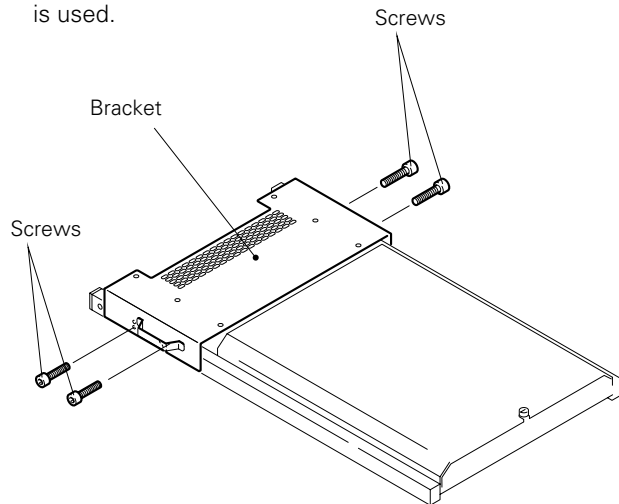
■ When using plasma display monitor PDP-433CMX or PDP-433MXE

(Units: mm)

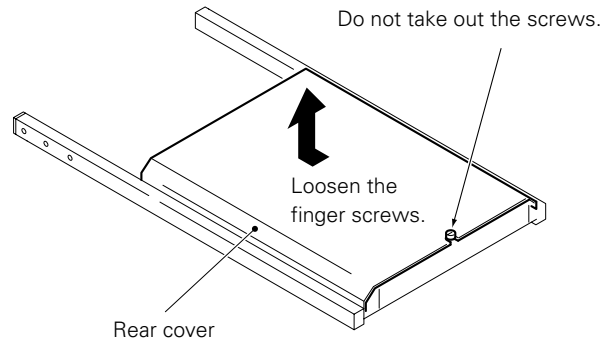


### 4.9.3 Disassembling the display stand

① Remove the screws (four locations on the left and right sides) and take off the bracket. For packing reasons, the bracket is installed at a location that is different from the location where it is usually installed when it is used.



② Remove the rear cover.



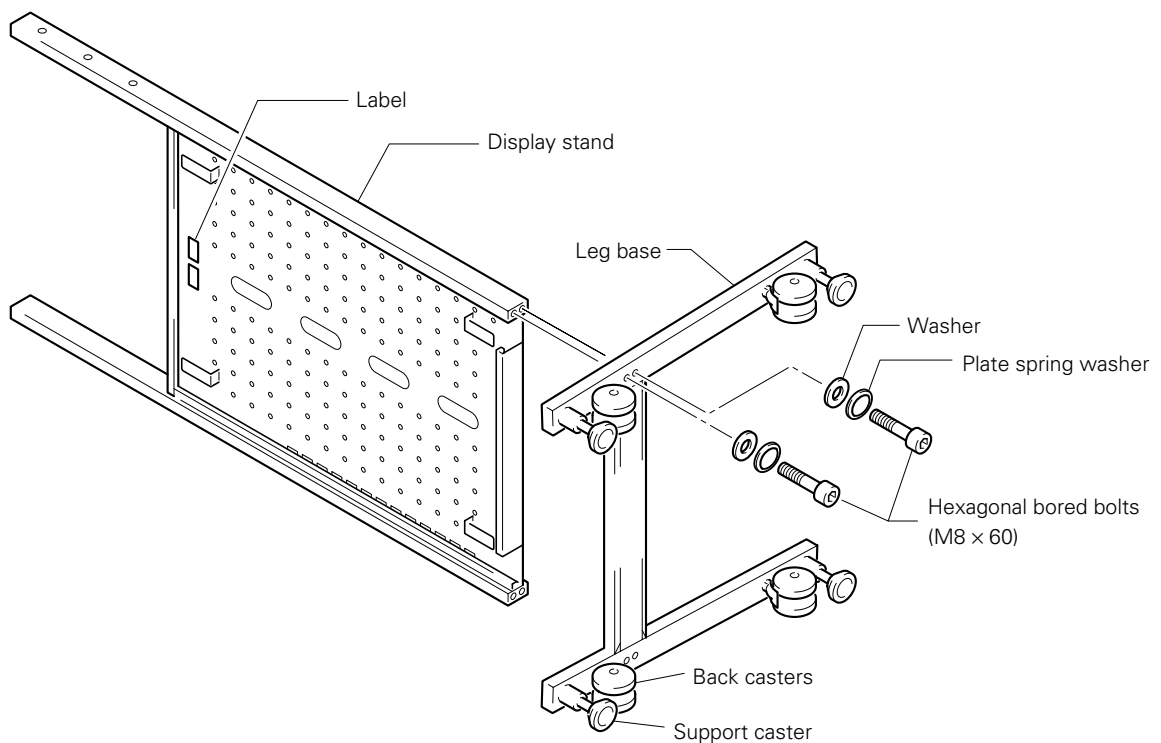
### 4.9.4 How to install

In order to ensure safety during installation, always be sure to work together with more than two persons.

① Assemble the unit

Attach the leg base to the display stand using the hexagonal bored bolts (M8 × 60) so that the rear label faces towards the back casters as the figure.

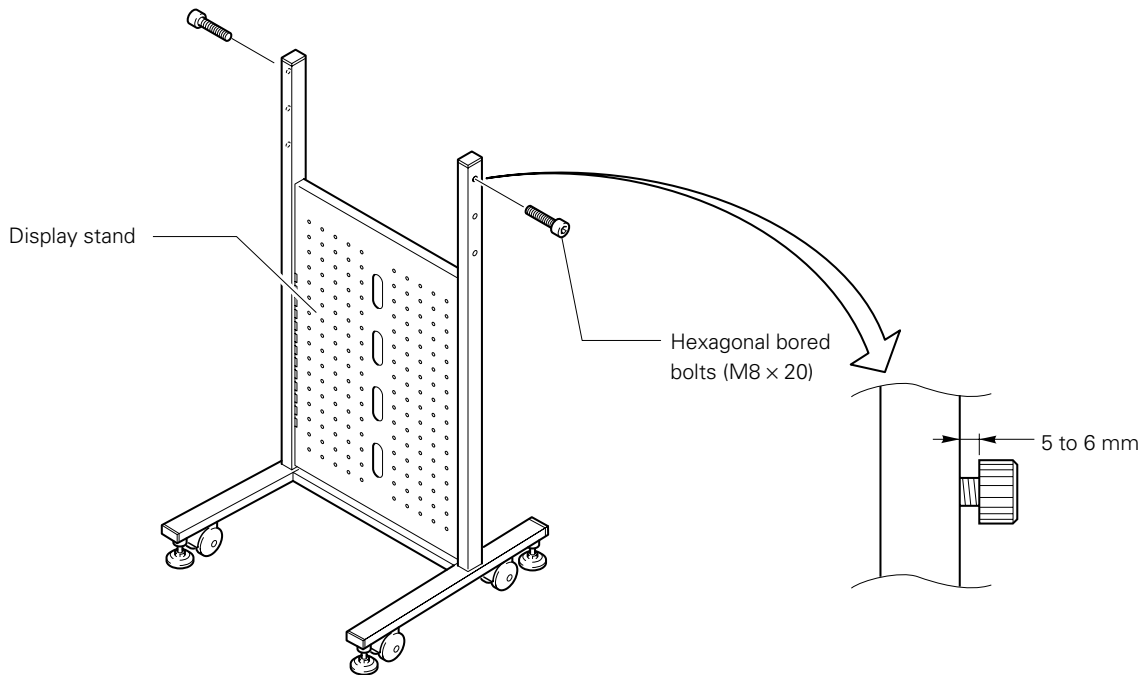
**Note:** In order to ensure safe installation, always be sure to alternately tighten each bolt two times or more until they are firmly fixed in place.



② Attaching bracket bolts to display stand

Attach the hexagonal bored bolts (M8 × 20) to the display stand as the figure, being sure to leave a space of 5 to 6 millimeters when doing so. (Note that these bolts may be attached at two different levels to allow a distance of 1350 mm or 1170 mm from the floor to the center of the display panel.)

**Note:** The bracket bolts may not be screwed into the third set of screw holes from the top, as these screw holes are used in Step 4 below.

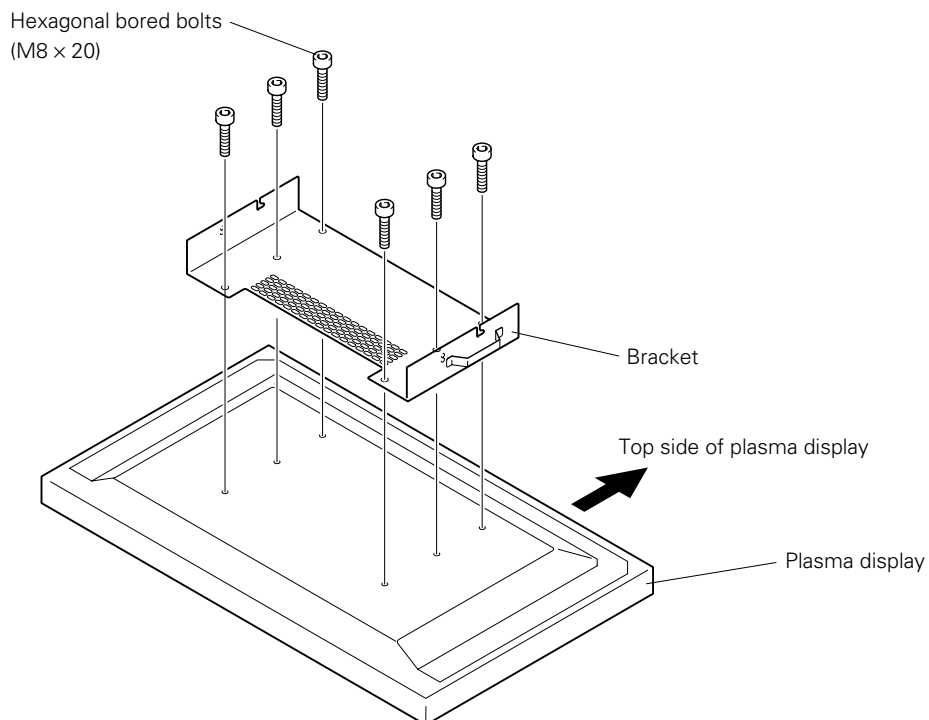


③ Attaching bracket to plasma display

Using the hexagonal bored bolts (M8 × 20), attach the bracket to the rear of the plasma display by screwing the bolts into the screw holes as the figure.

**Note 1:** The plasma display should be placed on a blanket or other soft surface so as to avoid scratching or otherwise damaging the surface of the display.

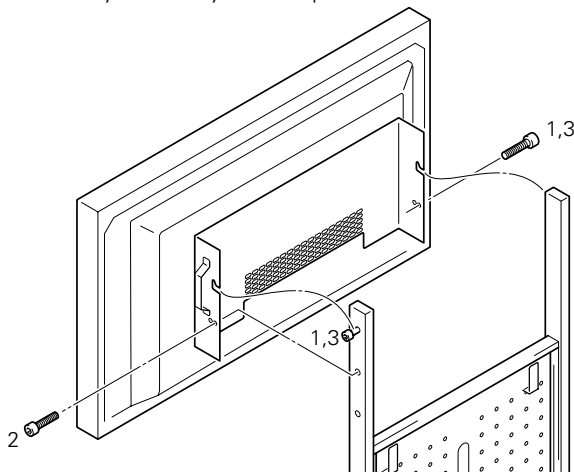
**Note 2:** In order to ensure safe installation, always be sure to alternately tighten each bolt two times or more until they are firmly fixed in place.



④ Attaching a panel to the stand once the bracket has been attached

1. Fix the holes on the protruding portion of the bracket onto the left and right bolts attached to the display stand.
2. Using two hexagonal bored bolts (M8 x 20), fix the bracket to the left and right sides of the display stand by inserting and screwing in the bolts into the screw holes located at the bottom of the protruding part of the bracket and the screw holes of the display stand.
3. Screw the bolts of the protruding portion of the bracket firmly into place.

**Note:** In order to ensure safe installation, always be sure to alternately tighten each bolt two times or more until they are firmly fixed in place.



**Precaution:**  
To safely attach the brackets to the support columns, be sure to always have two people do this task as shown in the drawing.

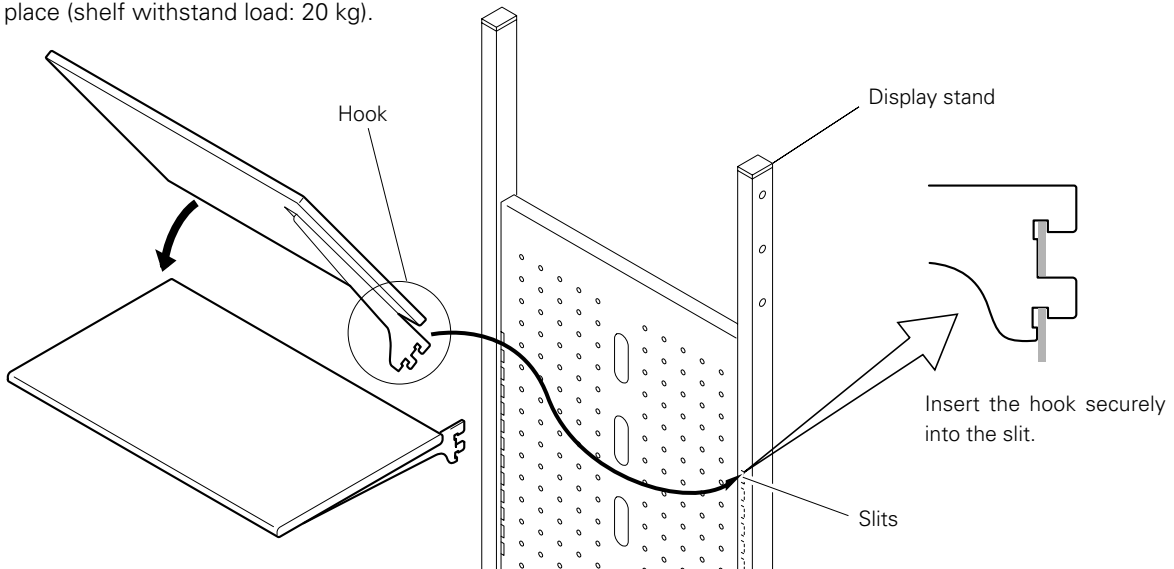
An illustration showing two people, represented by simple line drawings, working together to attach a bracket to a stand. One person is holding the bracket against the stand while the other appears to be using a tool to secure it. The stand has a perforated metal surface.

**[Adjusting the angle of the plasma display screen]**  
When you want the screen to be easier to see, you can angle it forwards by altering the bracket attachment locations. (5°)

Two diagrams showing a vertical display stand with a screen. The left diagram shows the screen at a 0° angle, which is perfectly vertical. The right diagram shows the screen tilted forward at a 5° angle. The diagrams illustrate how the screen's position is adjusted by moving the bracket attachment points on the stand.

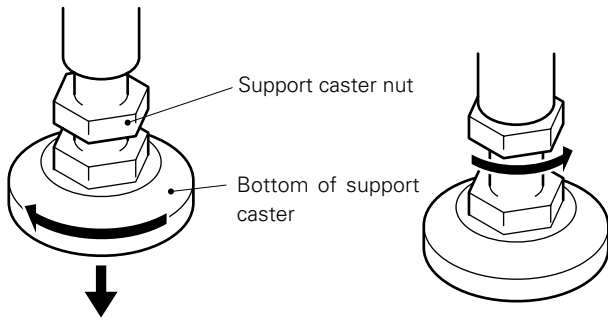
⑤ Attaching the stand shelf to the display stand

Hold the stand shelf at a diagonal to the display stand and insert the upper portion of the hooked end of the shelf brackets into the slits located on the display stand before then returning the shelf to a horizontal position to fix it into place (shelf withstand load: 20 kg).

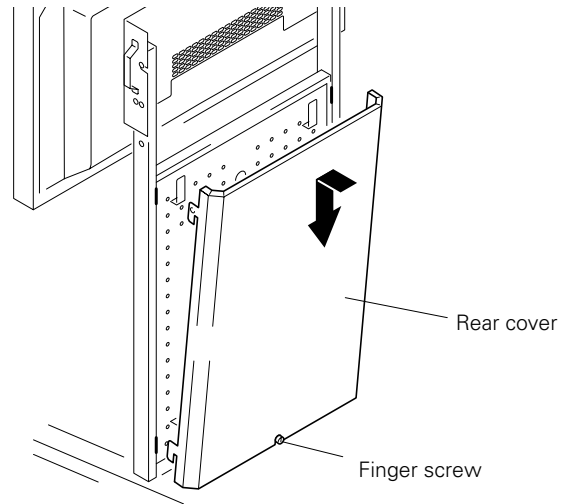


⑥ Adjusting the support caster When the mobile cart has been placed into position, be sure to adjust the support caster to fix into place.

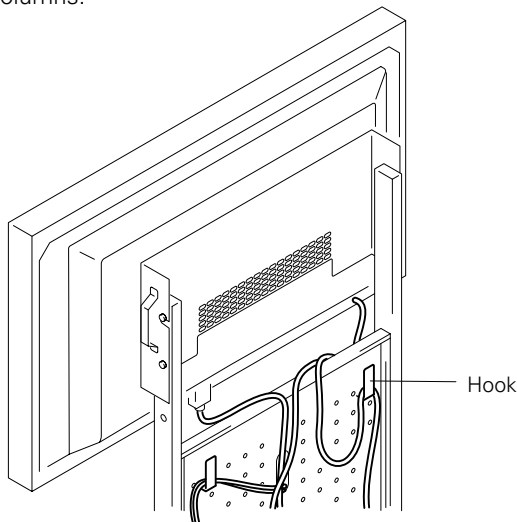
1. Turn the support caster in the direction indicated by the arrow until the bottom of the caster touches the floor.
2. Turn the nut at the top of the caster in the direction indicated by the arrow to fix the caster into place.



⑧ Attach the rear cover. Attach the rear cover and fix it in place by tightening the finger screws. Be careful not to catch the cable in the rear cover.



⑦ Hang the cords on the hooks on the back of the support columns.





4.10 PDP Bracket: PDK-5005 (Can be used only with the PDP-503CMX/PDP-503MXE)

4.10.1 Specifications

<b>External Dimensions</b> .....	1218 (W) × 714 (H) × 148.5 (D) (47-15/16 (W) × 28-1/8 (H) × 5-27/32 (D) in.) (when mounted to the display)
<b>Weight</b> .....	4.1 kg (9.0 lbs.) (mounting hardware only) 43.0 kg (94.8 lbs.) (mounting hardware and plasma display monitor <when using PDP-503CMX or PDP-503MXE>)
<b>Material</b> .....	steel pipe for general structure (STK-MR)
<b>Finish</b> .....	Semi-matte black paint (Original Pioneer color)
<b>Package dimensions</b> .....	850 (W) × 110 (H) × 130 (D)mm (33-15/32 (W) × 4-11/32 (H) × 5-1/8 (D) in.)
<b>Package weight</b> .....	5.0 kg (11.0 lbs.)

**Accessories**

Vertical frame .....	× 2
Horizontal frame .....	× 2
Monitor mount bolt .....	× 4
Plus/minus screw with washer (M5 × 50) .....	× 8
Special eye bolt (M8 × 80) .....	× 4
Spring washer nut for M8 .....	× 8
Hexagonal nut for M8 .....	× 8
Large flat washer for M8 .....	× 8
Small washer for M8 .....	× 4
Operating instructions .....	× 1
Mount contractor contract form .....	× 1

The appropriate types of screws and other mounting hardware will depend on the strength and composition of the ceiling and walls. Prepare them separately.

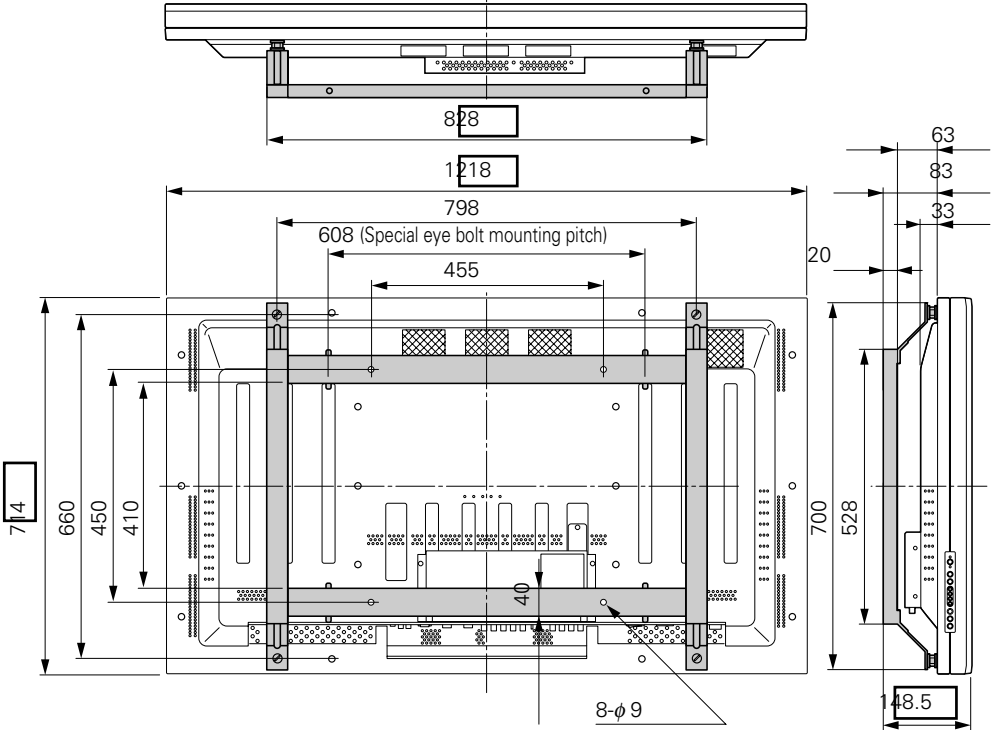
For the operating temperature restrictions of the unit please refer to the 'Special Installation' section



4.10.2 External Dimensions

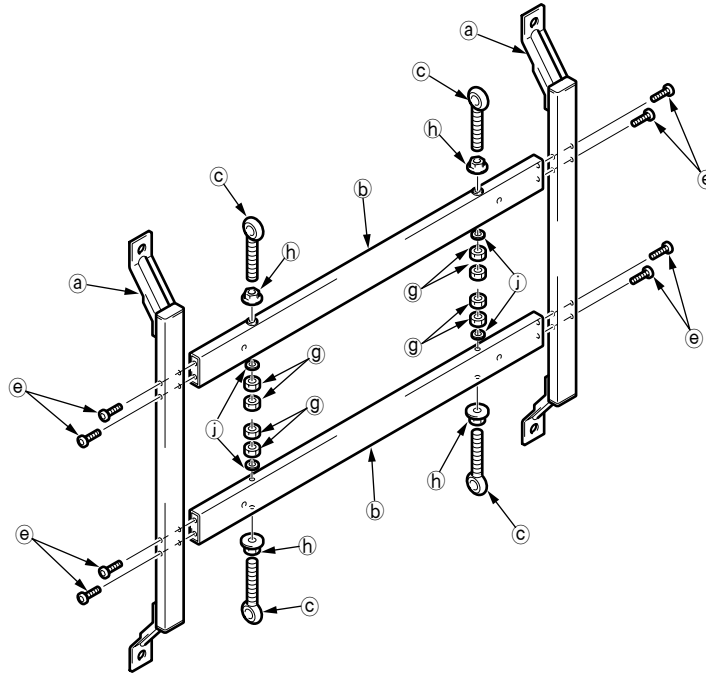
(Units: mm)

The mounting format is symmetrical from left to right and from top to bottom.

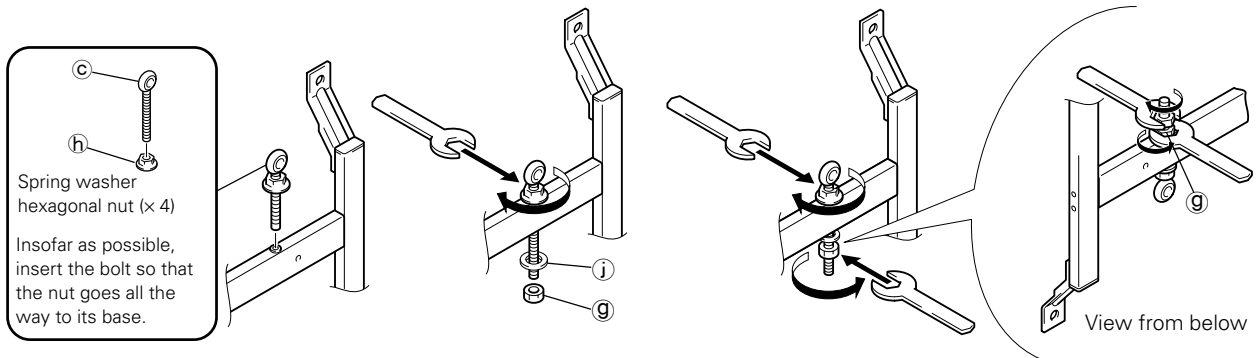


4.10.3 Assembly Procedure

① Temporarily fasten the vertical (a) and horizontal (b) frames using all of the M5 plus/minus screws with washers (c).



② Attach the special eye bolts (c) to the spring washers (h), and insert them into the appropriate holes. Secure the small flat washers (j) and nuts (g). (For additional safety, use double nuts.)




1. Attach the special eye bolts together with the M8 nuts to the main unit.


2. After passing the bolt through, secure it with the small flat washer and nut.

3. Tighten the nuts with spanners.

4. For additional safety, use double nuts. (Tighten the two nuts against each other.)




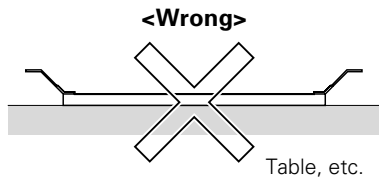
**CAUTION**



**Never use special eye bolts except in the designated locations. If they are used on the plasma display itself, internal damage may result.**

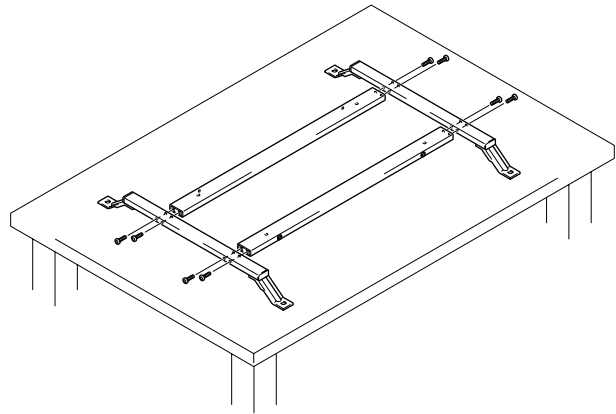
- ③ Place the bracket on a level table or platform for the final tightening of the bolts.

**CAUTION**  The tightening the screws on the vertical and horizontal frames should be performed on a level table, as illustrated, and after the positions of the holes have been aligned.

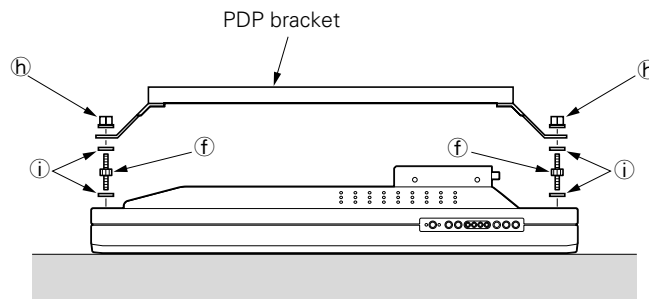


Table, etc.


If placed in this position, it will be difficult to align the holes.



- ④ Place the plasma display face down on a secure table, as shown in the illustration, in such a way as to prevent it from falling or getting scratched.



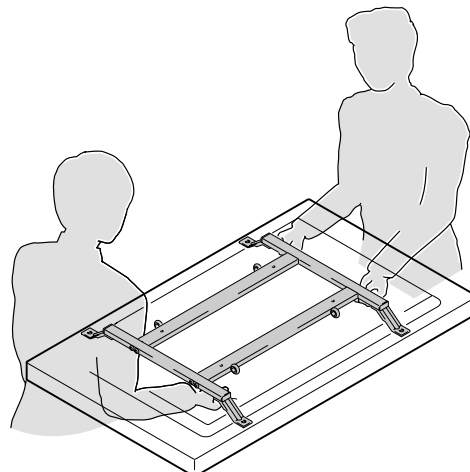
- ⑤ Place a large flat washer ① on each of the designated holes. Tighten well the monitor mounting bolts ② from above.  
 ⑥ Place another large flat washer of each monitor mounting bolts. On top of these, mount the assembled PDP bracket.

**CAUTION**  Washers must be used. If the number and location of washers is incorrect, warping of the display unit may result.

- ⑦ As the last step secure the M8 spring nuts ⑧.

**4.10.4 An example of use**

The unit can be mounted to any of Pioneer's mounting hardware while it is attached to the PDP bracket. As illustrated, the bracket can be used as a handle for moving and installation.



### 4.11 Cable Cover: PDA-P01

#### 4.11.1 Specifications

**External dimensions** ..... 754 (W) × 123.9 (H) × 45.5 (D) mm  
 (29-11/16 (W) × 1-13/16 (H) × 4-7/8 (D) in.)

**Weight** ..... 225 g (0.50 lbs.)

**Materials** ..... ABS

**Dimensions of packaging** ..... 771 (W) × 59 (H) × 151 (D) mm  
 (30-11/32 (W) × 2-5/16 (H) × 5-15/16 (D) in.)

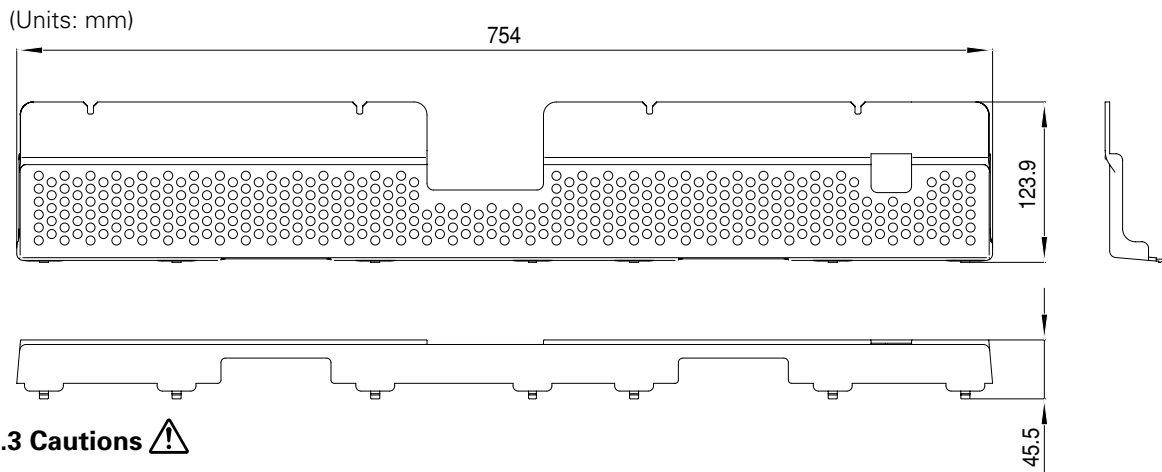
**Package weight** ..... 0.7 kg (1.5 lbs.)

**Accessories**

- Cable cover ..... × 1
- Clips ..... × 4
- Operating instructions ..... × 1

(Note) Refer to procedure ② on Page 94 to install the PDP-433CMX/PDP-433MXE with ceiling suspension hardware (PDK-5012).

#### 4.11.2 External Dimensions



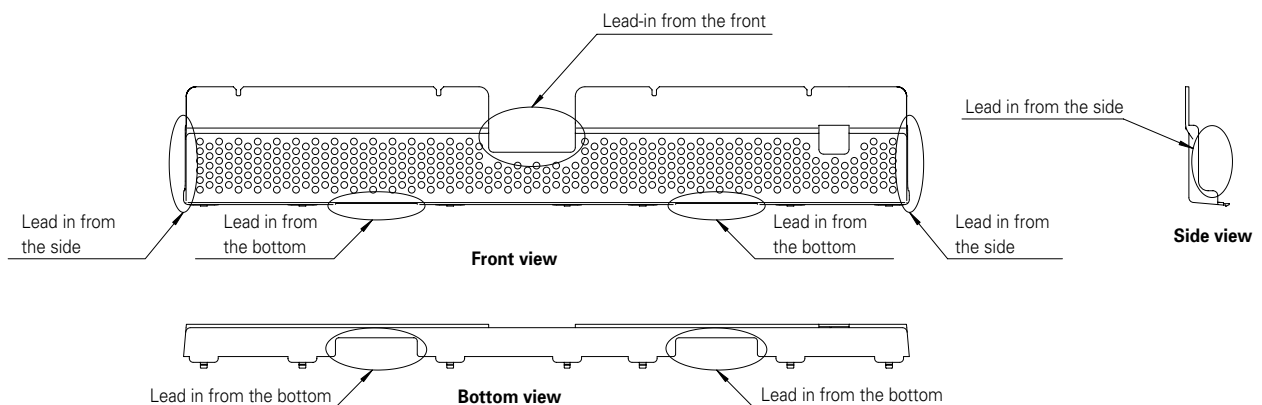
#### 4.11.3 Cautions ⚠

1. This cable cover was exclusively designed for plasma displays produced by PIONEER.
2. This product is important for the assembled display's external appearance.  
 The cover keeps cables organized when numerous input and output cables are connected.

#### 4.11.4 Cable lead-in locations

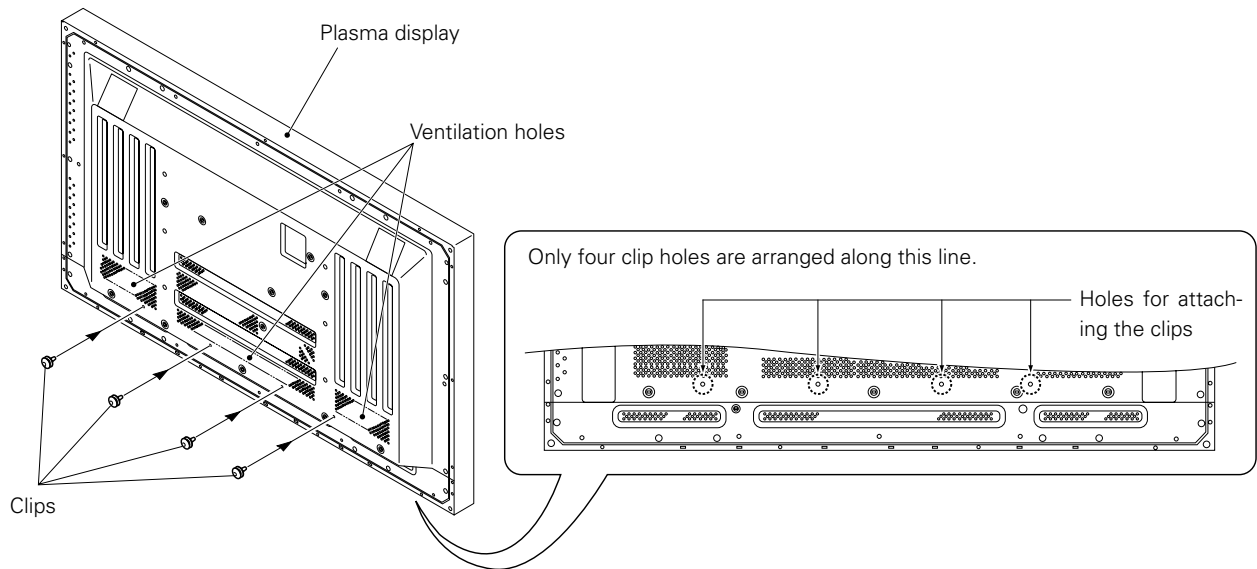
When the cable cover is attached to the plasma display, you can lead in the cable from a total of 5 locations: 1 on the front, 2 on the sides, and 2 on the bottom.

Choose the cable lead-in location suitable for the way the way the display is used.

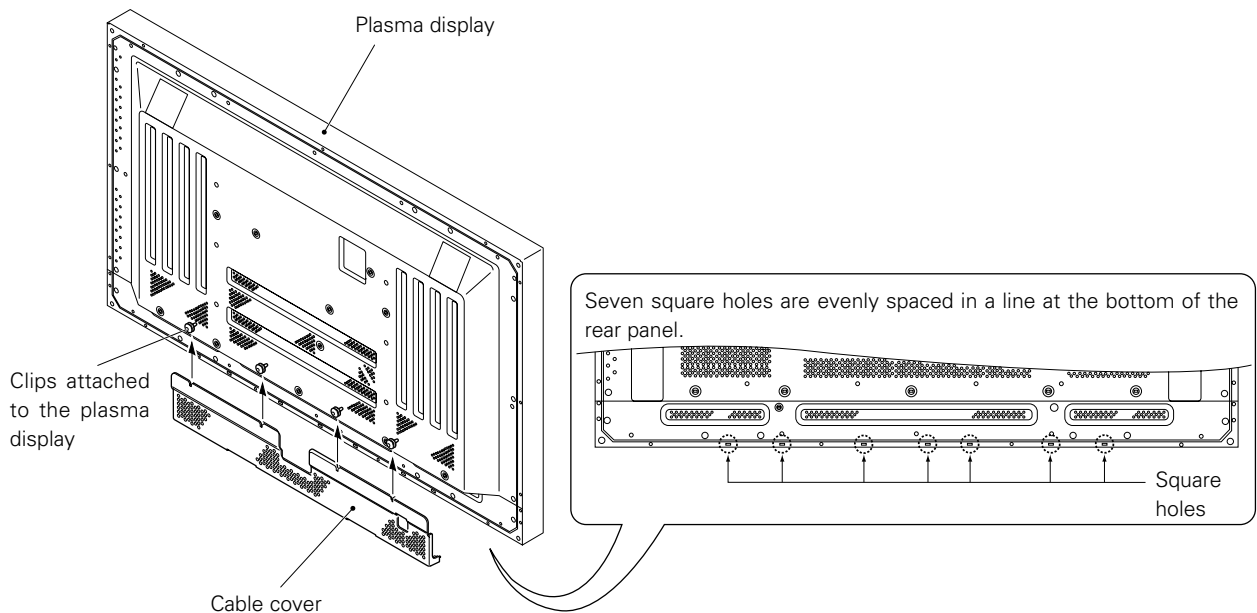


**4.11.5 How to install**

- ① Insert the included clips in the four corresponding holes in the rear of the plasma display housing. Be sure to insert the clip all the way to the bottom. **(Note!** Once inserted, these clips cannot be removed. Additionally, make sure the clips are not inserted in the ventilation holes.)



- ② Connect the cables.
- ③ After the cables are in place, attach the cable cover.  
First slide the cable cover onto the rear case, then snap the notches onto the stems of the four clips.



- ④ Carefully arrange the cables, then snap the cable cover shut into the seven square holes at the bottom of the rear panel.

**4.12 Speaker System: PDP-S05-LR (Can be used only with the PDP-503CMX/PDP-503MXE)**

**4.12.1 Specifications**

- External dimensions** ..... 74 (W) × 714 (H) × 101 (D) mm  
 (2-29/32 (W) × 28-1/8 (H) × 3-31/32 (D) in.)  
 1368 (W) × 714 (H) × 101 (D) mm (53-27/32 (W) × 28-1/8 (H) × 3-31/32 (D) in.)  
 (plasma display monitor when using PDP-503CMX or PDP-503MXE)
- Weight** ..... 1.8 kg (4.0 lbs.)  
 42.5 kg (93.7 lbs.) (plasma display monitor when using PDP-503CMX or PDP-503MXE)
- Dimensions of packaging** ..... 778 (W) × 168 (H) × 318 (D) mm  
 (30-5/8 (W) × 6-5/8 (H) × 12-17/32 (D) in.)
- Package weight** ..... 5.0 kg (11.0 lbs.)
- Cabinet** ..... Enclosed type, antimagnetic design
- Used speakers (two-way method):**
  - Woofers (for low tones)** ..... Oval cone type
  - Tweeters (for high tones)** ..... 2.5 cm dome type
- Nominal impedance** ..... 8 Ω
- Frequency Range** ..... 50 to 20,000 Hz
- Sensitivity** ..... 82 dB/W (at 1 m distance)
- Permissible input:**
  - Max. input** ..... 12 W
  - Rated input** ..... 4 W
- Crossover frequency** ..... 3 kHz

**Accessory parts (for 2 speakers)**

- Speaker cable ..... × 2
- Flat countersunk head screw ..... × 4
- Hexagon socket head screw ..... × 4
- Mounting tool ..... × 1
- Washer M8 (ø25) ..... × 2
- Speaker mounting fittings (bottom) ..... x2
- Speaker mounting fittings (top right) ..... x1
- Speaker mounting fittings (top left) ..... x1
- Mounting plate (for left side) ..... x 1
- Mounting plate (for right side) ..... x 1
- Warranty card ..... x 1
- Operating Instructions ..... x 1

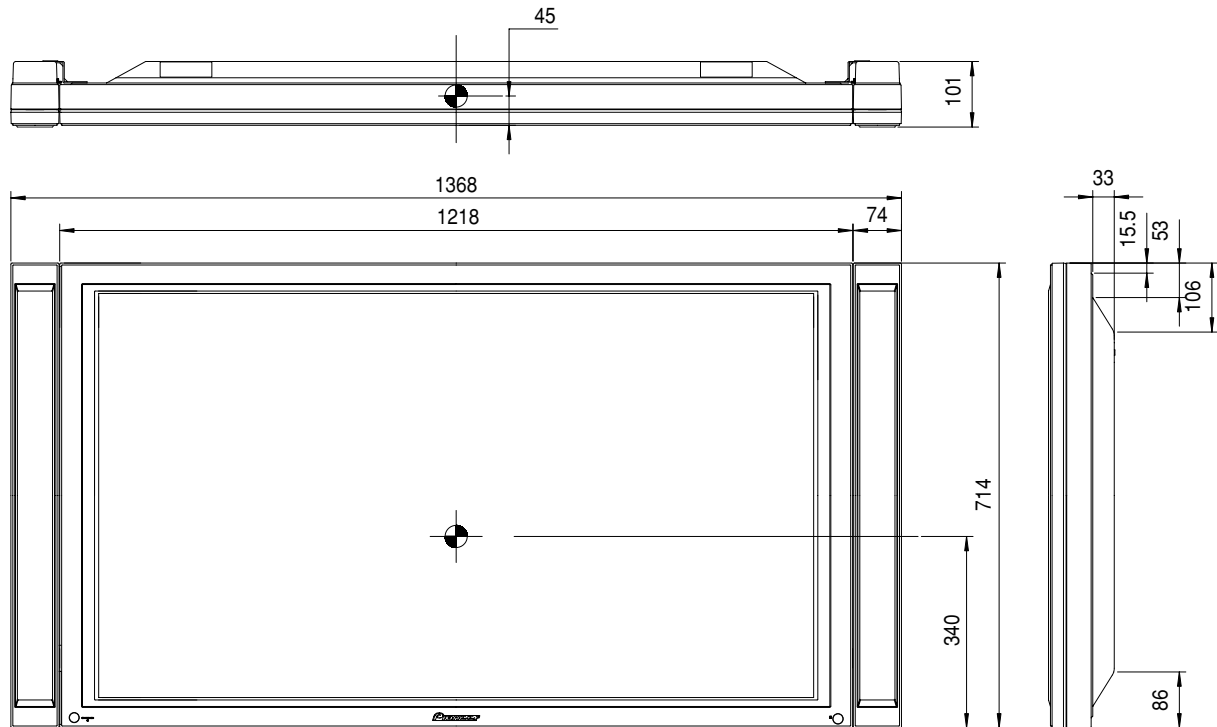
**Note**  
 After this unit has been installed on the plasma display, you can't use the display operation panel.

 **Cautions**

The color may be irregular if there is a CRT type PC monitor close to it. To prevent this, keep the speaker separated from a PC monitor.

4.12.2 External Dimensions (plasma display monitor when using PDP-503CMX or PDP-503MXE)

⊙ Center of gravity  
(Units: mm)



These are the dimensions of the side surface of the speaker.

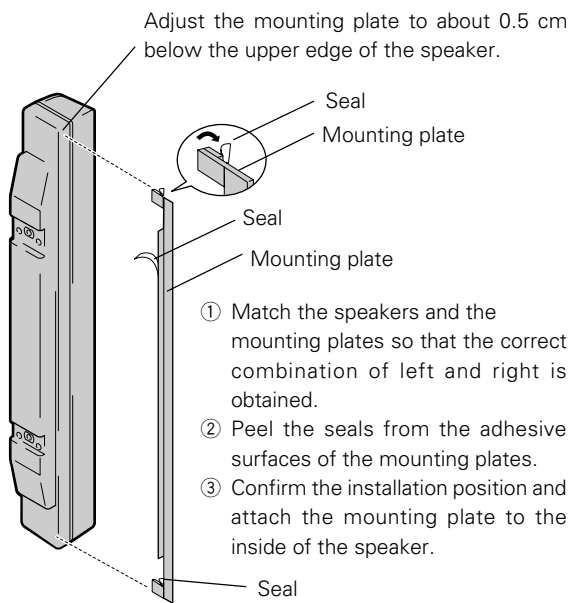
4.12.3 Installation on the PDP-503CMX or PDP-503MXE

1) Installing procedure

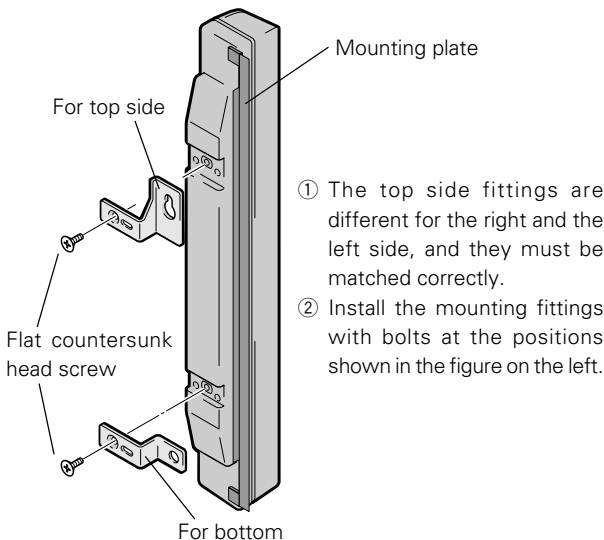
Perform installation according to the following steps (1) to (3).

**Note:**  
After this unit has been installed on the plasma display, you can't use the display operation panel. Please use the remote control supplied with the display.

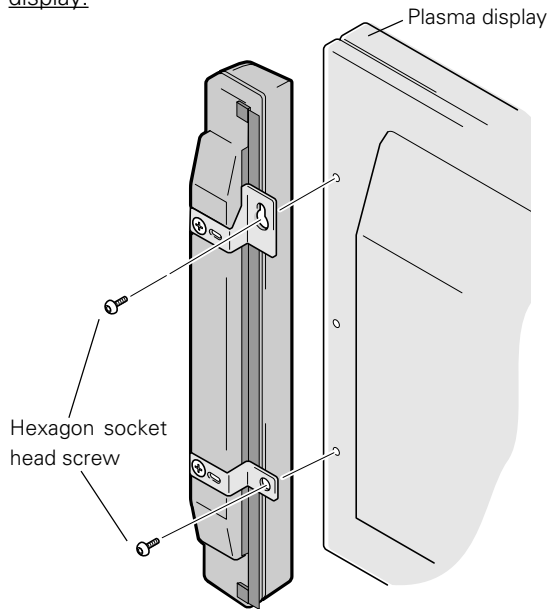
(1) Attach the mounting plates to this unit  
As in the illustration below (right speaker only), when looking from the rear, attach the right mounting plate to the right hand side of the right speaker. For the left speaker, attach the left mounting plate to their left hand side.



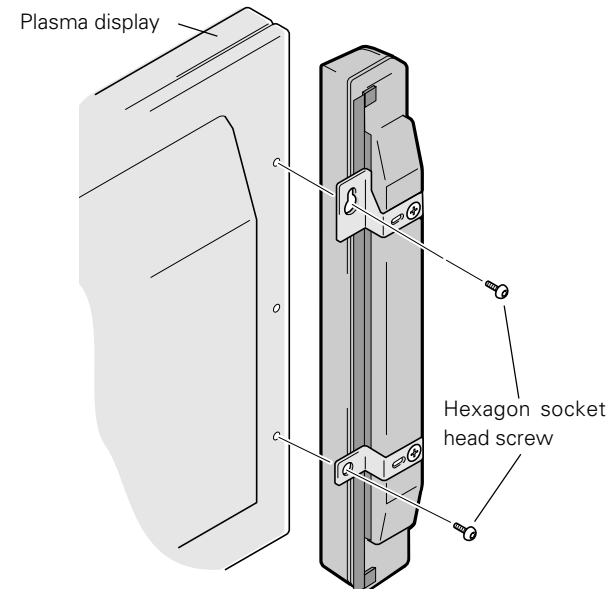
(2) Install the mounting fittings on this unit  
The illustration shows an example for this unit (right side).



(3) Install this unit on the display side  
Install the unit marked "RIGHT" on the right side of the display.



Install the unit marked "LEFT" on the left side of the display.



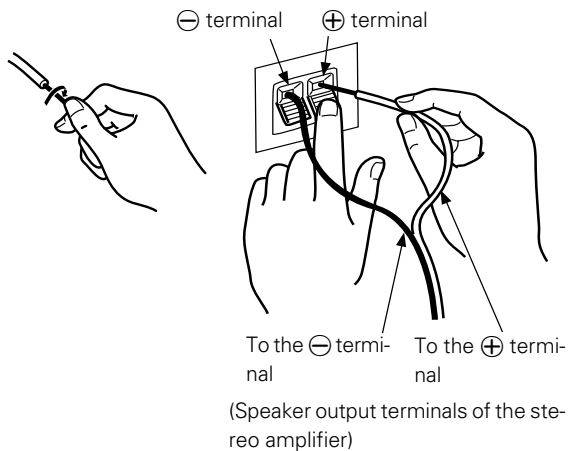
- ① Check the indications LEFT and RIGHT at the rear of the speakers, observe the indication "UP↑", and fasten the upper mounting fitting provisionally to the display. Then install the lower fitting on the display.
- ② Adjust the position so that the gap between the speaker and the display is uniform, and then tighten the screws firmly.

**Note** • When the display is to be moved after speaker installation, do not hold the display by the speakers. Hold the bottom of the display to move it.



**2) Connection to a stereo amplifier**

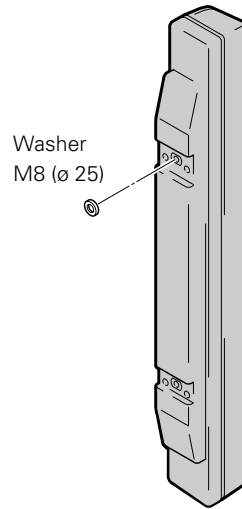
1. Switch off the power of the amplifier.
  2. Connect the input terminals of the speaker system and the speaker output terminals of the stereo amplifier with the accessory speaker cable. The polarity of the input terminals is plus ⊕ for the red terminal (the terminal on the right side in the following figure) and minus ⊖ for the black terminal (the terminal on the left side in the following figure).
1. Remove the insulation and twist the core ends together.
  2. Push the lever, insert the cable into the hole, and release the lever.



- After connection to the terminals, pull lightly on the cable to confirm that the tips of the cable are connected positively to the terminals. An imperfect connection can cause sound interruptions and noise.
- When cable cores stick out and ⊕ and ⊖ lines are short-circuited, an excessive load will be applied to the stereo amplifier and the operation will stop or trouble will be caused.
- When the polarity is reversed for one speaker (left or right) at the time of connection to the stereo amplifier, the bass reproduction will be reduced, the sound positioning will be lost, and a correct stereo effect will not be obtained.

**3) Installation to commercial mounting fittings**

This unit includes M8 (ø25) washers for installation on commercial mounting fittings.



- Installation is made by two-point fixing at the top side mounting holes for commercial mounting fittings. As these two mounting holes are not at the same level, washers are used to compensate for this difference.

**4) Cabinet maintenance**

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the cabinet is very dirty, wipe with a soft cloth moistened with water-diluted cleanser; then wipe again with a dry cloth. Do not use furniture wax or cleaners. They may damage the surface of the cabinet.
- Never use thinner, benzene, insecticide sprays and other chemicals on or near the cabinets, since these will corrode the surfaces.
- When a chemical cloth is used, read the cautions for the chemical cloth carefully.

**4.13 Speaker System: PDP-S07-LR (Can be used only with the PDP-433CMX/PDP-433MXE)**

**4.13.1 Specifications**

- External dimensions** ..... 74 (W) × 630 (H) × 101 (D) mm  
 (2-29/32 (W) × 24-13/16 (H) × 3-31/32 (D) in.)  
 1220 (W) × 630 (H) × 101 (D) mm (48-1/32 (W) × 24-13/16 (H) × 4-1/16 (D) in.)  
 (plasma display monitor when using PDP-433CMX or PDP-433MXE)
- Weight** ..... 1.6 kg (3.5 lbs.)  
 34.7 kg (76.5 lbs.) (plasma display monitor when using PDP-433CMX or PDP-433MXE)
- Dimensions of packaging** ..... 694 (W) × 168 (H) × 318 (D) mm  
 (27-5/16 (W) × 6-5/8 (H) × 12-17/32 (D) in.)
- Package weight** ..... 4.6 kg (10.1 lbs.)
- Cabinet** ..... Enclosed type, antimagnetic design
- Used speakers (two-way method):**
  - Woofers (for low tones)** ..... Oval cone type
  - Tweeters (for high tones)** ..... 2.5 cm dome type
- Nominal impedance** ..... 8 Ω
- Frequency Range** ..... 60 to 20,000 Hz
- Sensitivity** ..... 82 dB/W (at 1 m distance)
- Permissible input:**
  - Max. input** ..... 12 W
  - Rated input** ..... 4 W
- Crossover frequency** ..... 3 kHz

**Accessory parts (for 2 speakers)**

- Speaker cable ..... × 2
- Flat countersunk head screw ..... × 4
- Hexagon socket head screw ..... × 4
- Mounting tool ..... × 1
- Washer M8 (ø25) ..... × 2
- Speaker mounting fittings (bottom) ..... x2
- Speaker mounting fittings (top right) ..... x1
- Speaker mounting fittings (top left) ..... x1
- Mounting plate (for left side) ..... x 1
- Mounting plate (for right side) ..... x 1
- Warranty card ..... x 1
- Operating Instructions ..... x 1

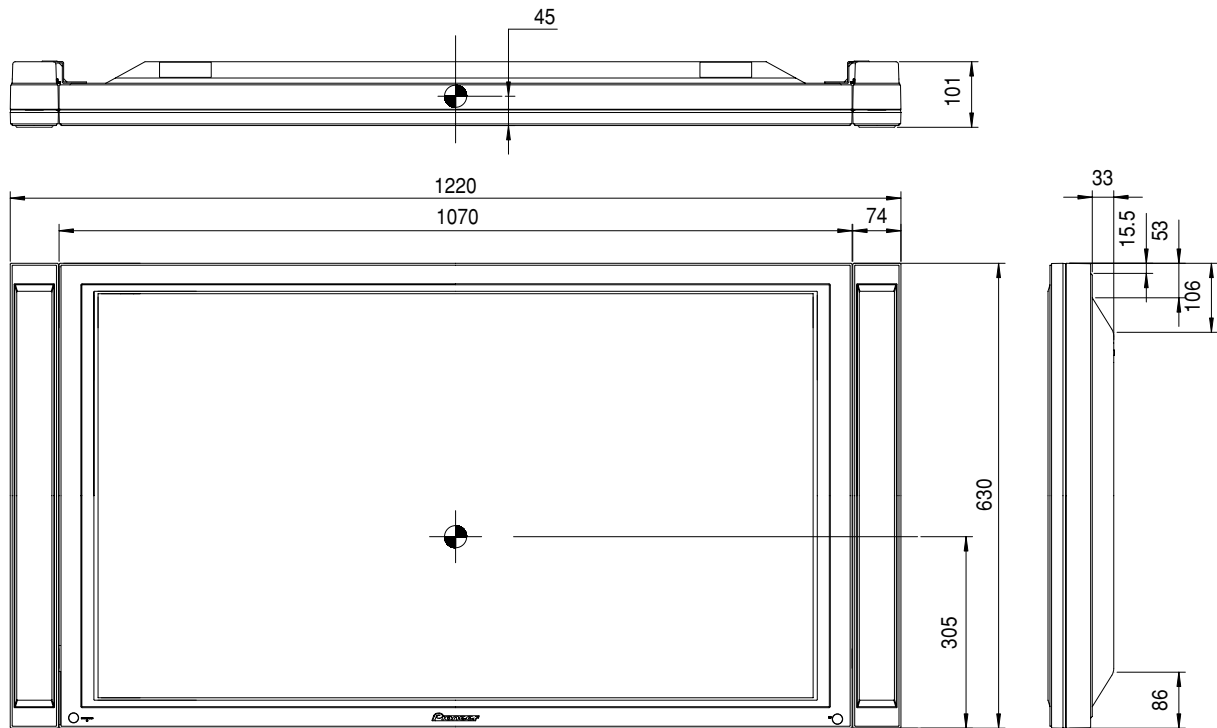
**Note**  
 After this unit has been installed on the plasma display, you can't use the display operation panel.

 **Cautions**

The color may be irregular if there is a CRT type PC monitor close to it. To prevent this, keep the speaker separated from a PC monitor.

4.13.2 External Dimensions (plasma display monitor when using PDP-433CMX or PDP-433MXE)

⊙ Center of gravity  
(Units: mm)



These are the dimensions of the side surface of the speaker.

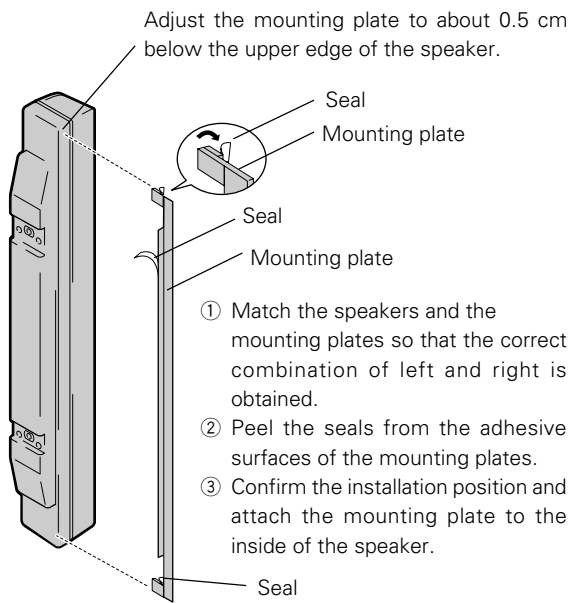
4.13.3 Installation on the PDP-433CMX or PDP-433MXE

1) Installing procedure

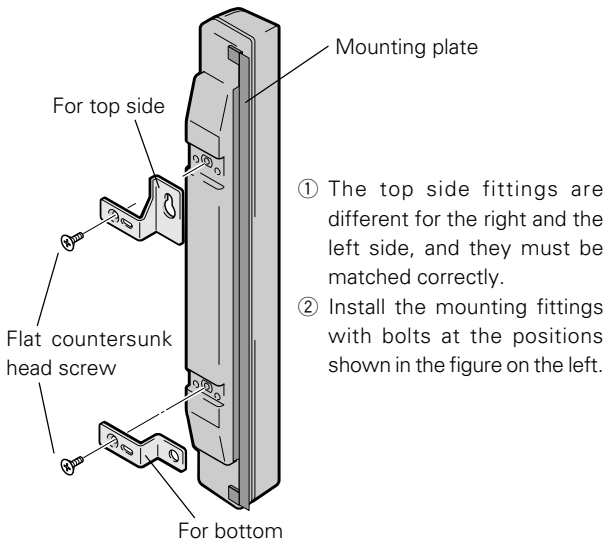
Perform installation according to the following steps (1) to (3).

**Note:**  
After this unit has been installed on the plasma display, you can't use the display operation panel. Please use the remote control supplied with the display.

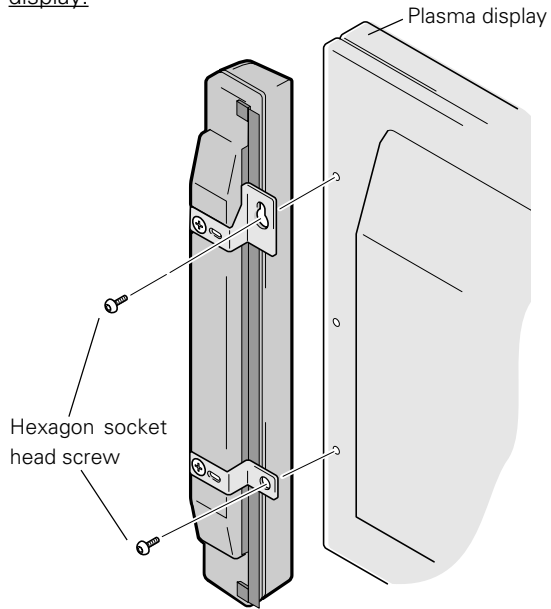
(1) Attach the mounting plates to this unit  
As in the illustration below (right speaker only), when looking from the rear, attach the right mounting plate to the right hand side of the right speaker. For the left speaker, attach the left mounting plate to their left hand side.



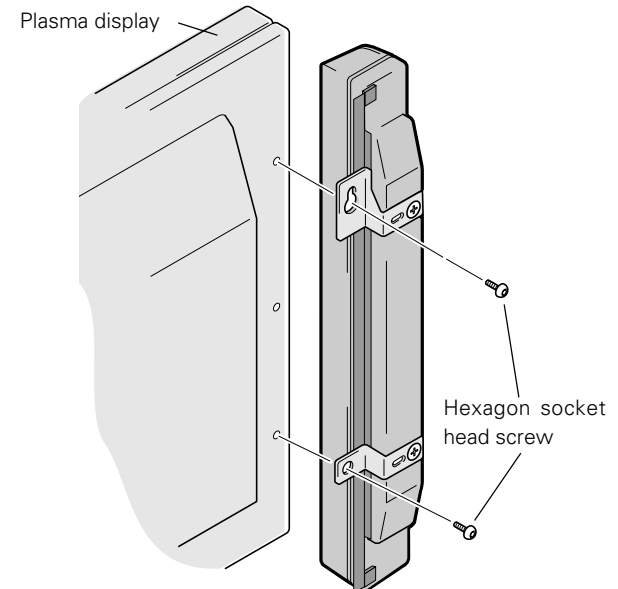
(2) Install the mounting fittings on this unit  
The illustration shows an example for this unit (right side).



(3) Install this unit on the display side  
Install the unit marked "RIGHT" on the right side of the display.



Install the unit marked "LEFT" on the left side of the display.



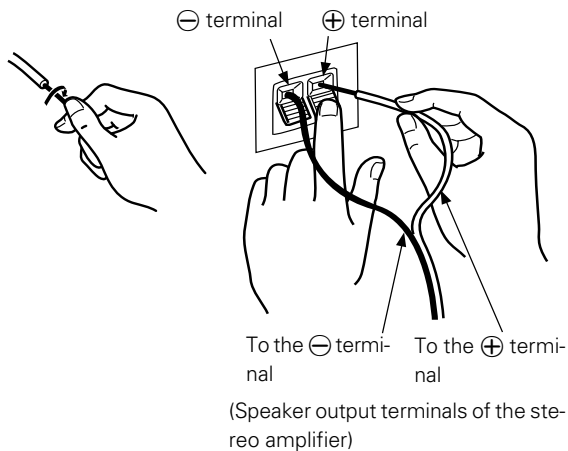
- Check the indications LEFT and RIGHT at the rear of the speakers, observe the indication "UP↑", and fasten the upper mounting fitting provisionally to the display. Then install the lower fitting on the display.
- Adjust the position so that the gap between the speaker and the display is uniform, and then tighten the screws firmly.



- When the display is to be moved after speaker installation, do not hold the display by the speakers. Hold the bottom of the display to move it.

**2) Connection to a stereo amplifier**

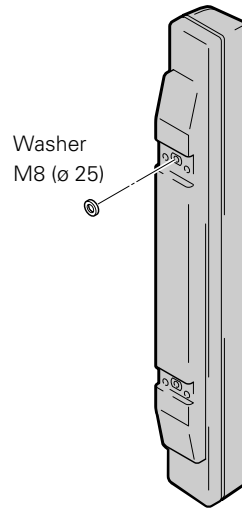
1. Switch off the power of the amplifier.
  2. Connect the input terminals of the speaker system and the speaker output terminals of the stereo amplifier with the accessory speaker cable. The polarity of the input terminals is plus ⊕ for the red terminal (the terminal on the right side in the following figure) and minus ⊖ for the black terminal (the terminal on the left side in the following figure).
1. Remove the insulation and twist the core ends together.
  2. Push the lever, insert the cable into the hole, and release the lever.



- After connection to the terminals, pull lightly on the cable to confirm that the tips of the cable are connected positively to the terminals. An imperfect connection can cause sound interruptions and noise.
- When cable cores stick out and ⊕ and ⊖ lines are short-circuited, an excessive load will be applied to the stereo amplifier and the operation will stop or trouble will be caused.
- When the polarity is reversed for one speaker (left or right) at the time of connection to the stereo amplifier, the bass reproduction will be reduced, the sound positioning will be lost, and a correct stereo effect will not be obtained.

**3) Installation to commercial mounting fittings**

This unit includes M8 (ø25) washers for installation on commercial mounting fittings.



- Installation is made by two-point fixing at the top side mounting holes for commercial mounting fittings. As these two mounting holes are not at the same level, washers are used to compensate for this difference.

**4) Cabinet maintenance**

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the cabinet is very dirty, wipe with a soft cloth moistened with water-diluted cleanser; then wipe again with a dry cloth. Do not use furniture wax or cleaners. They may damage the surface of the cabinet.
- Never use thinner, benzene, insecticide sprays and other chemicals on or near the cabinets, since these will corrode the surfaces.
- When a chemical cloth is used, read the cautions for the chemical cloth carefully.

# Before Beginning Adjustments

## 5.1 Before Beginning Adjustments

You can make adjustments to the unit in the following ways:

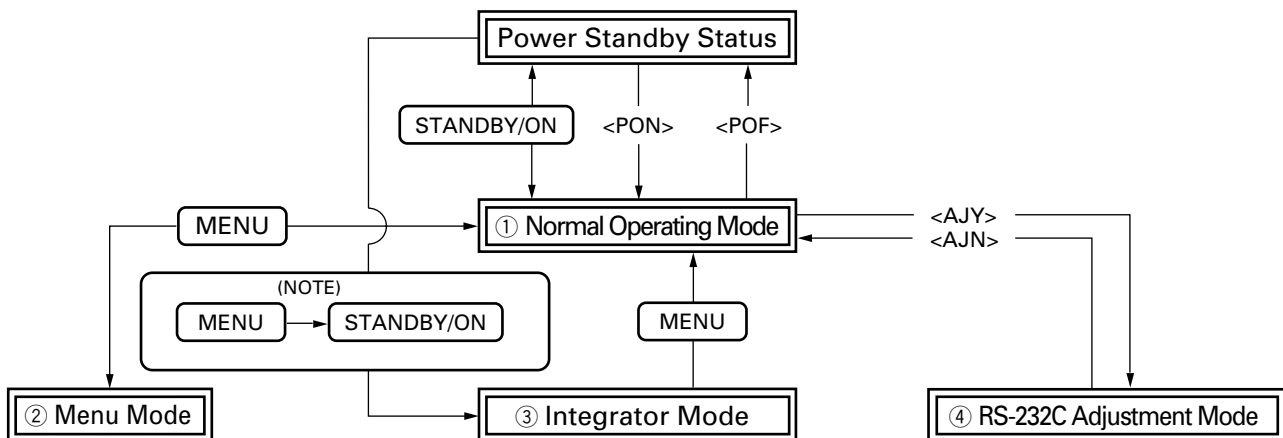
- With the operating panel of the main unit
- With the remote control unit
- With a PC (through RS-232C)

Make sure you've thoroughly read and understood the following before making any adjustments.

Items that apply only when the PDA-5002 is installed are marked with a star ★.

### 5.1.1 Operating mode

The system has the following four major operating modes:



□ indicates operating mode and status.

○ indicates button operations on the remote control or on the operating panel of main unit .

< > indicates RS-232C command operations.

(NOTE) Refer to 5.4.1, "About the integrator mode".

#### ① Normal Operating Mode

Intended for video playback, this mode enables the following basic operations:

Switching to STANDBY status (POWER OFF)

- Switching to power standby status
- Screen-size switching
- Volume adjustment/muting (remote control only)
- AUTO SET UP (only when PC signals are input)
- POINT ZOOM (only when PC signals are input/only remote control)
- Moving to the various adjustment modes such as menu mode.

Additionally, normal operating mode also enables some of the RS-232C commands controls (as discussed in 5.5.4, "List of RS-232C commands").

#### ② Menu Mode

This mode is for adjusting the resolution and the image position and for carrying out the various other settings. Refer to 5.3, "Menu Mode", for further details.

This mode allows you to change adjustment data within certain limits on the basis of values adjusted in integrator or RS-232C adjustment modes (discussed later).

Refer to 5.3, "Menu Mode", for further details.

### ③ Integrator Mode

This mode provides adjustment functions for the integrator.

White balance adjustment and various other settings are available in addition to those in the Menu mode. Refer to 5.4, "Integrator Mode" for further details.

### ④ RS-232C Adjustment Mode

This mode enables various adjustments and settings using a PC.

Some adjustment items are available only in this mode.

#### CAUTION

When adjustment/setting has been made under this mode, enter ID first before other any other actions.

Refer to 5.5, "RS-232C Adjustment Mode", for further details.

### 5.1.2 Combination use of remote control unit, operating panel and PC

- The remote control and the operating panel of the main unit may be used together.

(Example) You can enter the Menu mode through the operating panel of the main unit, then make adjustments using the remote.

- Depending on which has transmitted the more recent command, either the remote, the operating panel of the main unit, or the RS-232C may originate the command currently in effect.

(Example) Operation

- ① Press the MENU button on the remote control  
(or on the operating panel of the main unit).

→ Enters Menu mode.

At this time, the only available RS-232C commands are:

- <AJY>
- <POF>

- ② Now, issue an <AJY> command from a PC.

→ Menu mode is disabled, and RS-232C adjustment mode is activated.

At this time, only the following options are available from the remote control (or the operating panel of the main unit):

- Power switch
- MENU button
- KEY LOCK/UNLOCK button

(NOTE) The remote does not have a KEY LOCK/UNLOCK button.

## Before Beginning Adjustments

### 5.1.3 Lists of supported input signals

#### 1) Input Video Signals Supported ★ (applies only when equipped with PDA-5002)

##### INPUTS 1 and 2

Vertical Frequency Fv (Hz)	Horizontal Frequency Fh (kHz)	Signal Format	Screen size				Remark
			4 : 3	FULL	ZOOM	WIDE	
50	15.625	Component RGB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
	28.1	Component RGB		<input type="radio"/>			1125i (1080i) HDTV
	31.25	Component RGB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
60	15.734	Component RGB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	525i (480i) SDTV
	31.5	Component RGB	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	525p (480p) SDTV
	33.75	Component RGB		<input type="radio"/>			1125i (1035i, 1080i) HDTV High vision video signal
	45.0	Component RGB		<input type="radio"/>			750p (720p) HDTV
	67.5	Component RGB		<input type="radio"/>			1125p (1080p) HDTV

##### INPUT 3

	Signal Format	Screen size				Remark
		4 : 3	FULL	ZOOM	WIDE	
NTSC	S-Video (Y/C)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PAL	S-Video (Y/C)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
SECAM	S-Video (Y/C)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
4.43 NTSC	S-Video (Y/C)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

##### INPUT 4

	Signal Format	Screen size				Remark
		4 : 3	FULL	ZOOM	WIDE	
NTSC	Composite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
PAL	Composite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
SECAM	Composite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
4.43 NTSC	Composite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	



2) Input PC Signals Supported

PC signal compatibility table (INPUT1, INPUT2)

• PDP-503CMX/PDP-503MXE

Resolution (Dot x Line)	Refresh rate		Screen size (Dot x line)				Remarks
	Vertical	Horizontal	DOT BY DOT	4:3	FULL	PARTIAL	
640x400	56.4Hz	24.8kHz			○ 1280x768		NEC PC-9800
	70.1Hz	31.5kHz			↑		NEC PC-9800
640x480	60Hz	31.5kHz	◎ 640x480	○ 1024x768	○ 1280x768		(852x480) (864x480)
	66.7Hz	35.0kHz	↑	↑	↑		Apple Macintosh 13"
	72.8Hz	37.9kHz	↑	↑	↑		
	75Hz	37.5kHz	↑	↑	↑		
	85Hz	43.3kHz	↑	↑	↑		
800 x600	56Hz	35.2kHz	◎ 800x600	○ 1024x768	○ 1280x768		
	60Hz	37.9kHz	↑	↑	↑		(1072x600)
	72Hz	48.1kHz	↑	↑	↑		
	75Hz	46.9kHz	↑	↑	↑		
	85Hz	53.7kHz	↑	↑	↑		
832x624	74.6Hz	49.7kHz	◎ 832x624	○ 1024x768	○ 1280x768		Apple Macintosh 16"
852x480	60Hz	31.7kHz	◎ 852x480		○ 1280x768		
1024x768	60Hz	48.4kHz	◎ 1024x768		○ 1280x768		(1376x768)
	70Hz	56.5kHz	↑		↑		
	75Hz (74.9Hz)	60.0kHz (60.2kHz)	↑		↑		( ) indicates Apple Macintosh 19"
	85Hz	68.7kHz	↑		↑		
1152x864	60Hz	53.7kHz		△ 1024x768	△ 1280x768		
	72Hz	64.9kHz		↑	↑		
	75Hz	67.7kHz		↑	↑		
1152x870	75.1Hz	68.7kHz		△ 1016x768	△ 1280x768		Apple Macintosh 21"
1152x900	66.0Hz	61.8kHz		△ 984x768	△ 1280x768		Sun Microsystems LO
	76.0Hz	71.7kHz		↑	↑		Sun Microsystems HI
1280x768	56Hz	45.1kHz	◎ 1280x768				
	60Hz	48.4kHz	↑				
	70Hz	56.1kHz	↑				
1280x960	60Hz	60.0kHz		△ 1024x768	△ 1280x768		
1280x1024	60Hz	64.0kHz		△ 960x768	△ 1280x768	◎ 1280x768	
	75Hz	80.0kHz		↑	↑		(1600x1024)
	85Hz	91.1kHz		↑	↑		
1600 x 1200	60Hz	75.0kHz		△ 1024x768	△ 1280x768		
	65Hz	81.3kHz		↑	↑		
	70Hz	87.5kHz		↑	↑		
	75Hz	93.8kHz		↑	↑		
	85Hz	106.3kHz		↑	↑		

◎ : Optimal picture. Adjustment of picture position, refresh rate, phase etc., may be necessary.

○ : Picture will be enlarged but some fine detail will be hard to see.

△ : Simple reproduction. Fine detail will not be reproduced. Screen size will be displayed as "~ (TYPE)".

■ : Not available.

## Before Beginning Adjustments

### PC signal compatibility table (INPUT1, INPUT2)

#### • PDP-433CMX/PDP-433MXE

Resolution (Dot x Line)	Refresh rate		Screen size (Dot x line)			Remarks
	Vertical	Horizontal	DOT BY DOT	4:3	FULL	
640x400	56.4Hz	24.8kHz			○ 1024x768	NEC PC-9800
	70.1Hz	31.5kHz			↑	NEC PC-9800
640x480	60Hz	31.5kHz	◎ 640x480	○ 768x768	○ 1024x768	(852x480) (864x480)
	66.7Hz	35.0kHz	↑	↑	↑	Apple Macintosh 13"
	72.8Hz	37.9kHz	↑	↑	↑	
	75Hz	37.5kHz	↑	↑	↑	
	85Hz	43.3kHz	↑	↑	↑	
800 x600	56Hz	35.2kHz	◎ 800x600	△ 768x768	○ 1024x768	
	60Hz	37.9kHz	↑	↑	↑	(1072x600)
	72Hz	48.1kHz	↑	↑	↑	
	75Hz	46.9kHz	↑	↑	↑	
	85Hz	53.7kHz	↑	↑	↑	
832x624	74.6Hz	49.7kHz	◎ 832x624	△ 768x768	○ 1024x768	Apple Macintosh 16"
852x480	60Hz	31.7kHz	◎ 852x480		○ 1024x768	
1024x768	60Hz	48.4kHz	◎ 1024x768	△ 768x768		(1376x768)
	70Hz	56.5kHz	↑	↑		
	75Hz (74.9Hz)	60.0kHz (60.2kHz)	↑	↑		( ) indicates Apple Macintosh 19"
	85Hz	68.7kHz	↑	↑		
1152x864	60Hz	53.7kHz		△ 768x768	△ 1024x768	
	72Hz	64.9kHz		↑	↑	
	75Hz	67.7kHz		↑	↑	
1152x870	75.1Hz	68.7kHz		△ 768x768	△ 1024x768	Apple Macintosh 21"
1152x900	66.0Hz	61.8kHz		△ 738x768	△ 1024x768	Sun Microsystems LO
	76.0Hz	71.7kHz		↑	↑	Sun Microsystems HI
1280x768	56Hz	45.1kHz			△ 1024x768	
	60Hz	48.4kHz			↑	
	70Hz	56.1kHz			↑	
1280x960	60Hz	60.0kHz		△ 768x768	△ 1024x768	
1280x1024	60Hz	64.0kHz		△ 720x768	△ 1024x768	
	75Hz	80.0kHz		↑	↑	(1600x1024)
	85Hz	91.1kHz		↑	↑	
1600 x 1200	60Hz	75.0kHz		△ 768x768	△ 1024x768	
	65Hz	81.3kHz		↑	↑	
	70Hz	87.5kHz		↑	↑	
	75Hz	93.8kHz		↑	↑	
	85Hz	106.3kHz		↑	↑	

◎ : Optimal picture. Adjustment of picture position, refresh rate, phase etc., may be necessary.

(Note) Because the PDP-433CMX/PDP-433MXE uses oblong pixels, the display will be more oblong than the actual input signal.

○ : Picture will be enlarged but some fine detail will be hard to see.

△ : Simple reproduction. Fine detail will not be reproduced. Screen size will be displayed as "~ (TYPE)".

■ : Not available.

## Before Beginning Adjustments

### PC signal compatibility table (INPUT5) ★ (applies only when equipped with PDA-5002)

#### • PDP-503CMX/PDP-503MXE

Resolution (Dot x Line)	Refresh rate		Screen size (Dot x line)				Remarks
	Vertical	Horizontal	DOT BY DOT	4:3	FULL	PARTIAL	
640x480	60Hz	31.5kHz	◎ 640x480	○ 1024x768	○ 1280x768		
800 x600	56Hz	35.2kHz	◎ 800x600	○ 1024x768	○ 1280x768		
	60Hz	37.9kHz	↑	↑	↑		
852x480	60Hz	31.7kHz	◎ 852x480		○ 1280x768		
1024x768	60Hz	48.4kHz	◎ 1024x768		○ 1280x768		
1152x864	60Hz	53.7kHz		△ 1024x768	△ 1280x768		
1280x768	56Hz	45.1kHz	◎ 1280x768				
	60Hz	48.4kHz	↑				
1280x960	60Hz	60.0kHz		△ 1024x768	△ 1280x768		
1280x1024	60Hz	64.0kHz		△ 960x768	△ 1280x768	◎ 1280x768	

◎ : Optimal picture. Adjustment of picture position may be necessary.

○ : Picture will be enlarged but some fine detail will be hard to see.

△ : Simple reproduction. Fine detail will not be reproduced. Screen size will be displayed as “~ (TYPE)”.

■ : Not available.

#### • PDP-433CMX/PDP-433MXE

Resolution (Dot x Line)	Refresh rate		Screen size (Dot x line)			Remarks
	Vertical	Horizontal	DOT BY DOT	4:3	FULL	
640x480	60Hz	31.5kHz	◎ 640x480	○ 768x768	○ 1024x768	
800 x600	56Hz	35.2kHz	◎ 800x600	○ 768x768	○ 1024x768	
	60Hz	37.9kHz	↑	↑	↑	
852x480	60Hz	31.7kHz	◎ 852x480		○ 1024x768	
1024x768	60Hz	48.4kHz	◎ 1024x768	△ 768x768		
1152x864	60Hz	53.7kHz		△ 768x768	△ 1024x768	
1280x768	56Hz	45.1kHz			△ 1024x768	
	60Hz	48.4kHz			↑	
1280x960	60Hz	60.0kHz		△ 768x768	△ 1024x768	
1280x1024	60Hz	64.0kHz		△ 720x768	△ 1024x768	

◎ : Reproduces the input signal and the screen's dots and lines so they correspond to a 1:1 relationship. (Note) Because the PDP-433CMX/PDP-433MXE uses oblong pixels, the display will be more oblong than the actual input signal.

○ : Picture will be enlarged but some fine detail will be hard to see.

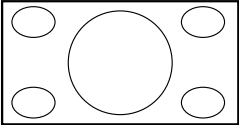
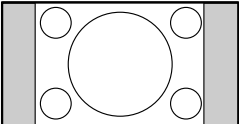
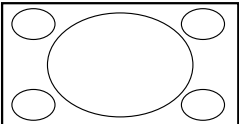
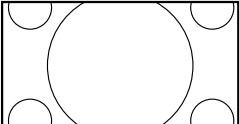
△ : Simple reproduction. Fine detail will not be reproduced. Screen size will be displayed as “~ (TYPE)”.

■ : Not available.

## Before Beginning Adjustments

### 3) About Screen Size

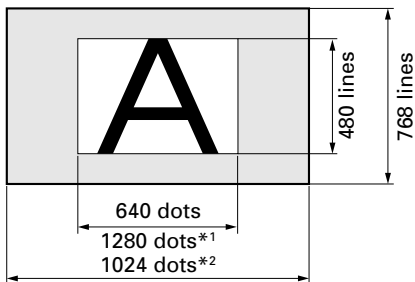
① Screen sizes for video signal input ★ (applies only when equipped with PDA-5002)

Appearance of picture	
<p>WIDE</p> 	Suitable for watching news and sports etc. With movies and sports etc., gives a spacious impression with plenty of punch.
<p>4 : 3</p> 	Suitable for watching news and dramas etc. Can watch programs with the original image soft (software) picture border. (In order to prevent the screen from burning out, the picture border will be displayed in a slightly different position every time you turn the display on.)
<p>FULL</p> 	Suitable for high vision pictures and wide-screen pictures ("squeeze") Of the movie theater size pictures, predominantly suitable for CinemaScope size pictures. Gives a really spacious impression with even more punch.
<p>ZOOM</p> 	Of the movie theater size pictures, predominantly suitable for Vista size pictures. Gives a really spacious impression with even more punch.

② Screen sizes for PC signal input

- DOT BY DOT

Faithful 1:1 reproduction of the dots and lines of the input signal on the screen.



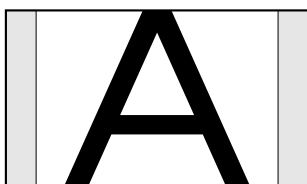
(This diagram is for 640 x 480 input)

\*1: PDP-503CMX/PDP-503MXE

\*2: PDP-433CMX/PDP-433MXE

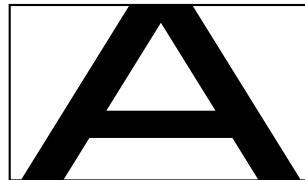
- 4:3

Reproduction that fills the screen without changing the aspect ratio of the input signal.



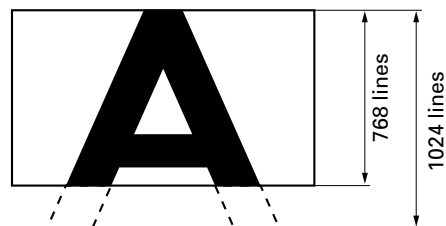
- FULL

16:9 reproduction of the input signal that really fills the screen.



- PARTIAL (Compatible only with PDP-503CMX/PDP-503MXE)

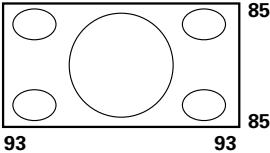
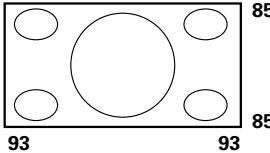
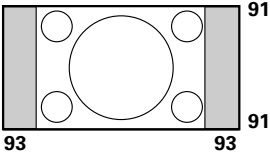
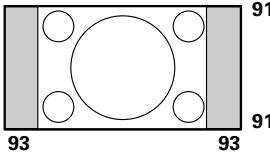
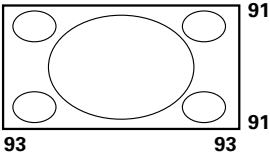
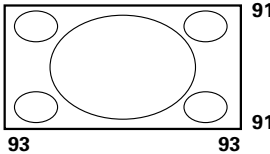
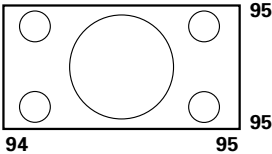
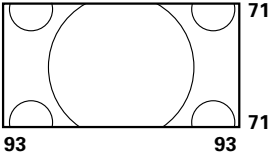
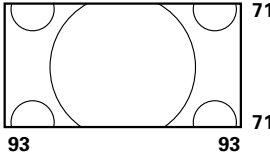
PARTIAL is possible with 1280 x 1024 / 60Hz input signals only. Faithful 1:1 reproduction of the dots and lines of the input signal on the screen. Note however that only part of the picture is displayed (part is lost off the edges of the screen).



Use the ▲/▼ buttons to adjust the image position (V-scroll function).

### Supplementary instructions

**Amount of screen information with video input signals (default settings) ★ (applies only when equipped with PDA-5002)**

	NTSC (60Hz system)	PAL (50Hz system)	HDTV system
WIDE			
4:3			
FULL			
ZOOM			

Units: %

### 5.1.4 List of adjustable and settable items

#### 1) Normal Operating Mode

- V. POSITION (V scroll function)

When the screen size is set to ZOOM or PARTIAL, you can adjust the image position using the ▲/▼ buttons

	Screen size	Variable range	Remarks
Video signal input ★ (applies only when equipped with PDA-5002)	ZOOM	±60	
PC signal input (Adjustment possible only for 1280 × 1024/ 60Hz)	PARTIAL	±40	Compatible only with PDP-503CMX/PDP-503MXE

## Before Beginning Adjustments

### 2) Menu Mode

#### ■ PDP-503CMX/PDP-503MXE and PDP-433CMX/PDP-433MXE

		Variable Range (STEP)	Coefficient (/STEP)	Factory Preset	PDP-503CMX/503MXE and PDP-433CMX/433MXE				
					INPUT1		INPUT2		
					PC Signal	Video Signal★	PC Signal	Video Signal★	
					Analog RGB	Component RGB	Analog RGB	Component RGB	
PICTURE	CONTRAST	-30 to +30	x 3	0	○	○	○	○	
	BRIGHT.	-30 to +30	x 3	0	○	○	○	○	
	R.LEVEL	0 to +60	x 3	+60	○		○		
	G.LEVEL	0 to +60	x 3	+60	○		○		
	B.LEVEL	0 to +60	x 3	+60	○		○		
	H.ENHANCE	0 to +15	x 1	0	○		○		
	V.ENHANCE	0 to +15	x 1	0	○		○		
	COLOR	-30 to +30	x 3	0		○		○	
	TINT	-30 to +30	x 1	0		○		○	
	SHARP	-7 to +7	x 1	0		○		○	
SCREEN	POSITION	H.POSITION	-128 to +127	x 1	0	○		○	
		V.POSITION	-128 to +127	x 1	0	○		○	
	CLOCK/ PHASE	CLOCK	-128 to +127	x 1	0	○		○	
		PHASE	-32 to +31	x 1	0	○		○	
SET UP	INPUT LABEL		Max. 8 letters		(Note 5) □ INPUT*□	○	○	○	○
	POWER MANAGEMENT		OFF-ON		OFF	○			
	AUTO POWER OFF		OFF-ON		OFF		○	○	○
	COLOR TEMP		LOW - MID LOW - MIDDLE - MID HIGH - HIGH		MIDDLE		○		○
	DIGITAL NR		OFF - LOW - MIDDLE - HIGH		LOW		○		○
	HIGH CONTRAST		OFF - ON		OFF		○		○
	PURECINEMA		OFF - STANDARD - HQ		OFF		△ (Note 1)		△ (Note 1)
	COLOR SYSTEM		AUTO - NTSC - PAL - SECAM - 4.43NTSC		AUTO				
	CLAMP POSITION		AUTO - LOCKED		AUTO	○	○	○	○
	3D Y/C MODE		STILL - MOTION		MOTION				
	SETTING		VGA - WIDE VGA - VIDEO (Note2) ① XGA - WIDE XGA (Note2) ②		VGA XGA	△ (Note 2)	△ (Note 2)	△ (Note 2)	△ (Note 2)
VIDEO SIGNAL		RGB - COMPONENT		RGB		○		○	
OPTION (Note 3)	POWER CONTROL		STANDARD - MODE1 - MODE2		STANDARD		○		
	AUTO FUNCTION		OFF - INPUT1 - INPUT4 (Note 4)		OFF		○		
	AUDIO OUT		FIXED - VARIABLE		FIXED		○		

★ (applies only when equipped with PDA-5002)

(Note 1) PURECINEMA can be set only during input of 525i (480i), NTSC, and 4.43NTSC signals.

(Note 2) ① It is set when vertical frequency 60Hz and horizontal frequency 31.5 kHz signals are entered. VIDEO cannot be set when digital RGB is entered or when a video card is not mounted.

② It is set when vertical frequency 60Hz and horizontal frequency 48.4 kHz or when vertical frequency 70 Hz and horizontal frequency 56.6 kHz signals are entered.

(Note 3) OPTION is set the same for all inputs.

(Note 4) When the PDA-5002 is not mounted, INPUT 4 cannot be set.

(Note 5) \* Based on 1 to 5/input functions.

## Before Beginning Adjustments

### ■ PDA-5002A★ (applies only when equipped with PDA-5002)

		Variable Range (STEP)	Coefficient (/STEP)	Factory Preset	PDA-5002			
					INPUT3	INPUT4	INPUT5	
					Video signal	Video signal	PC signal	
					S-video	Composite	Digital RGB	
PICTURE	CONTRAST	-30 to +30	x 3	0	○	○	○	
	BRIGHT.	-30 to +30	x 3	0	○	○	○	
	R.LEVEL	0 to +60	x 3	+60			○	
	G.LEVEL	0 to +60	x 3	+60			○	
	B.LEVEL	0 to +60	x 3	+60			○	
	H.ENHANCE	0 to +15	x 1	0			○	
	V.ENHANCE	0 to +15	x 1	0			○	
	COLOR	-30 to +30	x 3	0	○	○		
	TINT	-30 to +30	x 1	0	○	○		
	SHARP	-7 to +7	x 1	0	○	○		
SCREEN	POSITION	H.POSITION	-128 to +127	x 1	0		○	
		V.POSITION	-128 to +127	x 1	0		○	
	CLOCK/ PHASE	CLOCK	-128 to +127	x 1	0			
		PHASE	-32 to +31	x 1	0			
SET UP	INPUT LABEL		Max. 8 letters		(Note 6) □INPUT*□	○	○	○
	POWER MANAGEMENT		OFF-ON		OFF			○
	AUTO POWER OFF		OFF-ON		OFF	○	○	
	COLOR TEMP		LOW - MID LOW - MIDDLE - MID HIGH - HIGH		MIDDLE	○	○	
	DIGITAL NR		OFF - LOW - MIDDLE - HIGH		LOW	○	○	
	HIGH CONTRAST		OFF - ON		OFF	○	○	
	PURECINEMA		OFF - STANDARD - HQ		OFF	△ (Note 1)	△ (Note 1)	
	COLOR SYSTEM		AUTO - NTSC - PAL - SECAM - 4.43NTSC		AUTO	○	○	
	CLAMP POSITION		AUTO - LOCKED		AUTO			
	3D Y/C MODE		STILL - MOTION		MOTION		△ (Note 2)	
	SETTING		VGA - WIDE VGA - VIDEO (Note3) ① XGA - WIDE XGA (Note3) ②		VGA XGA			△ (Note 3)
VIDEO SIGNAL		RGB - COMPONENT		RGB				
OPTION (Note 4)	POWER CONTROL		STANDARD - MODE1 - MODE2		STANDARD		○	
	AUTO FUNCTION		OFF - INPUT1 - INPUT4 (Note 4)		OFF		○	
	AUDIO OUT		FIXED - VARIABLE		FIXED		○	

(Note 1) PURECINEMA can be set only during input of 525i (480i), NTSC, and 4.43NTSC signals.

(Note 2) 3D Y/C MODE setting can be done only when all the following conditions are satisfied.

When INPUT 4 is selected

When the NTSC signal is entered while the COLOR SYSTEM is set to AUTO

Or when COLOR SYSTEM is set to NTSC.

(Note 3) ① It is set when vertical frequency 60Hz and horizontal frequency 31.5 kHz signals are entered. VIDEO cannot be set when digital RGB is entered or when a video card is not mounted.

② It is set when vertical frequency 60Hz and horizontal frequency 48.4 kHz or when vertical frequency 70 Hz and horizontal frequency 56.6 kHz signals are entered.

(Note 4) OPTION is set the same for all inputs.

(Note 5) When the PDA-5002 is not mounted, INPUT 4 cannot be set.

(Note 6) \* Based on 1 to 5/input functions.

## Before Beginning Adjustments

### ■ Video cards other than the PDA-5002

		Variable Range (STEP)	Coefficient (/STEP)	Factory Preset	Video cards other than the PDA-5002		
					INPUT3 to 5	INPUT3 to 5	
					Video signal	PC signal	
						Digital RGB	
PICTURE	CONTRAST	-30 to +30	x 3	0	○	○	
	BRIGHT.	-30 to +30	x 3	0	○	○	
	R.LEVEL	0 to +60	x 3	+60		○	
	G.LEVEL	0 to +60	x 3	+60		○	
	B.LEVEL	0 to +60	x 3	+60		○	
	H.ENHANCE	0 to +15	x 1	0		○	
	V.ENHANCE	0 to +15	x 1	0		○	
	COLOR	-30 to +30	x 3	0	○		
	TINT	-30 to +30	x 1	0	○		
	SHARP	-7 to +7	x 1	0	○		
SCREEN	POSITION	H.POSITION	-128 to +127	x 1	0		○
		V.POSITION	-128 to +127	x 1	0		○
	CLOCK/ PHASE	CLOCK	-128 to +127	x 1	0		
		PHASE	-32 to +31	x 1	0		
SET UP	INPUT LABEL	Max. 8 letters		(Note 5) □INPUT*□	○	○	
	POWER MANAGEMENT	OFF-ON		OFF			
	AUTO POWER OFF	OFF-ON		OFF	○	○	
	COLOR TEMP	LOW - MID LOW - MIDDLE - MID HIGH - HIGH		MIDDLE	○		
	DIGITAL NR	OFF - LOW - MIDDLE - HIGH		LOW	○		
	HIGH CONTRAST	OFF - ON		OFF	○		
	PURECINEMA	OFF - STANDARD - HQ		OFF	△ (Note 1)		
	COLOR SYSTEM	AUTO - NTSC - PAL - SECAM - 4.43NTSC		AUTO			
	CLAMP POSITION	AUTO - LOCKED		AUTO			
	3D Y/C MODE	STILL - MOTION		MOTION			
	SETTING	VGA - WIDE VGA - VIDEO (Note2) ①		VGA		△ (Note 2)	
	XGA - WIDE XGA (Note2) ②		XGA				
	VIDEO SIGNAL	RGB - COMPONENT		RGB			
OPTION (Note 3)	POWER CONTROL	STANDARD - MODE1 - MODE2		STANDARD		○	
	AUTO FUNCTION	OFF - INPUT1 - INPUT4 (Note 4)		OFF		○	
	AUDIO OUT	FIXED - VARIABLE		FIXED		○	

(Note 1) PURECINEMA can be set only during input of 525i (480i), NTSC, and 4.43NTSC signals.

(Note 2) ① It is set when vertical frequency 60Hz and horizontal frequency 31.5 kHz signals are entered. VIDEO cannot be set when digital RGB is entered or when a video card is not mounted.

② It is set when vertical frequency 60Hz and horizontal frequency 48.4 kHz or when vertical frequency 70 Hz and horizontal frequency 56.6 kHz signals are entered.

(Note 3) OPTION is set the same for all inputs.

(Note 4) When the PDA-5002 is not mounted, INPUT 4 cannot be set.

(Note 5) \* Based on 1 to 5/input functions.



## Before Beginning Adjustments

### 3) Integrator Mode

		Variable Range (STEP)	Factory Preset	PDP-503CMX/503MXE and PDP-433CMX/433MXE		PDA-5002			Video cards other than the PDA-5002		
				INPUT1, 2		INPUT3	INPUT4	INPUT5	INPUT3 to 5	INPUT3 to 5	
				PC Signal	Video Signal	Video Signal	Video Signal	PC Signal	Video Signal	PC Signal	
				Analog RGB	Component RGB	S-Video	Composite	Digital RGB		Digital RGB	
PICTURE	CONTRAST	0 to 255	(Note 8)	○	○	○	○	○	○	○	
	BRIGHT	0 to 255	(Note 8)	○	○	○	○	○	○	○	
	COLOR	0 to 255	(Note 8)		○	○	○		○		
	TINT	0 to 255	(Note 8)		○	○	○		○		
	H.ENHANCE	0 to 15	0, 2 (Note 9)	○				○		○	
	V.ENHANCE	0 to 15	0, 2 (Note 9)	○				○		○	
	H.SHARP	0 to 15	8		○	○	○		○		
V.SHARP	0 to 15	8		○	○	○		○			
WHITE BALANCE	R.HIGH	0 to 255	(Note 8)	○	○	○	○	○	○	○	
	G.HIGH	0 to 255	(Note 8)	○	○	○	○	○	○	○	
	B.HIGH	0 to 255	(Note 8)	○	○	○	○	○	○	○	
	R.LOW	0 to 255	(Note 8)	○	○	○	○	○	○	○	
	G.LOW	0 to 255	(Note 8)	○	○	○	○	○	○	○	
	B.LOW	0 to 255	(Note 8)	○	○	○	○	○	○	○	
SCREEN	H.POSITION	0 to 255	128	○	○	○	○	○	○	○	
	V.POSITION	0 to 255	128	○	○	○	○	○	○	○	
	CLOCK	0 to 255	128	○							
	PHASE	0 to 63	32	○							
	V.SIZE	0 to 127	0	○	○	○	○	○	○	○	
SET UP	2X2 MODE	2X2	OFF – ON (Note 2)	OFF	△ (Note 1)	△ (Note 1)	△ (Note 1)	△ (Note 1)	△ (Note 1)	△ (Note 1)	
		LAYOUT	UP LEFT – DOWN LEFT – UP RIGHT – DOWN RIGHT	UP LEFT	△ (Note 1)	△ (Note 1)	△ (Note 1)	△ (Note 1)	△ (Note 1)	△ (Note 1)	
	BRT.ENHANCE	OFF – ON	OFF	△ (Note 2)	△ (Note 2)	△ (Note 2)	△ (Note 2)	△ (Note 2)	△ (Note 2)	△ (Note 2)	
	HDTV MODE	1035i – 1080i	1035i		△ (Note 3)				△ (Note 3)		
	VIDEO INPUT	COMPONENT1 – COMPONENT 2	(Note 4)		○						
	SUB VOLUME	0 to 60	60	○	○	○	○	○	○	○	
OPTION (Note 5)	OSD	ON – OFF	ON				○				
	BAUD RATE	4800 – 9600 – 19200 – 38400 – 1200 – 2400	4800				○				
	OFF TIMER	TIMER	OFF – ON (Note 6)	OFF				○			
		DISPLAY TIME	1 to 24	1				○			
		MASK TIME	0.0 to 9.5	0.0				○			
		MASK COLOR	WHITE – RED – GREEN – BLUE	WHITE				○			
	FULL MASK	OFF – WHITE – RED – GREEN – BLUE	OFF					(Note 6)			
	SIDE MASK	R.LEVEL	0 to 255	80				○			
		G.LEVEL	0 to 255	80				○			
		B.LEVEL	0 to 255	80				○			
	MASK CONTROL	ON – OFF	ON				○				
	ORBITER MODE	OFF – ON	OFF				○				
	INVERSE MODE	OFF – ON	OFF				○				
	COLOR MODE	MODE1 – MODE2	MODE1				○				
	MIRROR MODE	OFF – X – Y – XY (Note 1)	OFF				○				
	FAN CONTROL	AUTO – MAX	AUTO				○				
	MONITOR NAME	Max. 12 letters	□□PLASMA□□□□				○				
	ID NO.SET	--, 00 to FF	--				○				
	SLOT INPUT	VIDEO(RGB) – COMPONENT1 – COMPONENT2	VIDEO RGB		△ (Note 7)					○	
	TEMPERATURE										Only display
HOURLY METER										Only display	

(Note 1) During MIRROR MODE operation (X, Y, XY time), 2X2 MODE does not operate: only its setting can be changed. (MIRROR MODE has priority.)  
 (Note 2) During 2X2 MODE operation (ON time), BRT ENHANCE does not operate: only its setting can be changed. (2X2 MODE has priority.)  
 (Note 3) HDTV MODE can be set only when a 1125i/60Hz signal is input.  
 (Note 4) When a 1125i/1125p/750p signal is input, COMPONENT1 is set, and when a 525i/525p/625i/625p signal is input, COMPONENT2 is set.  
 (Note 5) OPTION is set for all inputs.

(Note 6) During display of the OFF TIMER mask, FULL MASK does not operate: only its setting can be changed. (OFF TIMER has priority.)  
 (Note 7) SLOT INPUT can be set only when a video card other than the PDA-5002 is installed.  
 (Note 8) There are cases where this varies according to each setting. And in some cases, it varies according to color mode.  
 (Note 9) It is "2" only during UXGA signal input.

## Before Beginning Adjustments

### 5.1.5 Last Memory

The last memory timing used by the unit is given in the table below.

Remember, no last memory function is executed if you perform the following without meeting these timing requirements:

- Switch off MAIN POWER;
- Unplug the power;
- Switch off the outlet.

Item	Memory Timing
Operation in Normal Operating Mode <ul style="list-style-type: none"> <li>• Power switch On/Off</li> <li>• Input switchover</li> <li>• Changing of screen size</li> <li>• Volume adjustment</li> <li>• Setting of KEY LOCK/UNLOCK</li> </ul>	<ul style="list-style-type: none"> <li>• Approximately four seconds after the end of the operation</li> <li>• When entering the STANDBY status through remote operation, through the operating panel of the main unit, or by issuing a &lt;POF&gt; command.</li> <li>• When switched to Menu mode as a result of a MENU button action</li> <li>• When switched to RS-232C adjustment mode by an &lt;AJY&gt; command</li> </ul> (NOTE) Among the RS-232C commands available in Normal Operating mode, some are not stored in last memory when used in this mode. See 5.5.1, "About the RS-232C Adjustment Mode".
Adjustments and settings in menu mode	<ul style="list-style-type: none"> <li>• Approximately four seconds after the end of the operation</li> <li>• When entering the STANDBY status through remote operation, through the operating panel of the main unit, or by issuing a &lt;POF&gt; command</li> <li>• When returning to the previous screen with the SET button</li> <li>• When exiting Menu mode with the MENU button (restoring the unit to Normal Operating mode)</li> <li>• When exiting Menu mode with the KEY LOCK/UNLOCK button (switching unit to Normal Operating mode and entering the KEY LOCK status)</li> <li>• When switching to RS-232C adjustment mode with an &lt;AJY&gt; command</li> <li>• When automatically exiting Menu mode after persistence of no-signal status for approximately eight minutes (restoring the unit to Normal operating mode)</li> </ul>
Adjustments and settings in Integrator mode	<ul style="list-style-type: none"> <li>• Approximately four seconds after the end of the operation</li> <li>• When entering the STANDBY status through remote operation, through the operating panel of the main unit, or by issuing a &lt;POF&gt; command</li> <li>• When returning to the previous screen with the SET button</li> <li>• When exiting Integrator mode with the MENU button (restoring the unit to Normal Operating mode)</li> <li>• When exiting Integrator mode with the KEY LOCK/UNLOCK button (switching unit to Normal Operating mode and entering the KEY LOCK status)</li> <li>• When switching to RS-232C adjustment mode with an &lt;AJY&gt; command</li> <li>• When automatically exiting Integrator mode after persistence of no-signal status for approximately eight minutes (restoring the unit to Normal operating mode)</li> </ul>
Adjustments and settings in RS-232C adjustment mode	<ul style="list-style-type: none"> <li>• Approximately four seconds after the end of the operation</li> <li>• When entering the STANDBY status through remote operation, through the operating panel of the main unit, or by issuing a &lt;POF&gt; command</li> <li>• When changing adjustment or setting items using PC commands</li> <li>• When exiting the RS-232C adjustment mode with an &lt;AJY&gt; command (restoring the unit to Normal Operating mode)</li> <li>• When exiting RS-232C adjustment mode with the KEY LOCK/UNLOCK button (switching unit to Normal Operating mode and entering the KEY LOCK or KEY/UNLOCK status)</li> <li>• When exiting the RS-232C mode with the MENU button (restoring the unit to Normal operating mode)</li> </ul>

(NOTE) If you start or stop the entire system by switching a breaker on or off, allow enough time for the last memory function to be performed by satisfying the timing requirements given above.

Note that this practice causes count errors on the hour meter.

### 5.1.6 Aging

After switching on power to the unit, input signals to perform aging until the unit stabilizes. Use signals that are unlikely to cause the displayed images to be "burned" onto the screen: signals such as a 100 % white signal, or animation from LDs are recommended. The process should take about 30 minutes. This ensures precision adjustments.

(NOTE) Display of still images over extended periods can lead to the above-mentioned "burning".

## 5.2 Normal Operating Mode

### 5.2.1 About normal operating mode

Normal operating mode enables the following:

① Input switching

- Pressing one of the INPUT buttons, 1 to 5 → Input switches over to the selected input.
- Pressing the INPUT button on the operating panel of the main unit → This switches the input to the next input.

② Screen-size switching

- Repeated pressing the SCREEN SIZE button on the remote control or the operating panel of the main unit changes screen size in the following sequence:

When reproducing video signals (signals other than PC signals) ★ (applies only when equipped with PDA-5002)  
 → WIDE → 4 : 3 → FULL → ZOOM →

When reproducing PC signals

→ DOT BY DOT → 4 : 3 → FULL → PARTIAL (Compatible only with PDP-503CMX/PDP-503MXE) →

(NOTES) • The screen size at which playback can be performed differs according to the input signal.

See 5.1.3, "List of supported input signals".

Displays with "(TYPE)" appended, such as FULL (TYPE), will sometimes appear, indicating a simplified reproduction.

- If an HDTV signal is detected, the screen size will switch to FULL (fixed). ★ (applies only when equipped with PDA-5002)
- During video playback, switching screen size to ZOOM or PARTIAL (Compatible only with PDP-503CMX/PDP-503MXE) permits scrolling the screen up or down with the ▲ and ▼ buttons (V-SCROLL function). Refer to section 5.1.4, "List of adjustable and settable items".

You will note that the act of reduction, enlargement, etc. of the screen using the screen size changing function of this machine at a coffee shop, hotel, etc. for profit or for public view may result in infringement of the right of an author protected under the Copyright Law.

③ Display call

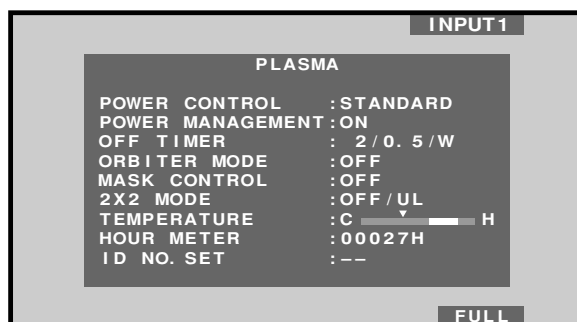
Ⓐ Press the DISPLAY button on the remote control.

→ The current input function, the incoming signal's horizontal and vertical frequencies, current screen size, and other characteristics are displayed on the screen.

(NOTE) The displayed horizontal and vertical frequencies are measured values, and there may be some error in the measurements.

Ⓑ Push and hold the DISPLAY button on the remote control or the operating panel of the main unit for two or more seconds while Ⓐ is displayed.

→ The various settings, internal temperature, etc. are displayed as shown on the screen below.



## Normal Operating Mode

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### ④ Volume adjustment/Muting

- Push the VOLUME + button on the remote control. → The volume increases.
- Push the VOLUME – button on the remote control. → The volume decreases.
- Push the MUTING button on the remote control. → Each time the button is pushed, it switches from MUTING ON to MUTING OFF, or vice versa.

### ⑤ Automatic adjustment of the screen

- During PC signal input, push the AUTO SET UP button on the remote control or main operating panel to automatically adjust the Menu Mode screen.

(NOTES)

- Adjustment is impossible during video signal input. ★ (applies only when equipped with PDA-5002)
- Adjustment is impossible during INPUT 5. ★ (applies only when equipped with PDA-5002)
- It may be impossible to perform adjustment correctly in the case of a low brightness signal such as a black or blue background.

### ⑥ Point zoom

- During PC signal input, push the POINT ZOOM button on the remote control.  
→ The POINT ZOOM screen appears.
- Select the expanded area and push the SET button.  
→ The expansion ratio changes as follows each time the button is pushed.  
⇒ X1.5 ⇒ X2.0 ⇒ X3.0 ⇒ X4.0 ⇒

During zoom, the display location can be moved by pushing the buttons: ▲/▼/▲/▼.

Notes) This operation is impossible during video signal input. ★(applies only when equipped with PDA-5002)

### ⑦ In addition to the above, several RS-232C commands are also available.

Refer to section 5.5, "RS-232C Adjustment Mode".

## 5.3 Menu Mode

### 5.3.1 About menu mode

1) How to enter/exit menu mode

- To enter menu mode and display the menu screen (refer to section 5.3.2, "Example of menu mode operation"), press the MENU button on the remote, or on the operating panel of the main unit while in normal operating mode. To return to normal operating mode, press the MENU button again.

2) When you carry out adjustments using menu mode:

- Each of the adjustment values for PICTURE and SCREEN will be stored separately for each input function and each input signal. For more details please refer to "5.4.4 PICTURE and WHITE BALANCE adjustment values memory area table" and "5.4.5 SCREEN adjustment values area table".

3) Notes

(1) Menu mode is canceled automatically and normal operating mode is restored in the following cases:

- When the input signal has been switched
- When switching over to another input signal frequency
- When no control is operated for a period of approximately eight minutes
- When the KEY LOCK/UNLOCK button on the operating panel of the main unit is pressed

(2) For adjustments in the menu mode, refer to the operating manual.

(3) When making adjustments, we recommend using video signals that you actually intend to use.

(4) The items that can be adjusted and set vary for each input signal. Only the OPTION can be set when a video signal is not being input.

### 5.3.2 Concerning the display of the OSD of each item

The sample OSD displays presented in this manual are all examples of displays by the PDP-503CMX/PDP-503MXE.

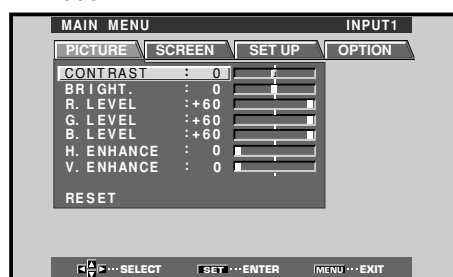
The OSD display of the PDP-433CMX/PDP-433MXE is shown below.

PDP-503CMX/PDP-503MXE: During OSD display, there are parts on both sides of the screen where OSD is not displayed.

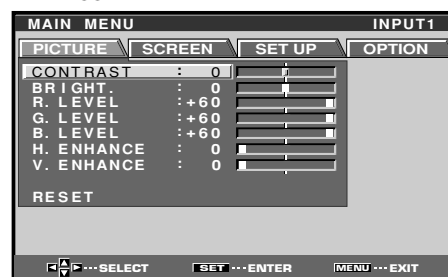
PDP-433CMX/PDP-433MXE: The OSD display fills the screen in the horizontal direction.

The content of the OSD display is identical for the PDP-503CMX/PDP-503MXE and the PDP-433CMX/PDP-433MXE.

Sample OSD display of the PDP-503CMX/  
PDP-503MXE



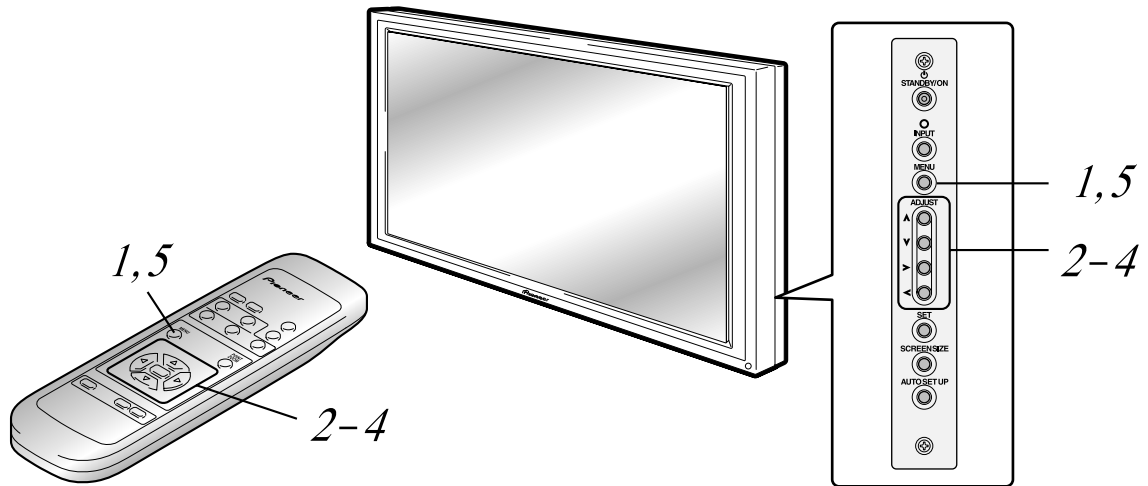
Sample OSD display of the PDP-433CMX/  
PDP-433MXE



## Menu Mode

### 5.3.3 Example of menu mode operation

Adjusting bright is shown below as an example of basic operation in menu mode.



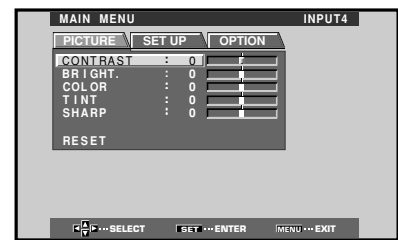
#### Step 1 Switch the display on the menu screen (activating menu mode).

1

Remote control unit



Main unit

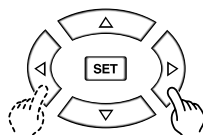


The currently selected item is highlighted in yellow.

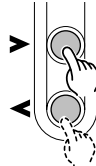
#### Step 2 Select PICTURE.

2

Remote control unit



Main unit



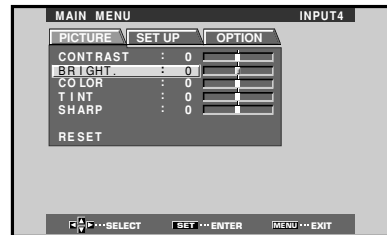
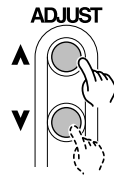
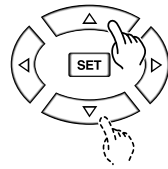
The currently selected item is highlighted in yellow.

**Step 3 Select BRIGHT.**

3

Remote control unit

Main unit

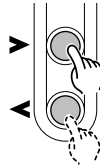
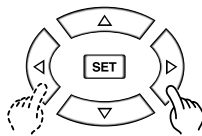


**Step 4 Make adjustments.**

4

Remote control unit

Main unit



Press the SET button to return to the screen in step 3.  
To make other adjustments, repeat steps 2 to 4.

**Step 5 Complete the procedure.**

5

Remote control unit

Main unit



Restores normal operating mode.

## Menu Mode

### 5.3.4 Settings in menu mode

#### 1) Rewriting the input display

The content displayed onscreen can be rewritten when input is changed.

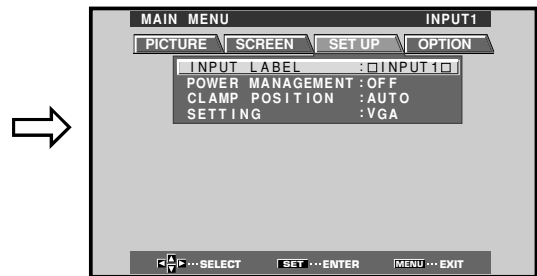
Where INPUT1 is normally displayed, for example, could be changed to display the name of a peripheral device, such as COMPUTER. (A maximum of 8 characters can be displayed.)

#### Example: Changing the INPUT LABEL from INPUT1 to COMPUTER

① Press the INPUT button and select INPUT1.

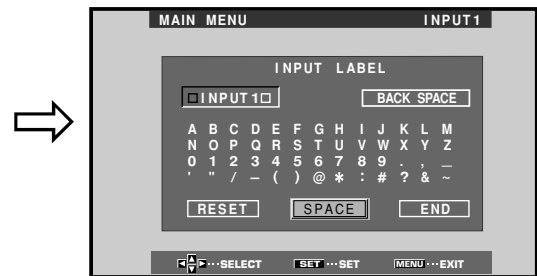
② Enter menu mode and select SET UP.

Screen ②



③ Select INPUT LABEL.

Screen ③



④ Move the cursor to the first relevant character (C in the example) and press the SET button. (Repeat this process to select all 8 characters.)

- Any of the 52 characters displayed on the menu screen can be used.
- When you select a character and then press the SET button, the input point will advance one character.
- If you make a mistake, select BACK SPACE and press the SET button. This will move the input point back one character.
- To restore the display to the initial setting (INPUT1, in this case), select RESET and press the SET button.

⑤ After you have finished inputting characters, move the cursor to END and press the SET button.



## 2) Setting POWER MANAGEMENT and AUTO POWER ON/OFF

To save electricity, this function automatically shifts the device into power-saving mode when no picture (sync) signal is detected.

- If not using this power-saving function  
→ select OFF.
- To enter power standby if no input signal is detected after 8 min  
→ select AUTO POWER OFF: ON.
- To switch between routine operating status and power-saving status, in accordance with the presence of signals  
→ Select POWER MANAGEMENT: ON.

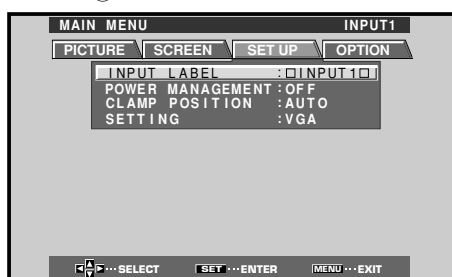
Set-able condition : POWER MANAGEMENT: INPUT 1 (personal computer signal), INPUT5\* (applies only when equipped with PDA-5002)  
AUTO POWER OFF; other than the above

Factory preset : OFF

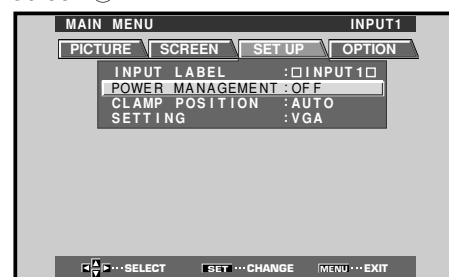
① Select SET UP.

② Move the cursor to POWER MANAGEMENT (AUTO POWER OFF) and use the SET button to change the setting.  
Setting will change between OFF and ON each time the SET button is pressed.

Screen ①



Screen ②



(NOTE)

- To restore routine operating status from power standby status, press the POWER button on the remote control or main unit's operation panel.
- To restore routine operating status from power-saving status, either use a personal computer or press the INPUT button on the remote control or main units operation panel.  
However, when there is G ON SYNC or composite SYNC input, it will not be possible to restore routine operating status via personal computer alone. The INPUT button will need to be pressed after the personal computer has been operated appropriately.
- Power consumption in power standby mode will be 1W.
- Power consumption in power-saving mode will be around 1W for INPUT 1 and around 50W for INPUT 5.

## Menu Mode

### 3) Setting the color temperature ★ (applies only when equipped with PDA-5002)

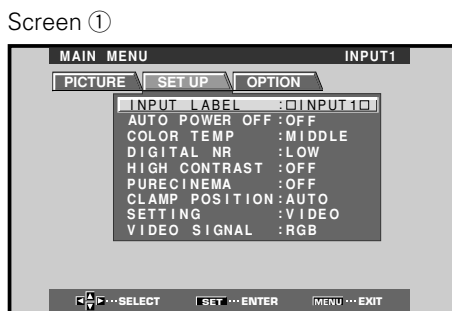
The color temperature for the video input signal can be set.

Set all the INPUT settings, 1~4, in accordance with the following.

- LOW: Equal to -3000k
- MID LOW: Equal to -2000k
- MIDDLE: + 0k (standard)
- MID HIGH: Equal to +1000k
- HIGH: Equal to +2000k

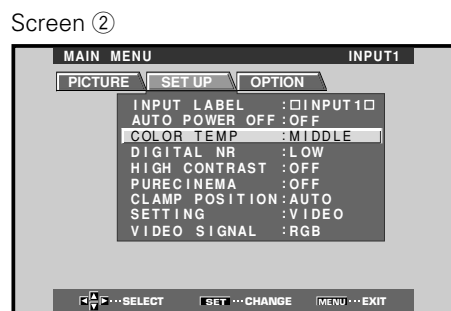
Available options : Video signal input  
Factory preset : MIDDLE

① Select SET UP.



② The cursor on COLOR TEMP and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change as follows: MIDDLE → MID HIGH → HIGH → LOW → MID LOW →...

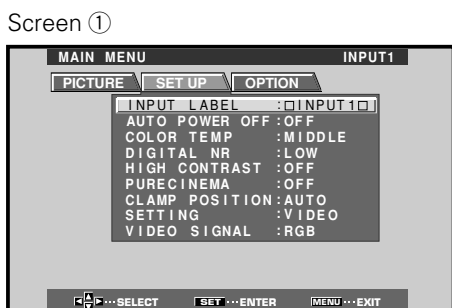


### 4) Reducing digital noise ★ (applies only when equipped with PDA-5002)

The setting for the digital noise reduction function can be set to improve the Signal to Noise (S/N) of displayed signals. Applies to only video signals.

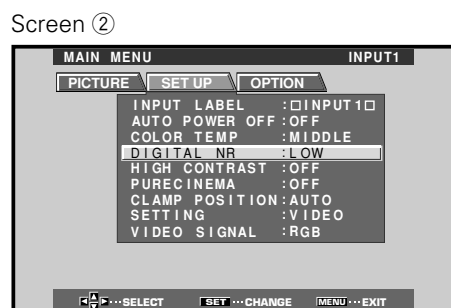
Set-able condition : Video signal input  
Factory preset : LOW

① Select SET UP.



② Move the cursor to DIGITAL NR and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change as follows: LOW → MIDDLE → HIGH → OFF



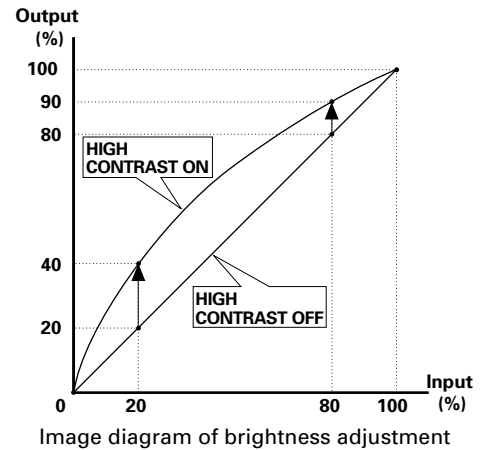
**5) Setting HIGH CONTRAST ★ (applies only when equipped with PDA-5002)**

This is a function that, for video signal input, emphasizes brightness by adjusting the picture intermediate brightness. When using software involving many dark scenes or when using the unit in a bright environment, set HIGH CONTRAST to ON. If you wish to accurately reproduce fine details (such as the texture of human skin), set HIGH CONTRAST to OFF.

Differences in the picture reproduced when HIGH CONTRAST is OFF or ON (refer to diagram at right)

- OFF ..... Reproduces input signal brightness linearly.
- ON ..... Reproduces input signal with intermediate brightness adjusted.

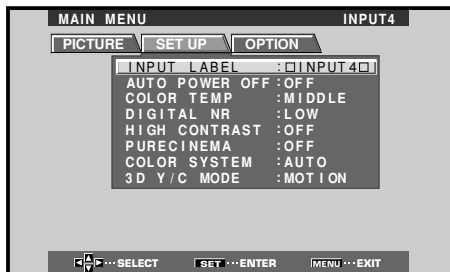
Set-able condition : Video signal input  
 Factory preset : OFF



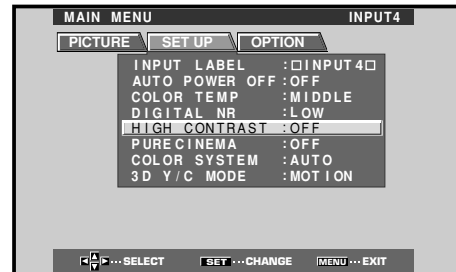
① Select SET UP.

② Move the cursor to HIGH CONTRAST and use the SET button to change the setting. Each time the SET button is pressed, the setting will switch between ON and OFF.

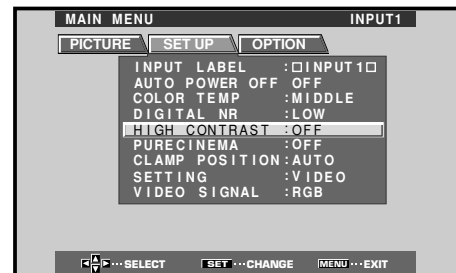
Screen ①



Screen ②



For INPUT 1 or INPUT 2, a screen like the following will be displayed.



## Menu Mode

### 6) Setting PURECINEMA ★ (applies only when equipped with PDA-5002)

The PURECINEMA function automatically detects video signals transferred at 24 frames per seconds (such as theatrical movies) and converts them to a progressive scan signal via a 2-3 pull down process.

For standard PURECINEMA function, select HQ.

PURECINEMA can introduce time delays between audio and video. Selecting STANDARD MODE may compensate for this delay.

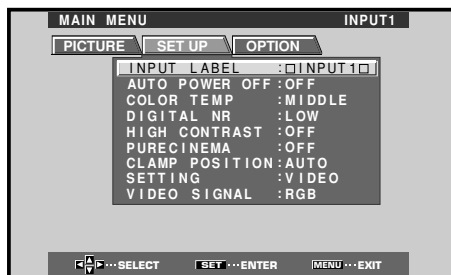
Available options : 525i (480i), NTSC, 4.43NTSC  
Factory preset : OFF

① Select SET UP.

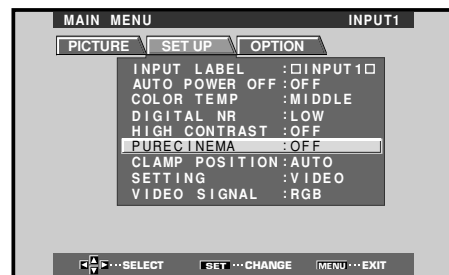
② Move the cursor to PURECINEMA and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change as follows: OFF → STANDARD → HQ →...

Screen ①



Screen ②



## 7) Setting the color system ★ (applies only when equipped with PDA-5002)

INPUT 3 and 4 automatically determine the various television systems used in countries around the world.

### CAUTION

This unit does not handle PAL-M and PAL-N systems.

Normally, this function is set to COLOR SYSTEM: AUTO (for automatic determination). However, it sometimes does not properly reproduce VTR signals with repeated dubbing and the like (resulting in lack of color, etc.). In this case, make settings correspond to the input signal, as follows.

Make all settings for INPUT 3 and 4.

- For NTSC signal input → select COLOR SYSTEM: NTSC.
- For PAL signal input → select COLOR SYSTEM: PAL.
- For SECAM signal input → select COLOR SYSTEM: SECAM.
- For 4.43 NTSC signal input → select COLOR SYSTEM:4.43NTSC.

Fixing the settings when the input signal has been determined in advance will make smooth image processing possible, making it possible to reduce input switching time and prevent mistaken signal determination.

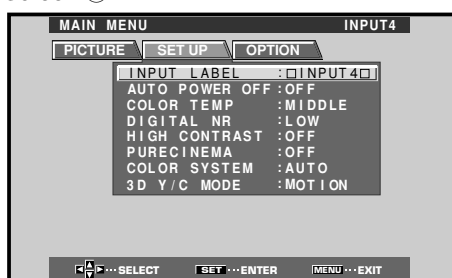
Set-able condition: INPUT 3, 4  
 Factory preset: INPUT 3 : AUTO  
 INPUT 4 : AUTO

① Select SET UP.

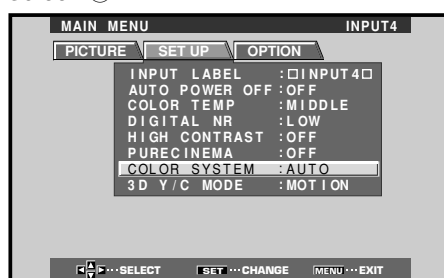
② Move the cursor to COLOR SYSTEM and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change as follows: AUTO → NTSC → PAL → SECAM → 4.43NTSC →...

Screen ①



Screen ②



# Menu Mode

## 8) Setting the clamp position

Simultaneous input of RGB (G ON SYNC) signals and sync signals may produce brightness inappropriately, resulting in an overly bright screen or images with a greenish cast. If this occurs, select CLAMP POSITION: LOCKED. Normally, the setting may be left on CLAMP POSITION: AUTO.

Methods for generating clamp pulse (a timing pulse necessary for reproducing brightness) are shown in Figure 1, a and b.

Figure 1: Clamp pulse generation

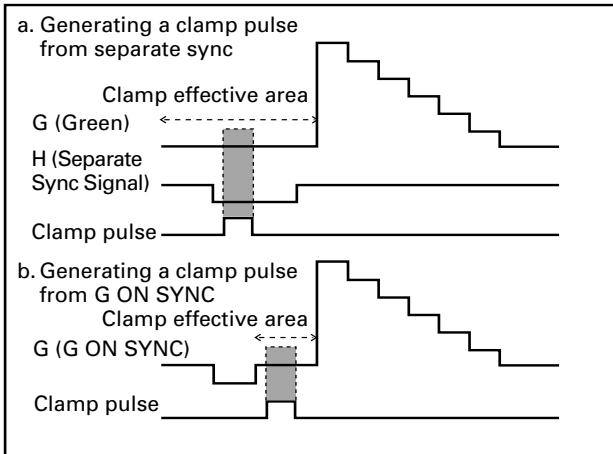
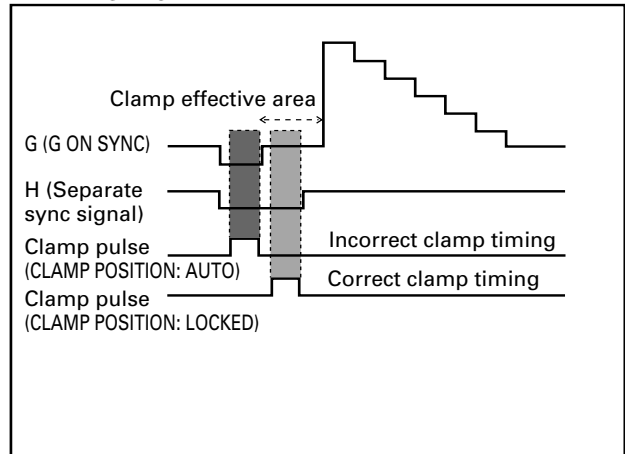


Figure 2: Simultaneous input of sync signals and G ON SYNC



With CLAMP POSITION: AUTO, separate sync signals will be monitored. The method shown in Figure 1, "a," will automatically be applied when separate sync signals are judged as present, and the method in Figure 1, "b," will be applied when they are judged as not present. However, as shown in Figure 2, if separate sync signals are input simultaneously with G ON SYNC, the former will be judged as present, and clamp pulse will be generated using the method shown in Figure 1, "a." This will result in incorrect clamp timing, preventing brightness from being produced normally.

If this occurs, either do not connect the separate sync signals or select CLAMP POSITION: LOCKED. If CLAMP POSITION: LOCKED is selected, the clamp pulse will be reproduced using the method in Figure 1, "b," whether or not separate sync signals are present. This will make it possible to produce brightness correctly.

(NOTE) The figures above are for illustrative purposes only.

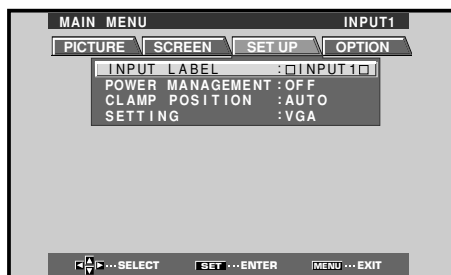
(NOTE) Composite sync input may be considered to be the same as separate sync input.

Set-able condition: INPUT 1 or 2  
 Factory preset: AUTO

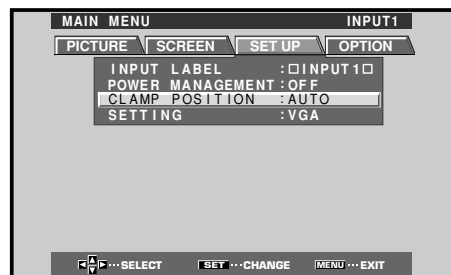
① Select SET UP.

② Move the cursor to CLAMP POSITION and use the SET button to change the setting. Each time the SET button is pressed, the setting will change between AUTO and LOCKED.

Screen ①



Screen ②



(NOTE) Cannot be set during component picture signal input.

## 9) Setting 3D Y/C separation ★ (applies only when equipped with PDA-5002)

The INPUT4 image input unit is equipped with a 3D Y/C separation circuit, the operation of which can be set. When reproducing still images, which involve no movement, select 3D Y/C MODE: STILL.

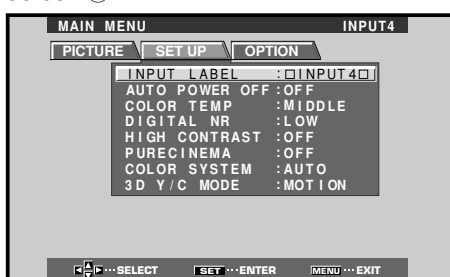
Set-able condition : INPUT 4 and NTSC  
 Factory preset : MOTION

① Select SET UP.

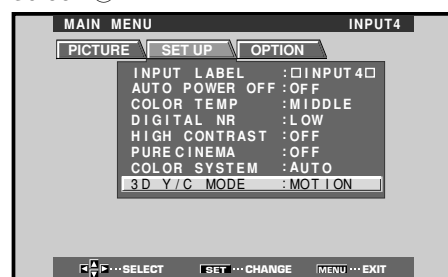
② Move the cursor to 3D Y/C MODE and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change between MOTION and STILL.

Screen ①



Screen ②



# Menu Mode

## 10) Settings for peripheral equipment

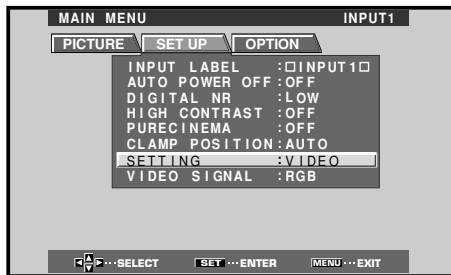
This unit automatically identifies personal computer signals and video signals from DVD players etc. according to the input signal frequency and is also equipped with a function that identifies the resolution of personal computer signals. But when the signals a) and b) shown below are input, the signal identification function does not operate. In such cases, the setting must be made manually.

Set-able condition : INPUT 1, 2 and 5 ★ (Used only when the PDA-5002 is installed)  
 a) For 31.5kHz horizontal and 60Hz vertical signal input  
 b) For 48.4kHz horizontal and 60Hz vertical or 56.5kHz horizontal and 70Hz vertical signal input

Factory preset : VGA, for "a"  
 XGA, for "b"

① Select SET UP.

Screen ①

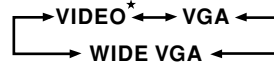


② Select SETTING and use the <</> button to change the setting.

Each time the <</> button is pressed, settings will change as follows.

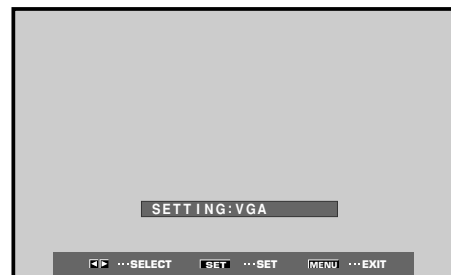
a) 31.5kHz horizontal/60Hz vertical signal input

For INPUT 1 or INPUT 2:



For INPUT 5 ★ (applies only when equipped with PDA-5002):

VGA -> WIDE VGA



b) 48.4kHz horizontal/60Hz vertical or 56.5kHz horizontal/70Hz vertical input signal

XGA -> WIDE XGA



### Note:

The screen sizes that can be chosen and the display method vary for each setting. To obtain the appropriate reproduction method and screen size, confirm the settings during the input of the corresponding signal and change them as necessary.

1. When the input signal is horizontally 31.5 kHz/vertically 60 Hz. ★ (Used only when the PDA-5002 is installed)

Input signal	Setting	Connected devices	Screen sizes that can be selected	
			PDP-503CMX/503MXE	PDP-433CMX/433MXE
525i (480i) SDTV	VIDEO*	VIDEO	WIDE/4:3/FULL/ZOOM	
640 X 480	VGA	PC	DOT BY DOT/4:3/FULL	
852 X 480	WVGA	PC	DOT BY DOT/FULL	

2. When the input signal is horizontally 48.4 kHz/vertically 60 Hz or horizontally 56.5 kHz/vertically 70 Hz

Input signal	Setting	Connected devices	Screen sizes that can be selected	
			PDP-503CMX/503MXE	PDP-433CMX/433MXE
1024 X 768	XGA	PC	DOT BY DOT/FULL	DOT BY DOT/4:3
1280 X 768	WXGA	PC	DOT BY DOT	FULL



## 11) Setting the input signal format ★ (Used only when the PDA-5002 is installed)

When a video signal is input to INPUT 1 or 2, settings must be made in keeping with peripheral devices in order to handle RGB and component picture signals.

Make all settings for INPUT 1 and 2 in accordance with the following.

Example:

When reproducing RGB signals → select VIDEO SIGNAL: RGB.

When reproducing signals from DTV set top boxes or DVD players → select VIDEO SIGNAL: COMPONENT.

Set-able condition : INPUT 1 and 2, for video signal input (other than personal computer signals)  
 Factory preset : INPUT 1: RGB  
 INPUT 2: RGB

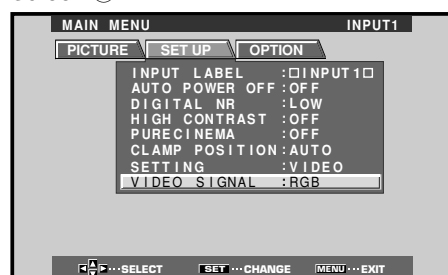
① Select SET UP.

② Move the cursor to VIDEO SIGNAL and use the SET button to change the setting.  
 Each time the SET button is pressed, the setting will switch between RGB and COMPONENT.

Screen ①



Screen ②



For component video picture signal input, see "5.4.3 Adjustments and settings in the integrator mode", 7) Setting component input.

# Menu Mode

## 12) Setting the power control

This function reduces power consumption and panel wear by controlling screen brightness in relation to the input signal.

For normal screen brightness → select POWER CONTROL: STANDARD.

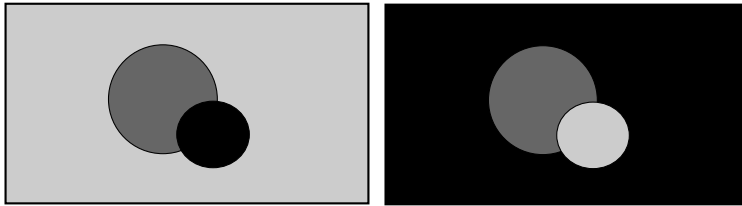
To reduce power consumption → select POWER CONTROL: MODE1.

To reduce consumption, screen wear and provide additional burn in protection → select POWER CONTROL: MODE2.

Factory preset : STANDARD

Differences in picture reproduction resulting from power control settings (illustration):

For an input signal like the following:



### STANDARD



Left figure: A bright picture overall, with no change.

Right figure: A dark picture overall, with peak brightness reproduced even brighter.

### MODE1



Left figure: Power consumption is reduced by restraining the brightness of a bright picture, overall.

Right figure: For a picture that is dark overall, similar to STANDARD, peak brightness is made even brighter.

### MODE2

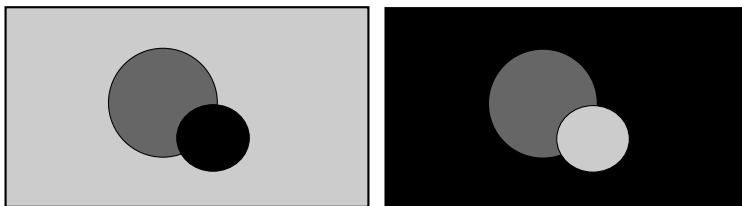
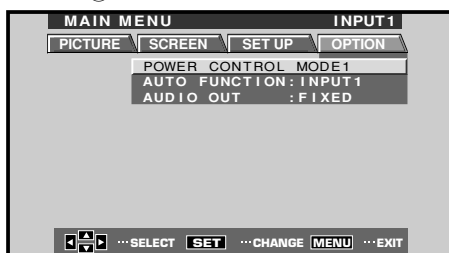


Image signal gradations are reproduced faithfully, with no control applied. The part of a dark picture, overall, for which peak brightness is not raised reduces burn-in and other types of panel deterioration.

① Select OPTION.

Screen ①



② Move the cursor to POWER CONTROL and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change as follows: STANDARD → MODE 1 → MODE 2 →...

POWER CONTROL settings are shared by all inputs.

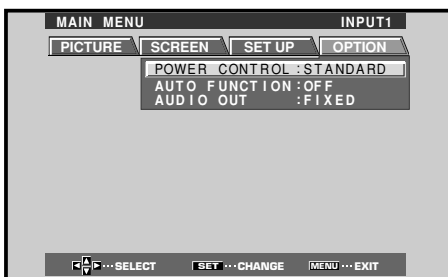
### 13) Setting automatic input switching

Using AUTO FUNCTION to detect the signal for the set input makes it possible to automatically switch to that input. INPUT 4 cannot be selected if PDA-5002 is not mounted.

Factory preset : OFF

① Select OPTION.

Screen ①



② Move the cursor to AUTO FUNCTION and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change as follows: OFF → INPUT1 → INPUT4\* (Used only when the PDA-5002 is installed) →...

Screen ②



- AUTO FUNCTION will not operate if set to OFF.
- When INPUT1 or INPUT4 is selected, when a signal to the selected input is detected, that input will be automatically switched to. Thereafter, input will not be switched even if the INPUT button on the remote control or plasma display is pressed (AUTO is displayed on the screen at this time.). In addition, if there is no signal input after input has been switched with AUTO FUNCTION, input will be restored to what it was before it was switched by AUTO FUNCTION.
- When the G ON SYNC signal has been input to INPUT 1, the AUTO FUNCTION function does not operate.

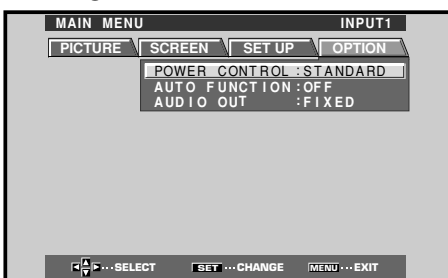
### 14) Setting audio output

Either FIXED or VARIABLE can be selected for the volume of sound output obtained from the AUDIO OUTPUT terminal.

Factory preset : FIXED

① Select OPTION.

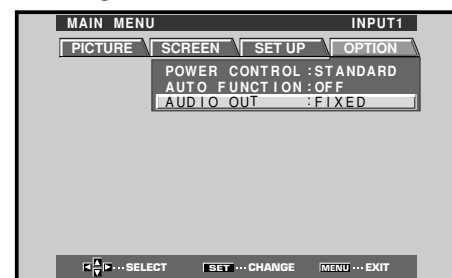
Screen ①



② Move the cursor to AUDIO OUT and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change between FIXED and VARIABLE.

Screen ②



- When FIXED is selected, audio output volume will not change even if VOLUME is adjusted on the plasma display.
- When VARIABLE is selected, audio output volume will change in keeping with the adjusted value for VOLUME.

## Integrator Mode

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### 5.4 Integrator Mode

#### 5.4.1 About the integrator mode

1) How to enter integrator mode

- Place the unit in integrator mode by doing the following:

Procedure: In standby, switch on power to the unit using the remote control or the operating panel of the main unit, as follows:

MENU button → STANDBY/ON button

(This procedure should be complete in three seconds.)

2) Upon entering the integrator mode

- The content of picture quality adjustment and picture location adjustment that are adjusted in menu mode are all initial values. The content of SET UP and OPTION are maintained, but COLOR TEMP becomes MIDDLE.

3) When you make adjustments in integrator mode:

- The adjusted values of PICTURE, WHITE BALANCE, and SCREEN (see 5.4.3 1) ~ 3)) are stored in memory for each input function and input signal.

However, regarding PICTURE, WHITE BALANCE during PC signal input, up to 8 kinds of input signals (signal frequencies) can be stored in memory for each function.

When 9 new kinds of input signals have been adjusted, the adjustment data for the input signal that has the longest history of adjustments is erased.

- For more details please refer to “5.4.4 PICTURE and WHITE BALANCE adjustment values memory area tables” and “5.4.5 SCREEN adjustment values memory area tables”.

4) To exit integrator mode

- Press the MENU button on the remote control or on the operating panel of the main unit to restore the unit to normal operating mode.

5) NOTES:

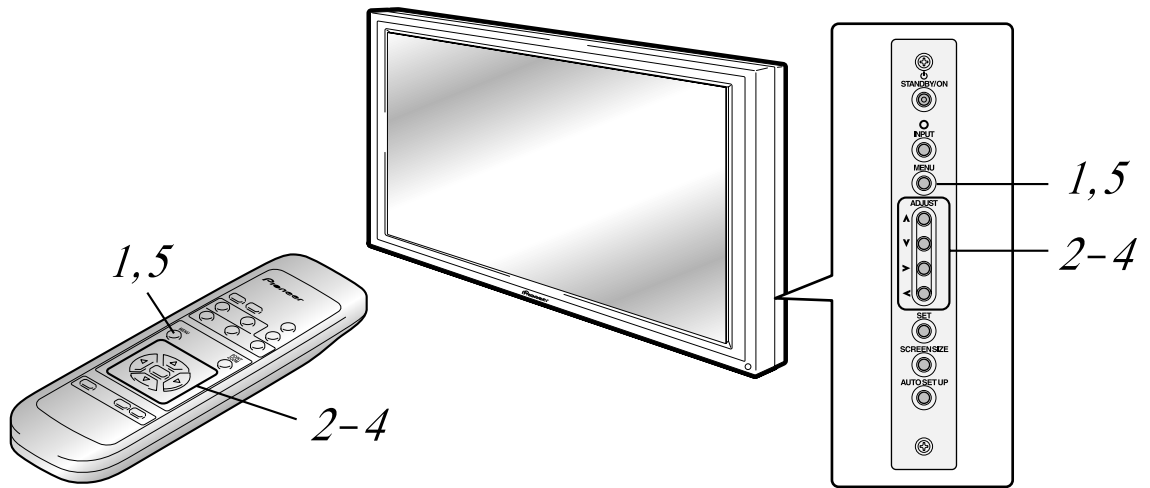
(1) Integrator mode is cancelled automatically in all of the following situations, returning to normal operating mode.

- When no operation occurs for a period of approximately eight minutes
- When you press the KEY LOCK/UNLOCK button on the operating panel of the main unit

(2) For adjustments and settings, feed video signals that you will actually use into the production run.

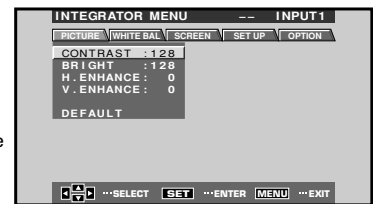
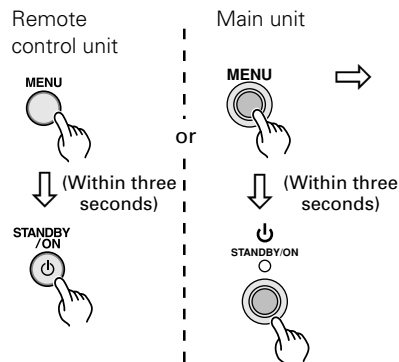
**5.4.2 Example of integrator mode operation**

An example of adjustments of BRIGHT in the integrator mode is discussed below.



**Step 1 Put the unit into standby, and do the following.**

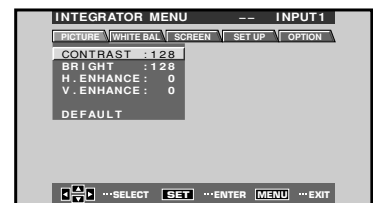
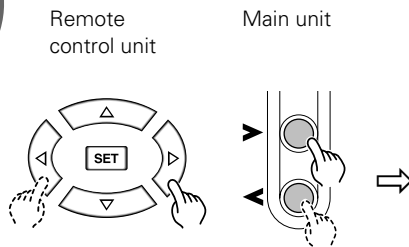
**1**



The currently selected item is highlighted in yellow.

**Step 2 Select PICTURE.**

**2**

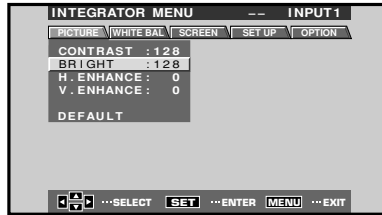
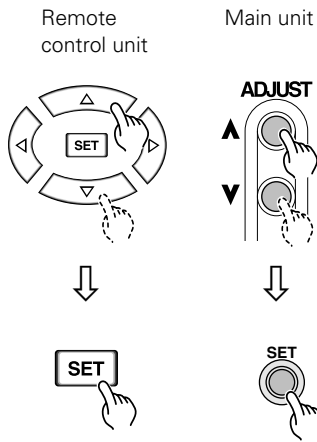


The currently selected item is highlighted in yellow.

# Integrator Mode

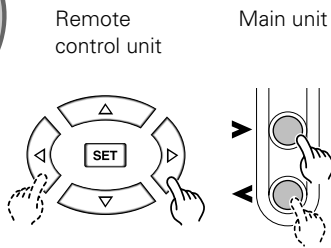
## Step 3 Select BRIGHT.

3



## Step 4 Make adjustments.

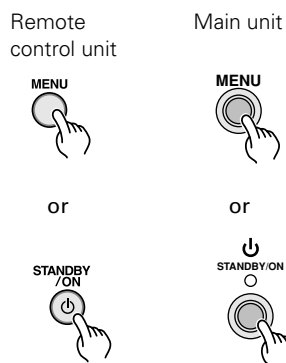
4



Press the SET button to return to the screen in Step 3.  
To continue to make other adjustments, repeat Steps 2 to 4.

## Step 5 To complete your adjustments, exit integrator mode.

5



⇒ Entering normal operating mode.

⇒ Entering STANDBY.

Although it is possible to exit integrator mode in other ways, such as by switching off the main power, we advise following the procedures shown at the left, in order to ensure that your adjustments are saved to memory.

### 5.4.3 Adjustments and settings in integrator mode

For detailed information, see 5.4.2, "Example of integrator mode operation."

#### 1) Adjusting PICTURE (picture quality)

The items that can be adjusted here are CONTRAST, BRIGHT, COLOR, TINT, H.ENHANCE, V.ENHANCE, H.SHARP and V. SHARP. These differ somewhat from the items that can be adjusted in menu mode (see the instruction manual).

- ① Enter integrator mode and switch to the input (INPUT 1~5) you want to adjust.

The set ID will be displayed on the upper right where the "--" mark is.

Select PICTURE and the item to adjust.

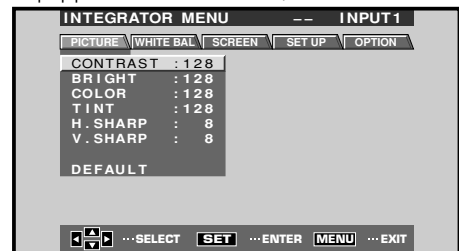
When DEFAULT is selected on screen ①, all adjustment values for PICTURE will be restored to the factory preset values.

Screen ①

Personal computer signal input



Video signal input ★ (applies only when equipped with PDA-5002)



- ② Make the necessary adjustments.

(NOTE) When in INPUT 1, 2 or 5 during personal computer signal input, COLOR, TINT, H. SHARP and V. SHARP cannot be adjusted.

During video signal input, H.ENHANCE and V.ENHANCE cannot be adjusted.

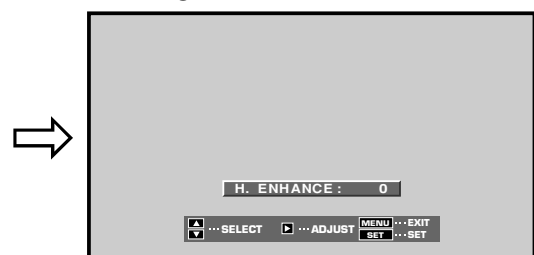
Make adjustments using the ◀ and ▶ buttons on the remote control or the main unit's operating panel.

The values adjusted here will be the initial values for adjustment in menu mode.

In addition, if SHARP is adjusted in menu mode, the amount of that adjustment will be added to both the H. SHARP and V. SHARP adjustment values in integrator mode.

Press the SET button to return to screen ②.

Screen ②



- <Adjustable range> 0 to 255 for CONTRAST, BRIGHT, COLOR and TINT
- 0 to 15 for H.ENHANCE, V.ENHANCE, H.SHARP\* (applies only when equipped with PDA-5002) and V.SHARP\* (applies only when equipped with PDA-5002).

## Integrator Mode

### 2) Adjusting WHITE BALANCE

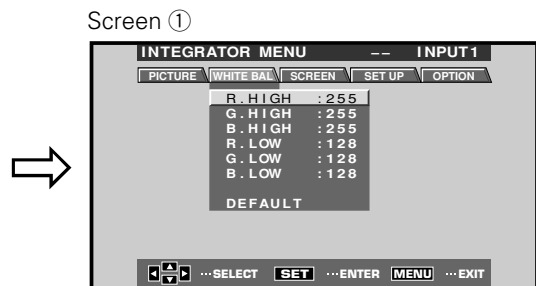
The items that can be adjusted here are R HIGH, G HIGH, B HIGH, R LOW, G LOW and B LOW.

- ① Enter integrator mode and switch to the input (INPUT 1~5) you want to adjust.

The set ID will be displayed on the upper right where the "--" mark is.

Select WHITE BALANCE and the item to adjust.

When DEFAULT is selected on screen ①, all adjustment values for WHITE BALANCE will be restored to the factory preset values.

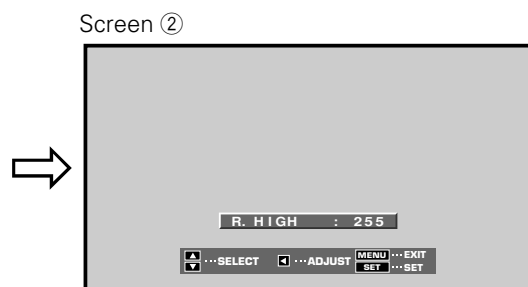


- ② Make the necessary adjustments.

Make adjustments using the ◀ and ▶ buttons on the remote control or the main unit's operating panel.

Press the SET button to return to screen ①.

<Adjustable range> 0 to 255 for each item



### 3) Adjusting SCREEN (screen position)

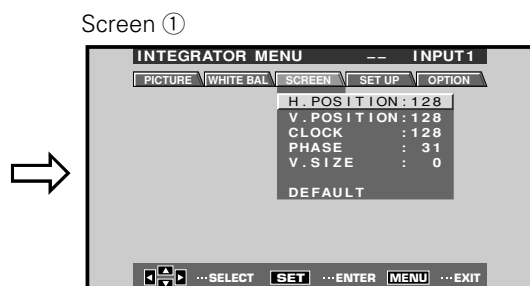
The items that can be adjusted here are H.POSITION, V.POSITION, CLOCK, PHASE and V.SIZE.

- ① Enter integrator mode and switch to the input (INPUT 1~5) you want to adjust.

The set ID will be displayed on the upper right where the "--" mark is.

Select SCREEN and the item to adjust.

When DEFAULT is selected on screen ①, all adjustment values for SCREEN will be restored to the factory preset values.



- ② Make the necessary adjustments.

(NOTE) CLOCK and PHASE can only be adjusted during personal computer signal input.

Make adjustments using the ◀ and ▶ buttons on the remote control or the main unit's operating panel.

The values adjusted here will be the initial values for menu mode. Press the SET button to return to screen ①.



<Adjustable Range> 0 to 255 for H. POSITION, V. POSITION and CLOCK (initial value: 128)  
0 to 127 for V. SIZE (initial value: 0)  
0 to 63 for PHASE (initial value: 32)

<Adjusting Order> For the sake of efficiency, make adjustments in the following order:  
V.POSITION → H.POSITION → CLOCK → H.POSITION → PHASE → H.POSITION

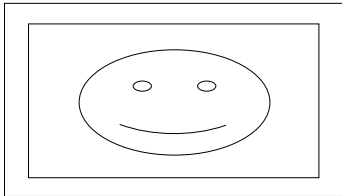


## 4) Setting the 4-screen display (2x2 mode)

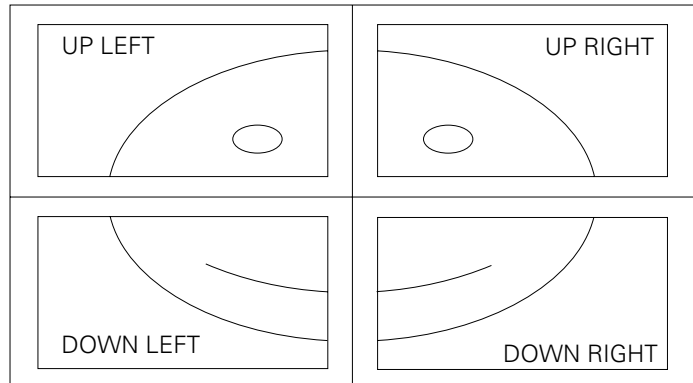
This function is for a large screen display involving four units, similar to a video wall.

For 4-screen display, set 2x2 to ON and then set LAYOUT in keeping with the positioning illustrated below.

Regular display



4-screen display



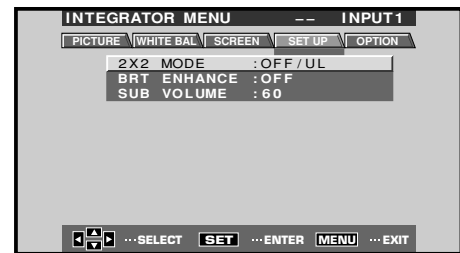
Factory preset : 2x2: OFF  
LAYOUT: UP LEFT

- Enter integrator mode. (See 5.4.1, "Integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select 2x2 MODE for SET UP.

Screen ①



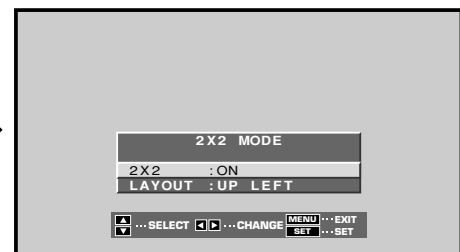
- Move the cursor to 2x2 and use the ◀ and ▶ buttons to change the setting.

Each time the ◀ and ▶ buttons are pressed, the setting will switch between OFF and ON.

Move the cursor to LAYOUT and use the ◀ and ▶ buttons to change the setting.

Each time the ◀ and ▶ buttons are pressed, the setting will change as follows: UP LEFT ↔ DOWN LEFT ↔ UP RIGHT ↔ DOWN RIGHT ↔ ...

Screen ②



Press the SET button to return to screen ①.

Make 2x2 MODE settings for each input.

(NOTE) In four-screen DISPLAY MODE the space between screens (mullion spacing) is not taken into consideration when magnifying the images.

## Integrator Mode

### 5) Setting brightness enhancement at screen center

This function improves and enhances the brightness of the center of the screen.

To emphasize screen brightness → set to ON

To equalize screen emphasis → set to OFF

Factory preset : OFF

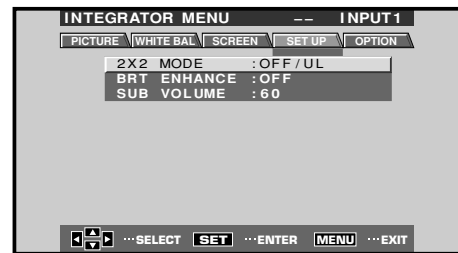
#### ① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select SET UP.

Screen ①



#### ② Move the cursor to BRT ENHANCE and use the SET button to change the setting.

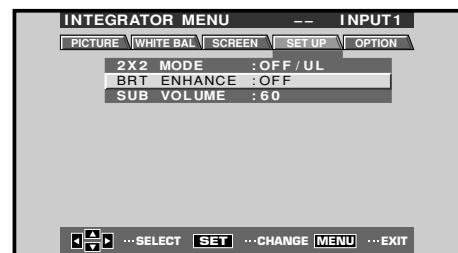
Each time the SET button is pressed, the setting will change between ON and OFF.

Set BRT ENHANCE for each input (INPUT1~5).

And set either PC signal or video signal.

Select EXIT on screen ② to return to screen ①.

Screen ②



(NOTE) The brightness enhancement function will not work for magnified display with 2x2 MODE: ON. (However, settings can be changed.)

## 6) Setting HDTV MODE ★ (applies only when equipped with PDA-5002)

This function sets the screen to match the HDTV signals that are input.

When the HDTV signal is 1125i (1035i) → set to 1035i

When the HDTV signal is 1125i (1080i) → set to 1080i

Set-able condition	: For 1125i/60Hz signal input
Factory preset	: 1035i

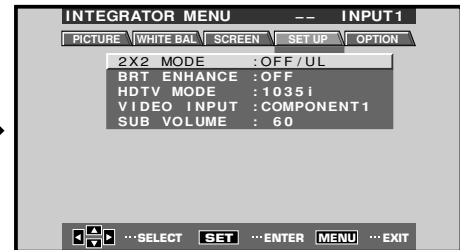
### ① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select SET UP.

Screen ①



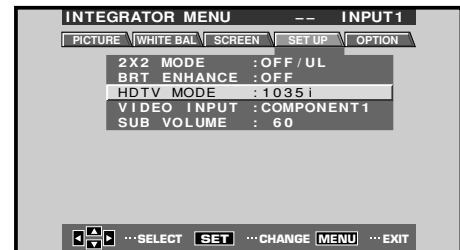
### ② Move the cursor to HDTV MODE and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change between 1035i and 1080i.

(NOTE) If this items are not set correctly, the following problems could result.

- i) If 1080i has been set, the upper portion of the screen might not display images in part, regardless of whether the input signal is 1035i.
- ii) If 1035i has been set, information may be lost from the top of the screen, regardless of whether the input signal is 1080i.

Screen ②



## Integrator Mode

### 7) Setting component input ★ (applies only when equipped with PDA-5002)

INPUT 1 and 2 handle two kinds of component picture signals.

Set them in accordance with the peripheral devices used.

Make the setting for each input and for each signal in accordance with the following.

For Y Pb Pr input (from HDTV equipments, etc.) → select VIDEO INPUT: COMPONENT1

For Y Cb Cr input (from DVD players, etc.) → select VIDEO INPUT: COMPONENT2

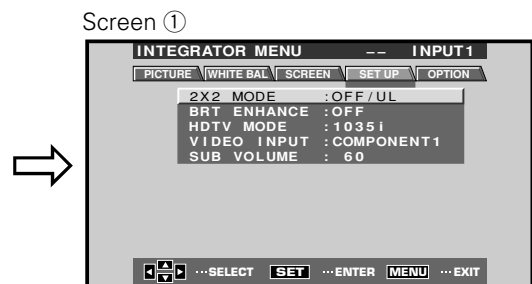
Set-able condition : INPUT 1 and 2, during video signal input (other than personal computer signals)  
Factory preset : COMPONENT2 for 525i, 525p, 625i and 625p input  
COMPONENT1 for 1125i, 1125p and 750p input

① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

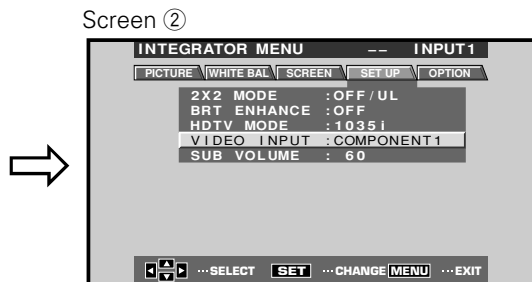
The set ID will be displayed on the upper right where the "--" mark is.

Select SET UP.



② Move the cursor to VIDEO INPUT and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change between COMPONENT1 and COMPONENT2.



## 8) Adjusting SUB VOLUME

This item adjusts the sound input level for each input.

It is convenient for adjusting levels between different sources (such as DVD players, personal computers, etc.).

First release sound silencing. Then, enter integrator mode and adjust appropriately.

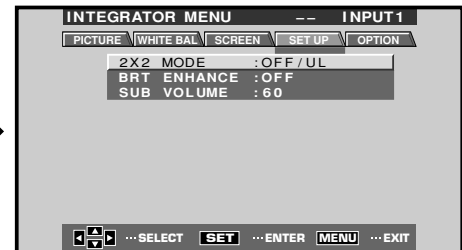
### ① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

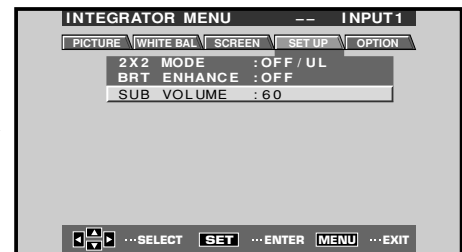
Select SET UP.

Screen ①



### ② Select SUB VOLUME.

Screen ②

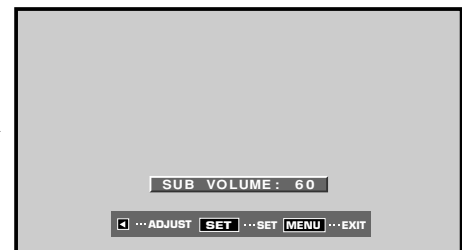


### ③ Make the necessary adjustments.

Make adjustments using the ◀ and ▶ buttons on the remote control or the main unit's operating panel.

Press the SET button to return to screen ②.

Screen ③



<Adjustable Range> 0 to 60 for each item (initial value is 60)

<Adjusting Order>

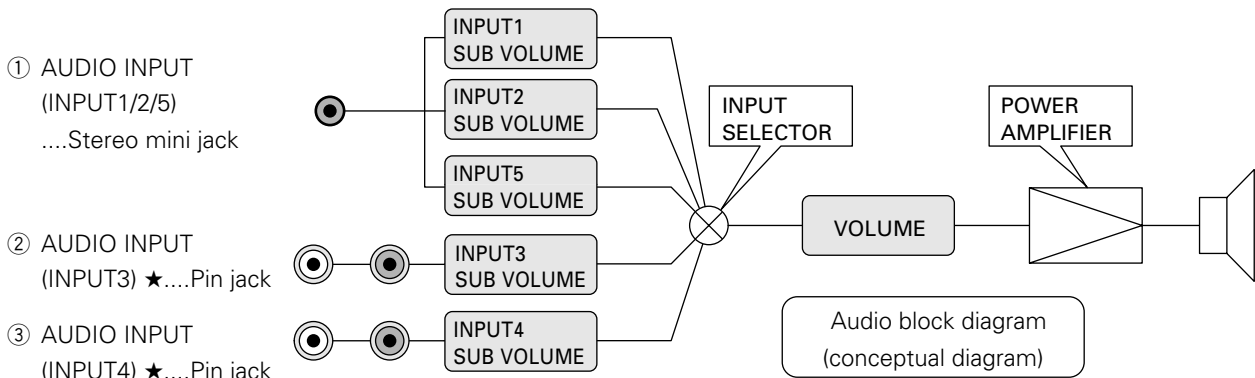
For the sake of efficiency, make adjustments in the following order:

(1) VOLUME (routine operating mode): Raises the volume to the actual usage status.

(2) SUB VOLUME (integrator mode): Adjusts high-volume input in keeping with low-volume input.

## Integrator Mode

(★: applies only when equipped with PDA-5002)



This unit is equipped with 3 audio input systems.

<PDP-503CMX/PDP-503MXE and PDP-433CMX/PDP-433MXE>

① AUDIO INPUT (INPUT1, 2 and 5): Stereo mini jack

→ Is selected in common when PICTURE INPUT 1, 2 or 5 has been selected.

<PDA-5002>

② AUDIO INPUT (INPUT3): Pin jack

→ Is selected when PICTURE INPUT 3 has been selected.

③ AUDIO INPUT (INPUT4): Pin jack

→ Is selected when PICTURE INPUT 4 has been selected.

### Use of SUB VOLUME: Example 1

When a personal computer is connected to INPUT 1 (picture input only) and a DVD player has been connected to INPUT2 (pictures and sound):

→ Will reproduce the DVD player's sound when PICTURE INPUT 1 or 2 has been selected.

When sound is not necessary with personal computer input (INPUT 1), set the SUB VOLUME for INPUT 1 to 0.

### Use of SUB VOLUME: Example 2

When a DVD player is connected to INPUT 3 (pictures and sound) and a personal computer to INPUT 5 (pictures and sound):

→ When the difference in volume between the DVD player and personal computer is distracting, adjust SUB VOLUME for whichever source is louder.

## 9) Setting the OSD display

This function suppresses the OSD display (INPUT display, etc.) in normal operating mode.

Even while OSD is OFF, the following OSD displays are possible.

- ① MENU display (menu mode and integrator mode)
- ② Warning just prior to AUTO POWER OFF or power management function operation
- ③ Warning from self-diagnosis function when interior temperature of set has become high
- ④ Announcements while KEY LOCK is in effect and KEY LOCK/UNLOCK setting displays
- ⑤ Display calls (including)

When OSD display is not necessary, owing to automatic running directions and the like → select OFF.

Factory preset : ON

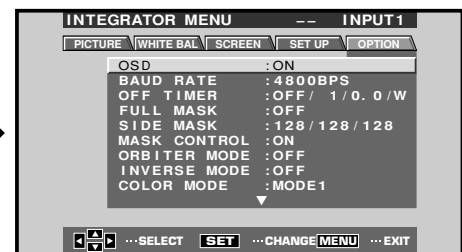
- ① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.

Screen ①

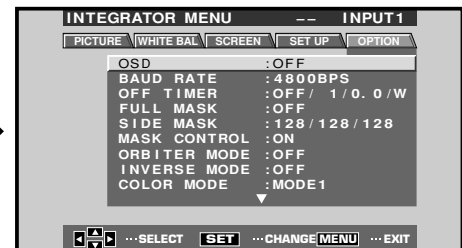


- ② Move the cursor to OSD and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change between ON and OFF.

OSD applies to all inputs (INPUT1~5).

Screen ②



## Integrator Mode

### 10) Setting the baud rate

When controlling or adjusting the unit from a PC, the RS-232C port can be set to one of six communication speeds (baud rates): 1200, 2400, 4800, 9600, 19200 and 38400BPS.

Factory preset : 4800BPS

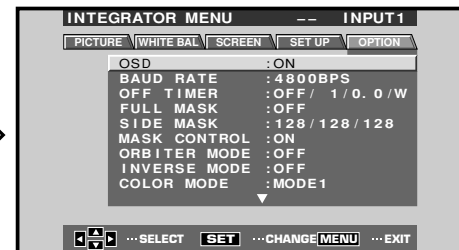
① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.

Screen ①



② Move the cursor to BAUD RATE and use the SET button to change the setting.

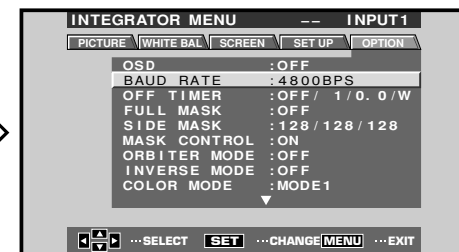
Each time the SET button is pressed, the setting will change as follows: 4800BPS → 9600BPS → 19200BPS → 38400BPS → 1200BPS → 2400BPS → ...

BAUD RATE applies to all inputs (INPUT1~5).

Set the unit's baud rate to match the PC's.

With long RS-232C cables, we recommend setting lower baud rates.

Screen ②





## 11) Setting OFF TIMER

This function is designed to switch the plasma display into standby mode after a selected time has elapsed. In addition, the full mask function can be automatically implemented prior to entering the standby mode.

For example, if the settings are made as follows,

TIMER: ON  
 DISPLAY TIME: 10H  
 MASK TIME: 2.5H  
 MASK COLOR: WHITE

then after 10 hours of normal operation, a mask will be displayed (white) for 2.5 hours. Then, standby status will go into effect. (At this time, the power supply will remain on for last memory.)

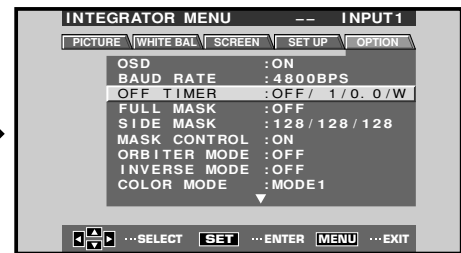
Factory preset : TIMER: OFF  
 DISPLAY TIME: 1H  
 MASK TIME: 0.0H  
 MASK COLOR: WHITE

- ① Enter integrator mode.  
 (See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OFF TIMER under OPTION.

Screen ①



- ② Select the item and use the ◀ and ▶ buttons to change the setting.

The TIMER setting will switch between OFF and ON.

DISPLAY TIME will change in one-hour increments, between 1 and 24H, as follows: ... ↔ 1H ↔ 2H ↔ ... ↔ 24H ↔ 1H...

MASK TIME will change in half-hour increments, between 0.0 and 9.5H, as follows: ... ↔ 0.0H ↔ 0.5H ↔ ... ↔ 9.5H ↔ 0.0H ↔ ...

MASK COLOR will change as follows: ... ↔ WHITE ↔ RED ↔ GREEN ↔ BLUE ↔ ...

Press the SET button to return to screen ①.

OFF TIMER is available for all inputs.

(Note) During display of the OFF TIMER mask, AUTO POWER OFF and POWER MANAGEMENT functions do not operate.

Screen ②



# Integrator Mode

## 12) Setting FULL MASK

This function uses the PDP internal signal to display the entire screen as one color: red, white, green or blue. For settings other than FULL MASK: OFF, external input signals cannot be displayed. It is an emergency measure for handling screen burn-in (although it cannot completely eliminate it). For details, see 5.8, "Regarding the problem of images become burnt onto the screen."

Factory preset : OFF

- ① Enter integrator mode.  
(See 5.4.1, "About the integrator mode.")

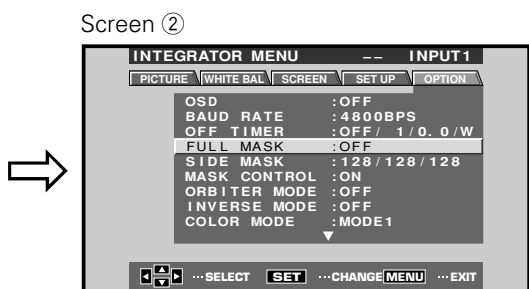
The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.



- ② Move the cursor to FULL MASK and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change as follows: OFF → WHITE → RED → GREEN → BLUE → ... After setting the color for the full mask, press the MENU button and leave integrator mode. This will display the full mask.



FULL MASK applies to all inputs (INPUT1~5).

(NOTE) During display of the OFF TIMER mask, FULL MASK does not operate. (However, settings can be changed.)

## 13) Adjusting SIDE MASK

This item adjusts the brightness of 4:3, DOT BY DOT and other non-image parts around the screen.

Brightness can be adjusted separately from RGB.

When making adjustments, pay attention to the brightness balance between the picture signals displayed and the adjoining sets.

(NOTE) A striped pattern may appear on top of the mask during adjustment, but this is not a defect.

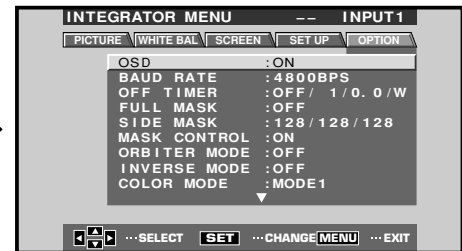
- ① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

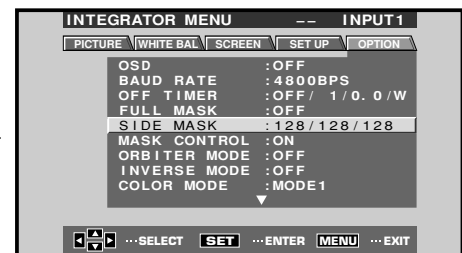
Select OPTION.

Screen ①



- ② Select SIDE MASK.

Screen ②



- ③ Make the necessary adjustments.

Make adjustments using the ◀ and ▶ buttons on the remote control or the main unit's operating panel.

When DEFAULT is selected on screen ③, all SIDE MASK adjustment values will be restored to the factory preset values.

Press the SET button to return to screen ②.

<Adjustable range> 0 to 255 for each item. (initial value is 80)

SIDE MASK applies to all inputs (INPUT1~5).

Screen ③



## Integrator Mode

### 14) Setting MASK CONTROL

MASK CONTROL is a function to help reduce burn resulting from displaying images that partially fill the screen. When MASK CONTROL is set to ON and image size is DOT BY DOT or 4:3, the displayed image's position will change slightly each time the unit is turned on. When MASK CONTROL is OFF, the displayed images will always remain in the same position.

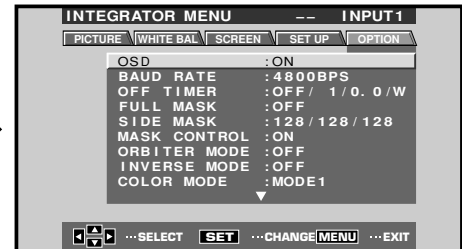
Factory preset : ON

- 1 Enter integrator mode.  
(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.

Screen ①

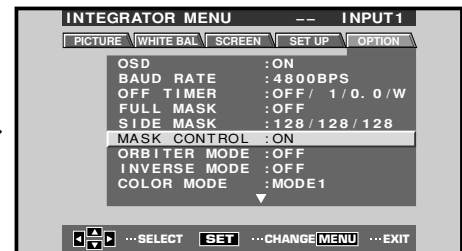


- 2 Move the cursor to MASK CONTROL and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change between ON and OFF.

MASK CONTROL applies to all inputs.

Screen ②



### 15) Setting ORBITER MODE

This function creates a slow horizontal and vertical movement of the displayed image. Approximately every 8 minutes the image's position is shifted one pixel horizontally and vertically. Total shifting range is  $\pm 3$  pixels horizontally and vertically.

When the ORBITER MODE is set to ON, it will work to reduce the appearance of burn in.

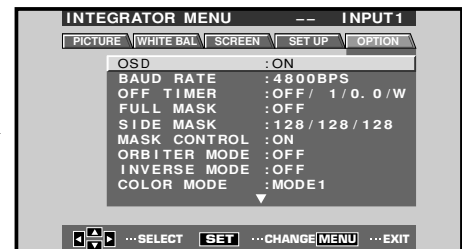
Factory preset : OFF

- 1 Enter integrator mode.  
(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.

Screen ①

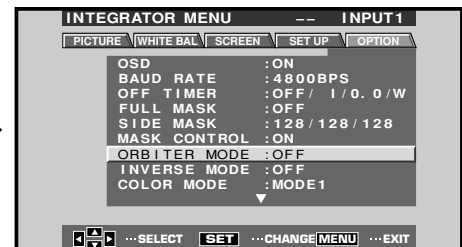


- 2 Move the cursor to ORBITER MODE and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change between OFF and ON.

ORBITER MODE applies to all inputs.

Screen ②



## 16) Setting INVERSE MODE (negative-positive color inversion)

This function is for negative-positive color inversion of displayed images. It is an emergency measure for handling screen burn-in occurring when still images are displayed (although it cannot completely eliminate it).

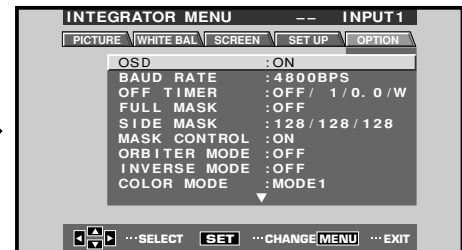
Factory preset : OFF

- Enter integrator mode.  
(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.

Screen ①

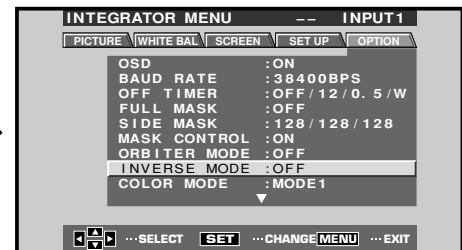


- Move the cursor to INVERSE MODE and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change between OFF and ON.

INVERSE MODE applies to all inputs.

Screen ②



# Integrator Mode

## 17) Setting COLOR MODE

In addition to values for normal operation (COLOR MODE1), this unit has independent and separate PICTURE and WHITE BALANCE adjustment values set to be optimal for TV studio retakes (COLOR MODE 2).

(See 5.4.4, "PICTURE and WHITE BALANCE adjustment values memory area tables.")

Change the settings to suit your usage purpose.

Factory preset : COLOR MODE: MODE1

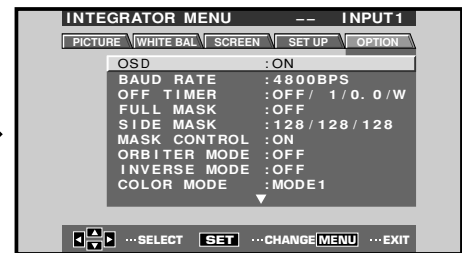
① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.

Screen ①



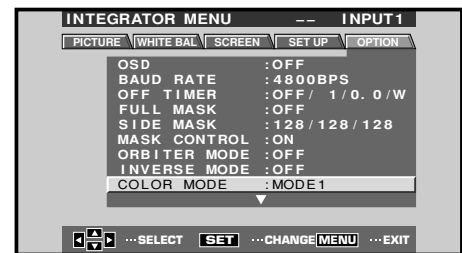
② Move the cursor to COLOR MODE and use the SET button

to change the setting.

Each time the SET button is pressed, the setting will change between MODE1 and MODE2.

When the COLOR MODE setting is changed, all input functions and input signal PICTURE and WHITE BALANCE adjustment values will be changed all at once.

Screen ②



COLOR MODE applies to all inputs.

(NOTE) The current color mode setting status can be confirmed by the display color of the character string at the very top of the screen.

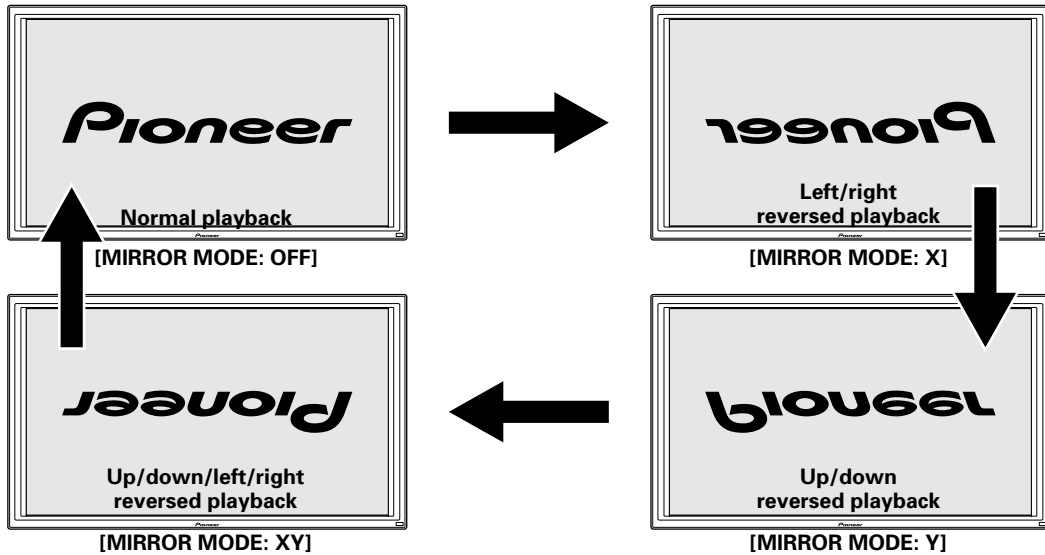
White: COLOR MODE: MODE 1

Yellow: COLOR MODE: MODE 2

**18) Setting MIRROR MODE**

This function permits displayed images to be reversed in various ways.

- Normal playback → MIRROR MODE: OFF
- Left-right reversed playback → MIRROR MODE: X
- Up-down reversed playback → MIRROR MODE: Y
- Up-down, left-right reversed playback → MIRROR MODE: XY



The MIRROR MODE: XY setting is useful for smart cable arrangement, making it possible to draw bundled cables upward (towards the ceiling) when the display is mounted upside-down using ceiling suspension hardware (PDK-5012).

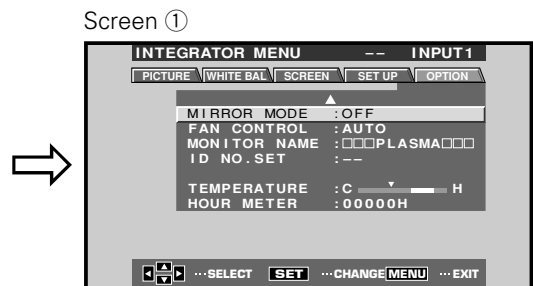
(NOTE) In using the PDK-5012 hardware, observe the operating temperature restrictions and other limitations specified in section 4.8, "Plasma Display Ceiling Suspension Hardware: PDK-5012."

Factory preset : MIRROR MODE: OFF

- ① Enter integrator mode.  
(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

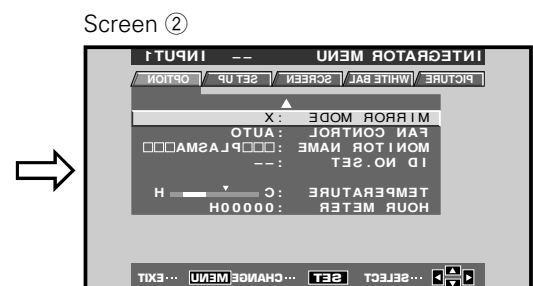
Select OPTION.



- ② Move the cursor to MIRROR MODE and use the SET button to change the setting.

Each time the SET button is pressed, the setting will change as follows: OFF → X → Y → XY → ...

MIRROR MODE applies to all inputs (INPUT1~5).



# Integrator Mode

## 19) Setting the cooling fan control formula

The back of the main unit is equipped with cooling fans.

This function switches the control formats of the cooling fans.

- To use the internal temperature sensor to automatically control fans → select AUTO
- To set a fixed number of maximum revolutions (thus cutting automatic control) → set MAX

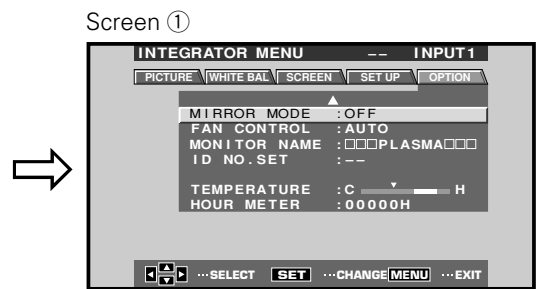
(NOTE) The MAX setting is useful when special installation applies.  
However, as fan rotation noise will be substantial, this setting should be used carefully in consideration of the surrounding environment (particularly if the unit is installed in a quiet place).  
For more details on installation, see Chapter 3, "Installation."

Factory preset : AUTO

- ① Enter integrator mode.  
(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

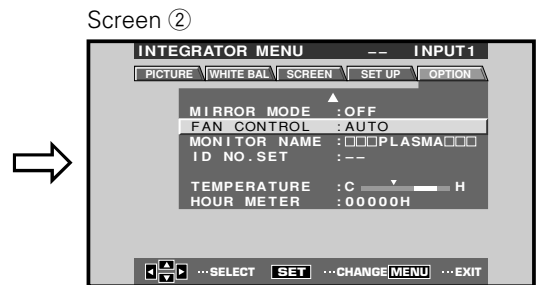
Select OPTION.



- ② Move the cursor to FAN CONTROL and use the SET button to change the setting.

Each time the SET button is pressed, the setting will switch between AUTO and MAX.

FAN CONTROL applies to all inputs (INPUT1~5).





## 20) Assigning a name to the monitor

The plasma display can have a 12 digit alphanumeric name assigned. This naming capability was designed to facilitate easier management, control and accounting of multiple plasma display. Using the GET commands can retrieve the assigned alphanumeric name and other operational information (RS-232C Adjustment Mode, page 180).

Only one name can be assigned per monitor, however each input can also have a custom alphanumeric name assigned.

Factory preset : □□□PLASMA□□□□

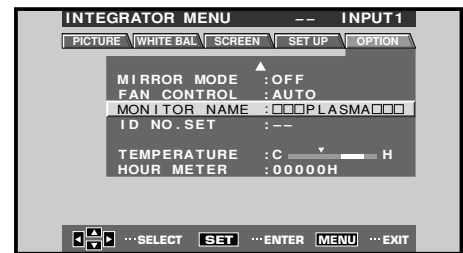
### ① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select MONITOR NAME under OPTION.

Screen ①



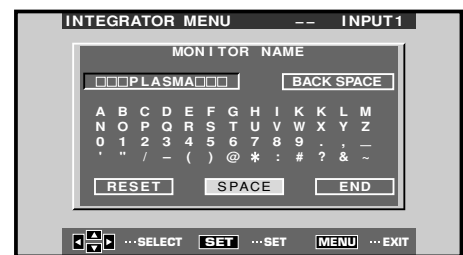
### ② Move the cursor to the first character and press the SET button. (Repeat this process to select all 12 characters.)

- Any of the 52 characters displayed on the menu screen can be used.
- When you select a character and then press the SET button, the input point will advance one character.
- If you make a mistake, select **BACK SPACE** and press the SET button. This will move the input point back one character.
- To restore the display to the initial setting (PLASMA), select **RESET** and press the SET button.

After you have finished inputting characters, move the cursor to **END** and press the SET button.

MONITOR NAME applies to all inputs.

Screen ②



## Integrator Mode

### 21) Assigning an ID

Here, an ID is assigned necessary for making adjustments in RS-232C adjustment mode.  
For details, see 5.5, "RS-232C adjustment mode."

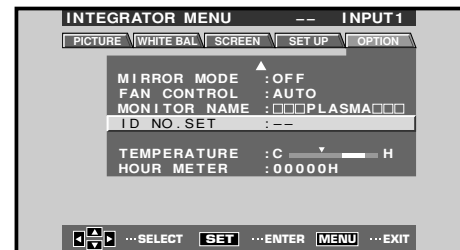
Factory preset : --

- Enter integrator mode.  
(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select ID NO. SET under OPTION.

Screen ①



- Use the ◀ and ▶ buttons to select the appropriate digit, then use the ▲ and ▼ buttons to change the numerical values and press the SET button to set the value.

IDs can be set from 00 to FF.

Screen ②



### 22) Input settings when using a video card other than the PDA-5002

Make settings in accordance with the input signals from the video card provided.  
For details, see the instruction manual on video cards.

(NOTE) These settings may not be accessed or adjusted or if unsupported by the expansion video card.

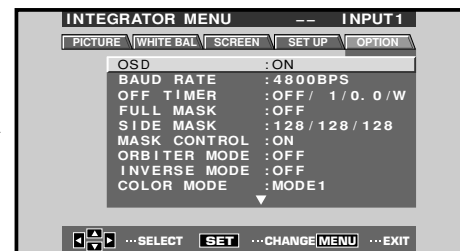
Factory preset : VIDEO (RGB)

- Enter integrator mode.  
(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.

Screen ①

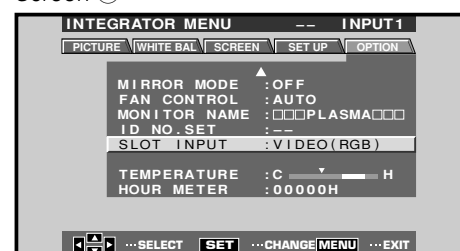


- Move the cursor to SLOT INPUT and then use the SET button to change the setting.

Each time the SET button is pressed, the setting will change as follows: VIDEO (RGB) → COMPONENT1 → COMPONENT2 → ...

SLOT INPUT applies to all input.

Screen ②



## 23) Simple checking of internal temperature

This function enables the unit's internal temperature to be **easily** checked using the level meter indicator.

When the indicator is green → internal temperature is normal.

When the indicator is yellow or red → internal temperature is slightly high. Turn OFF the power supply once, confirm installation status immediately, and then use air conditioning or the like to counteract the heat radiation.

### CAUTION

When checking the internal temperature, conduct aging thoroughly, just as before making adjustments. (Minimum: 30 min. with a 100% white signal.)

The same applies to checking the effect of countermeasures to heat radiation.

For more details, see Chapter 3, "Installation site requirements"

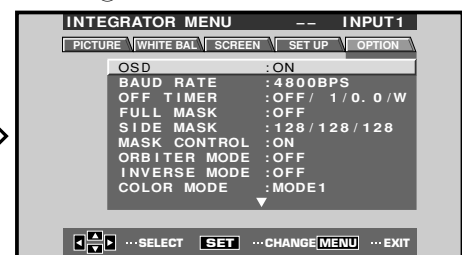
- ① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.

Screen ①

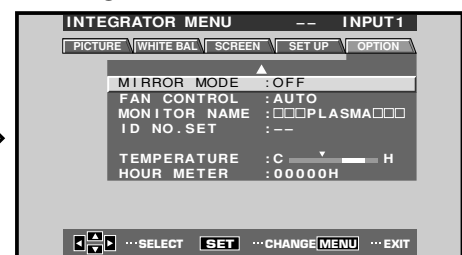


- ② Use TEMPERATURE to check the internal temperature.

Temperature can also be checked by pushing the DISPLAY button for 2 seconds or more in display call.

(See 5.2.1, "about normal operating mode")

Screen ②



## 24) Checking the accumulated ON time

This function displays the accumulated time (in 1-hour units) for which the unit has been receiving power.

### CAUTION

The accumulated time does not include the time when the unit is in standby mode.

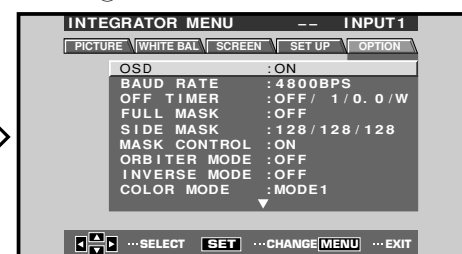
- ① Enter integrator mode.

(See 5.4.1, "About the integrator mode.")

The set ID will be displayed on the upper right where the "--" mark is.

Select OPTION.

Screen ①

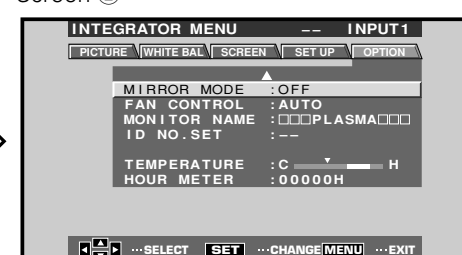


- ② Use HOUR METER to check the accumulated ON time.

The accumulated ON time can also be checked by pushing the DISPLAY button for 2 seconds or more in display call.

(See 5.2.1, "About normal operating mode.")

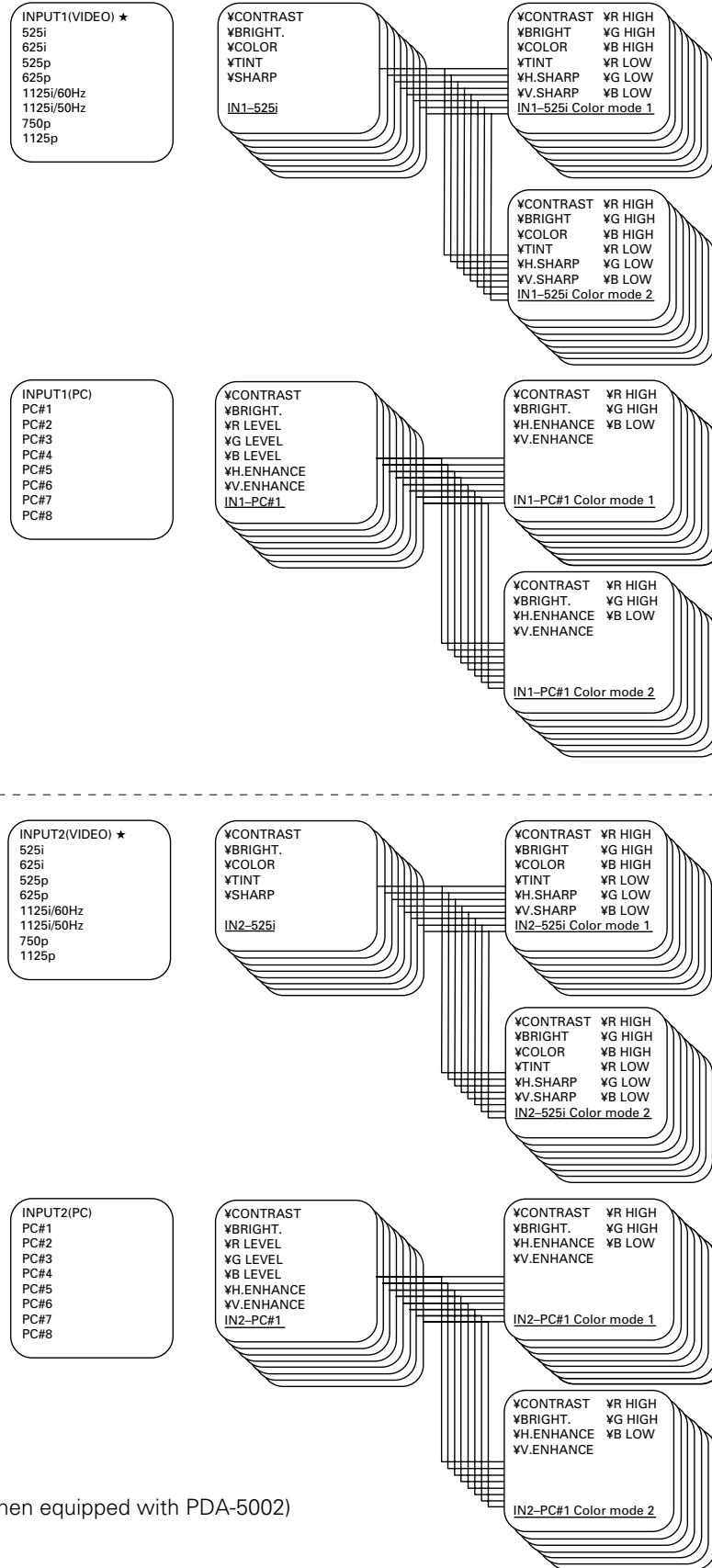
Screen ②



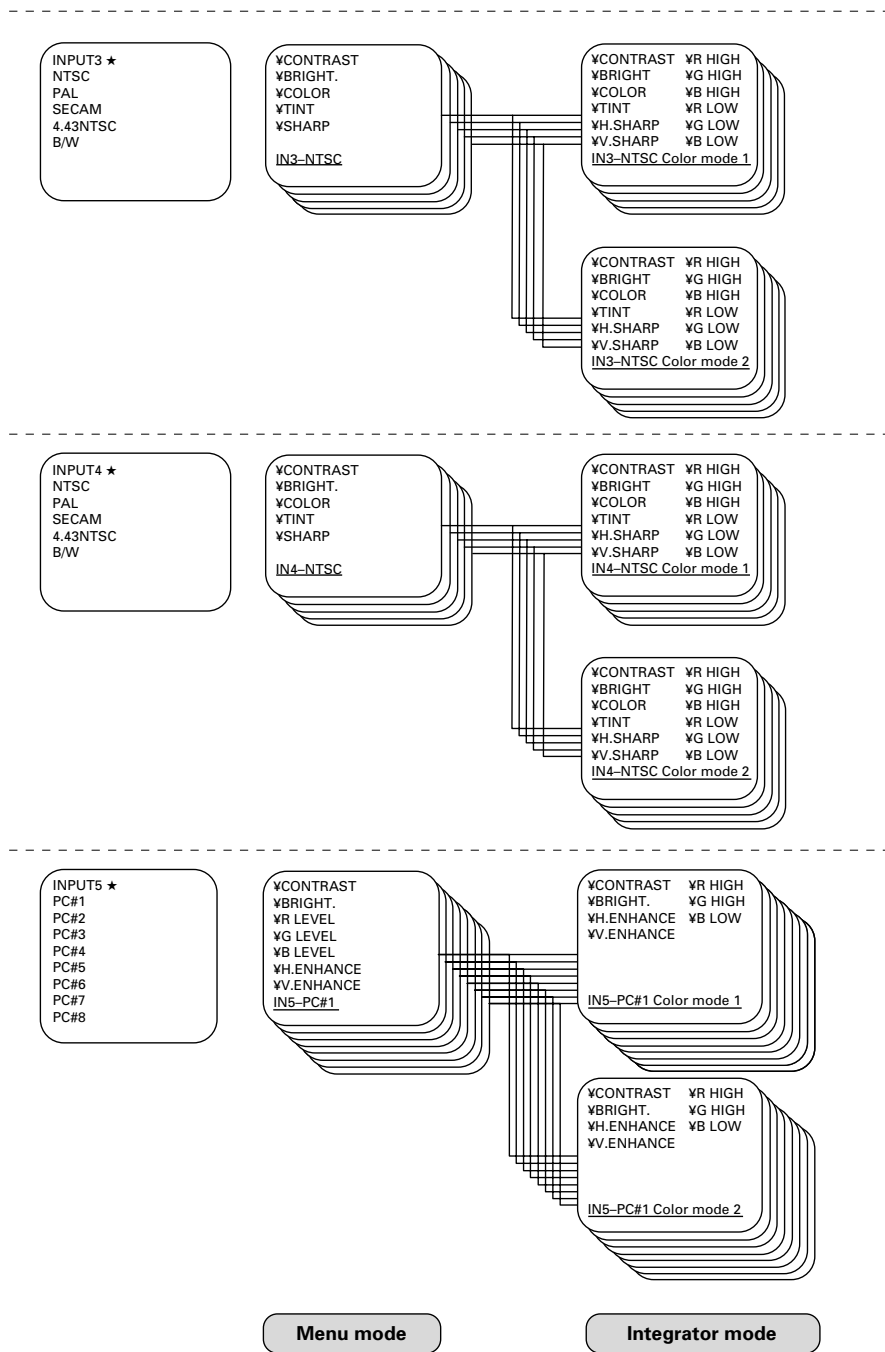
# Integrator Mode

## 5.4.4 PICTURE and WHITE BALANCE adjustment values memory area tables

The memory area PICTURE and WHITE BALANCE adjustment values have the layout shown below. Adjustment in memory mode uses the same memory as Color mode 1, and 2. The adjustment values in integrator mode are stored in parts of memory separate from that for color mode 1 and 2.



★: applies only when equipped with PDA-5002)

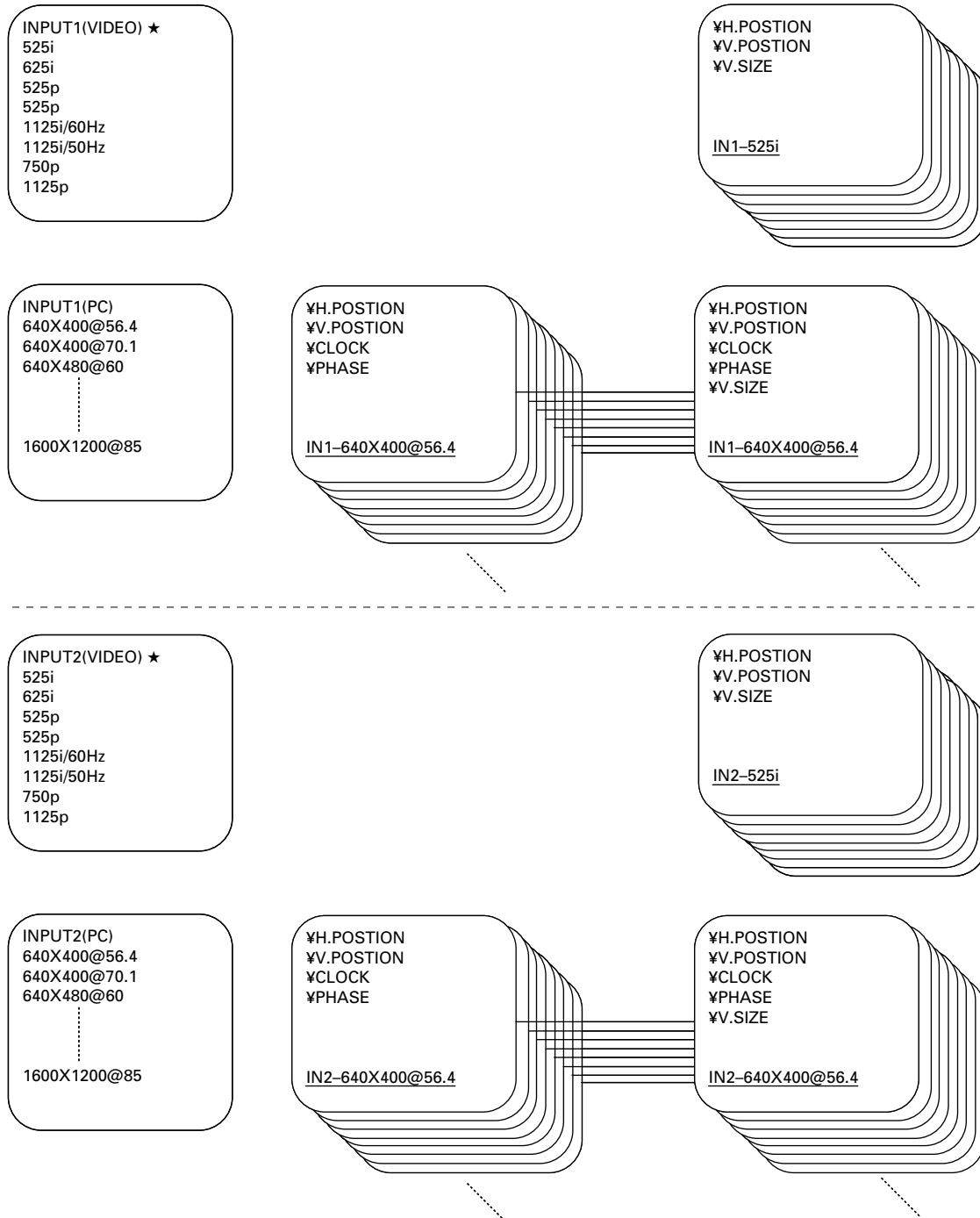


★: applies only when equipped with PDA-5002)

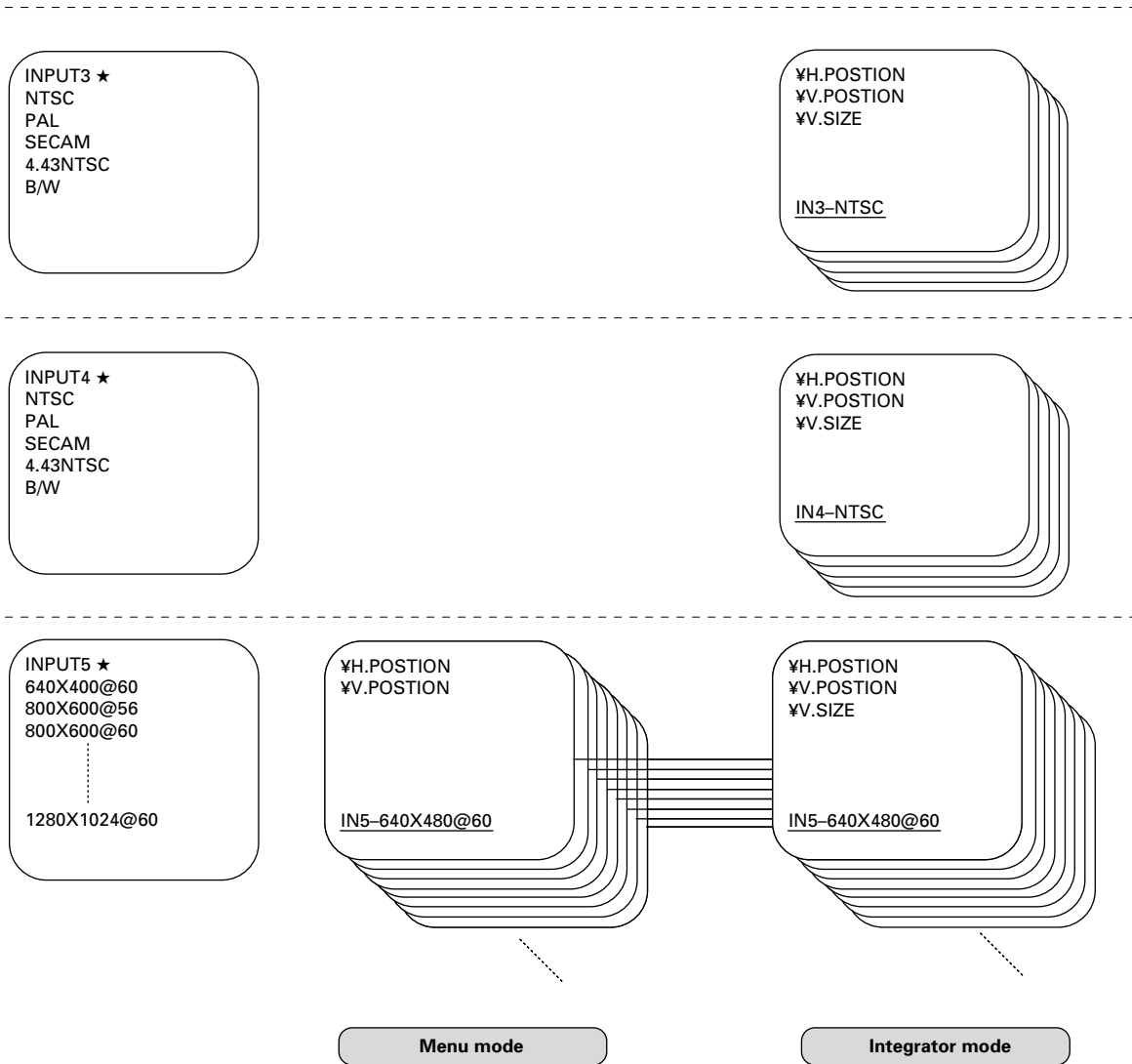
# Integrator Mode

## 5.4.5 SCREEN adjustment values area tables

SCREEN adjustment value memory areas are laid out as shown below.  
 During video signal input, SCREEN adjustment cannot be done in Menu mode.



★: applies only when equipped with PDA-5002)



★: applies only when equipped with PDA-5002)

## RS-232C Adjustment Mode

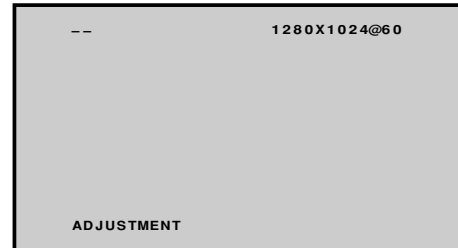
---

### 5.5 RS-232C Adjustment Mode

Through the unit's RS-232C terminal. You can use a PC to make various adjustments and settings.

#### 5.5.1 About the RS-232C adjustment mode

- 1) When carrying out adjustments in the RS-232C adjustment mode
  - The data is written into the same memory area as for integrator mode (refer to 5.4.4 and 5.4.5 'Memory area tables').
- 2) Screens displayed in the RS-232C Adjustment Mode
  - The display will appear much like the illustration to the right. The ID number of the set of adjustments will be indicated in the upper left corner of the screen, where "--" is shown in the illustration.



#### CAUTION

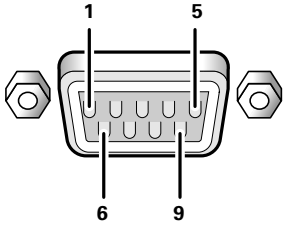
- (1) Always enter ID before using RS-232C adjustment mode.  
In addition, include the ID of the set to be targeted for control/adjustment in the RS-232C command that you transmit. Refer to section 5.5.2, "Interface".
- (2) Some RS-232C commands can be used in normal operating mode. Refer to section 5.5.4, "List of RS-232C commands".
- (3) The adjustment data and set items from RS-232C adjustment mode include items that are not considered to be items stored in last memory.  
For details, see "5.5.4 List of RS-232C commands." A precondition for storing them in last memory is that all conditions in "5.1.5 Last Memory" have been satisfied.  
Please take due care.
- (4) About <DIN>/<DIY> (OSD displays disabled/enabled)  
No matter what the settings, the following items may be displayed.
  - Menu display (Menu mode and integrator mode)
  - Warning just before the Auto Power Off or Power Management come on
  - Warning of high internal temperature or other problem
  - Display announcing KEY LOCK is set; also display announcing the setting of KEY LOCK/UNLOCK
  - Display call (including holding a button down)
- (5) RS-232C adjustment mode is automatically canceled when the STANDBY/ON, MENU, or KEY LOCK/UNLOCK (main unit operating panel only) are pushed.



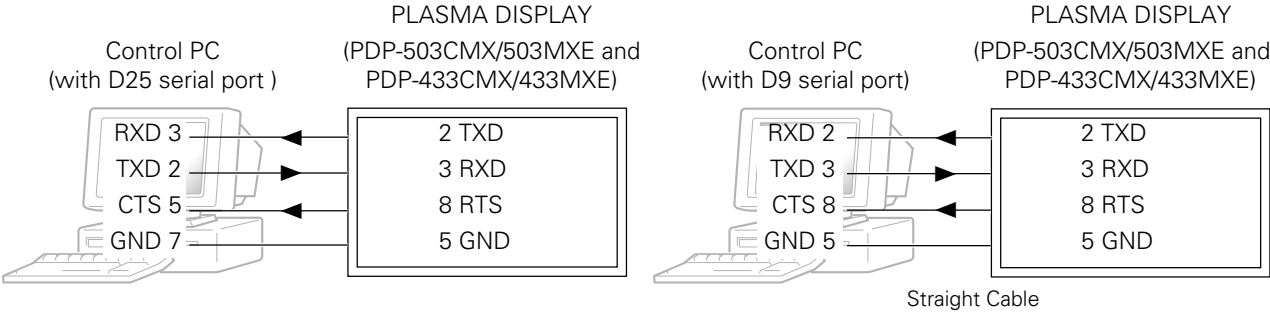
5.5.2 Interface

- 1) Connector  
D-sub 9 pins
- 2) Pin layout

Pin No.	Signal
1	NC (not connected)
2	TxD (Transmit Data)
3	RxD (Receive Data)
4	NC (not connected)
5	GND
6	NC (not connected)
7	NC (not connected)
8	RTS (Request To Send)
9	NC (not connected)



- 3) Baud Rate  
4800 bps (standard)  
(switch-able to 1200, 2400, 9600, 19200, 38400 bps)  
(NOTE) Set the baud rate to match that of the computer presently in use. Moreover, in the case that the RS-232C cable is very long, we recommend that you make the baud rate lower.
- 4) Data Format  
Start: 1-bit  
Data: 8-bit  
Parity: 0 (no parity)  
Stop: 1-bit
- 5) Connection



\* D-sub 9-pin/D-sub 25-pin conversion tables are now available on the market.

(NOTE) As computer manufactures may not use the same pin assignments. In case of communication difficulties, please check pin functions not just pin numbers.

- 6) Protocol  
From computer to plasma display

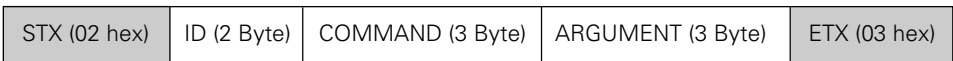
(1) When transmitting commands individually



(2) When transmitting commands in batches (up to max. 3 commands) .... (NOTE)



(3) When transmitting direct numeric commands



## RS-232C Adjustment Mode

---

(Note) Transmit the following commands one at a time.

Transmit the next command after waiting at least the following waiting times

### Power ON/OFF commands

Command	Function	Waiting time (seconds)
PON	Perform power ON	6
POF	Perform power standby	6

### Function switching command

Command	Function	Waiting time (seconds)
IN1 ~ IN5	Function switching	3

### Commands accompanying signal mode switching

Command	Function	Waiting time (seconds)
BBY	Set the input setting to VIDEO:RGB	3
PCY	Set the input setting to PC (VGA or XGA)	3
PWY	Set the input setting to PC (WVGA or WXGA)	3
CP1	Set the input setting to VIDEO:COMPONENT1	3
CP2	Set the input setting to VIDEO:COMPONENT2	3
TVA	Set the color system to AUTO	3
NTS	Set the color system to NTSC	3
PAL	Set the color system to PAL	3
SCM	Set the color system to SECAM	3
NT4	Set the color system to 4.43NTSC	3

### GET commands

Command	Function	Waiting time (seconds)
GPS	Output position adjustment data to TXD	2
GWB	Output picture and white balance data to TXD	2
GSS	Output SET UP setting to TXD	2
GSO	Output the OPTION setting to TXD	2

Error Example 1)

STX	ID	<PON>	<AJY>	<CNT>	ETX
-----	----	-------	-------	-------	-----

Error Example 2)

STX	ID	<POF>	<PON>	ETX
-----	----	-------	-------	-----

Error Example 3)

STX	ID	<IN2>	<AJY>	<CNT>	ETX
-----	----	-------	-------	-------	-----

Error Example 4)

STX	ID	<GWB>	<CNT>	ETX
-----	----	-------	-------	-----

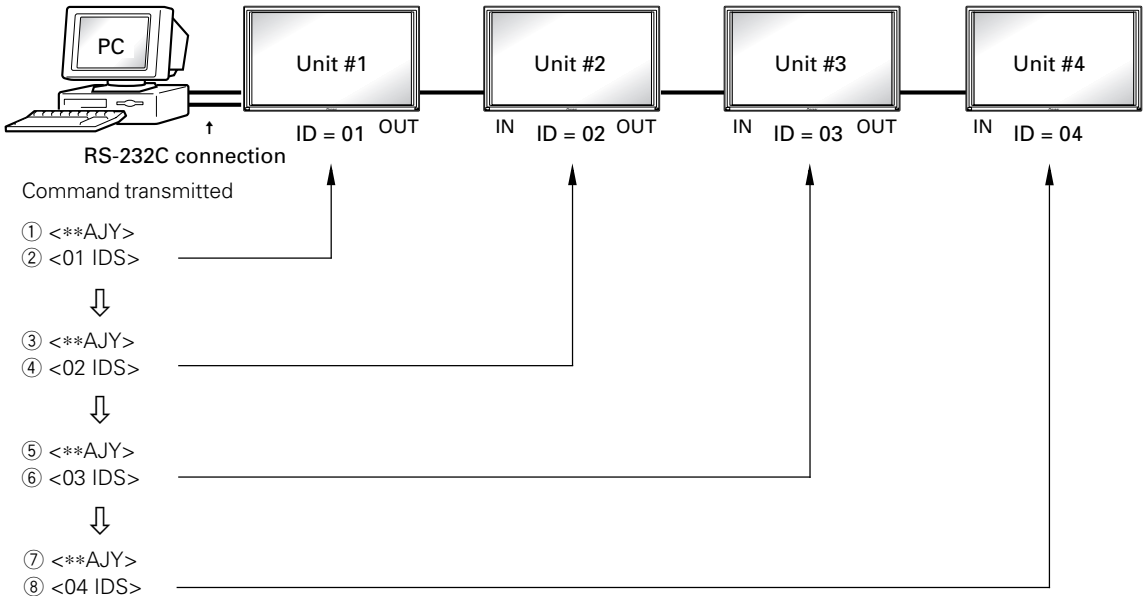
**5.5.3 ID assignment**

When a connection is made, this feature assigns an ID. ID assignment is performed in the PC.

Commands: <IDC> (ID CLEAR) ..... Clears assigned IDs.  
 <IDS> (ID SET) ..... Assigns IDs  
 IDS is only effective when an ID has not been assigned.  
 It is assigned from a unit close to the PC.

Example: 4 units (At first, the ID is assigned at the PC.)

First of all, following the example in the diagram below, carry out the RS-232C connection and the combination connection (see "5.6 Combination connection").



By sending RS-232C commands in this order, you can assign an ID to each set.

A unit to which an ID has been assigned can only receive commands which have that ID attached. Attach ID to the beginning of commands before transmitting them.

Characters that may be used when assigning IDs are 0~9 and A~F (there is no differentiation between uppercase and lowercase letters).

- <A\*\*IDC> : Clear assigned ID of all units.
- <A\*1AJY> : Units with 1 as the second digit in their ID will go into adjustment mode.
- <A\*2IN1> : Units with 2 as their first digit will use INPUT 1.

**Cautionary notes regarding ID assignment**

Units connected to other units from which IDs were cleared will become inoperable by RS-232C.

After making settings as in the diagram above, if you carry out <A\*\*AJY> → <A\*\*IDC> then the IDs will be cleared for all of the sets #1~#4, and it will become such that you can only control the set connected directly to the PC (set #1). If you then carry out <A\*\*AJY> → <01 IDS>, it will become such that you can only control the second set (set #2). By setting ID likewise thereafter, the setting of subsequent units will become operable.

## RS-232 Adjustment Mode

### 5.5.4 List of RS-232C commands

#### How to read this table

- RS-232C adjustment validity : Shows availability in RS-232C adjustment mode.
- Normal validity : Shows availability in normal operating mode.  
Valid commands can be used even if they do not follow the sending of the AJY command.
- Numerical direct validity : Shows commands that, if transmitted followed by 3-digit numbers, can directly set the adjustment value.
- Up/Down validity : Shows whether or not a command, if transmitted followed by Upn/DWn (with n a number from 0 to 9), can or cannot increase the adjusted value by that number alone.  
○ or ● : Valid    × : Invalid

(NOTE) ● = Not put into last memory

	Command Name	Full Name	RS-232C Adjustment Validity	Normal Validity	Numerical Direct Validity	Up/Down Validity	Function
A	AJN	ADJUST NO	●	×	×	×	Terminates RS-232C adjustment mode.
	AJY	ADJUST YES	×	●	×	×	Initiates RS-232C adjustment mode.
	AMN	AUDIO MUTE NO	●	●	×	×	Turns audio mute OFF.
	AMY	AUDIO MUTE YES	●	●	×	×	Turns audio mute ON.
B	BBY	VIDEO RGB YES	○	×	×	×	Sets input setting to VIDEO SIGNAL: RGB.
	BHI	B HIGH	○	×	○	○	Adjusts BLUE HIGH-LIGHT.
	BLW	B LOW	○	×	○	○	Adjusts BLUE LOW-LIGHT.
	BR1	BAUD RATE1	○	×	×	×	Sets RS-232C baud rate to 1200bps.
	BR2	BAUD RATE2	○	×	×	×	Sets RS-232C baud rate to 2400bps.
	BR3	BAUD RATE3	○	×	×	×	Sets RS-232C baud rate to 4800bps.
	BR4	BAUD RATE4	○	×	×	×	Sets RS-232C baud rate to 9600bps.
	BR5	BAUD RATE5	○	×	×	×	Sets RS-232C baud rate to 19200bps.
	BR6	BAUD RATE6	○	×	×	×	Sets RS-232C baud rate to 38400bps.
	BRT	BRIGHTNESS	○	×	○	○	Adjusts brightness.
BSL	B SIDE MASK LEVEL	○	×	○	○	Adjusts BLUE SIDE MASK LEVEL.	
C	CFR	CLOCK FREQUENCY	○	×	○	○	Adjusts clock frequency.
	CL1	CLAMP MODE1	○	×	×	×	Sets clamp position to AUTO.
	CL2	CLAMP MODE2	○	×	×	×	Fixes clamp setting position.
	CM1	COLOR MODE 1	○	○	×	×	Sets COLOR MODE 1.
	CM2	COLOR MODE 2	○	○	×	×	Sets COLOR MODE 2 (retake).
	CNT	CONTRAST	○	×	○	○	Adjusts contrast.
	COL	COLOR	○	×	○	○	Adjusts color.
	CP1	VIDEO COMPONENT1	○	×	×	×	Sets signal format to COMPONENT 1.
	CP2	VIDEO COMPONENT2	○	×	×	×	Sets signal format to COMPONENT 2.
	CPH	CLOCK PHASE	○	×	○	○	Adjusts clock phase.
	CT1	COLOR TEMP.1	○	×	×	×	Sets color temperature to LOW (equal to -3000K).
	CT2	COLOR TEMP.2	○	×	×	×	Sets color temperature to MID LOW (equal to -2000K).
	CT3	COLOR TEMP.3	○	×	×	×	Sets color temperature to MIDDLE (± 0K, standard).
	CT4	COLOR TEMP.4	○	×	×	×	Sets color temperature to MID HIGH (equal to +1000K).
	CT5	COLOR TEMP.5	○	×	×	×	Sets color temperature to HIGH (equal to +2000K).
D	DIN	OSD DISPLAY NO	○	○	×	×	Disables OSD displays.
	DIY	OSD DISPLAY YES	○	○	×	×	Enables OSD displays.
	DOF	DISPLAY OFF	●	●	×	×	Turns current OSD display OFF.
	DS2	DISPLAY2	○	×	×	×	Displays current information.
	DSP	DISPLAY	○	×	×	×	Displays current input signal information.
	DW0	DOWN 10	○	×	-	-	Reduces adjustment value by 10.
	DW n	DOWN n	○	×	-	-	Reduces adjustment value by n.
	DWF	DOWN FULL	○	×	-	-	Reduces adjustment value to minimum.
F	FCA	FAN CONTROL AUTO	○	×	×	×	Puts control of fan's rotation on AUTO.
	FCM	FAN CONTROL MAX	○	×	×	×	Puts control of fan's rotation on MAX.
	FMB	FULL MASK BLUE	○	×	×	×	Turns full mask blue on.
	FMG	FULL MASK GREEN	○	×	×	×	Turns full mask green on.
	FMN	FULL MASK NO	○	×	×	×	Releases full mask.
	FMR	FULL MASK RED	○	×	×	×	Turns full mask red on.
	FMY	FULL MASK YES	○	×	×	×	Turns full mask white on.
	FRP	FRESH POSITION	○	×	×	×	Initializes position adjustment data.
	FXO	FIX OUTPUT	○	×	×	×	Fixes sound output.

## RS-232C Adjustment Mode

	Command Name	Full Name	RS-232C Adjustment Validity	Normal Validity	Numerical Direct Validity	Up/Down Validity	Function
G	GHI	G HIGH	○	×	○	○	Adjusts GREEN HIGH-LIGHT.
	GLW	G LOW	○	×	○	○	Adjusts GREEN LOW-LIGHT.
	GPS	GET POSITION DATA	○	○	×	×	Outputs position data as TxD.
	GSL	G SIDE MASK LEVEL	○	×	○	○	Adjusts GREEN SIDE MASK LEVEL.
	GSO	GET STATUS OPTION	●	●	×	×	Outputs OPTION-related data as TxD.
	GSS	GET STATUS SET UP	●	●	×	×	Outputs SET UP-related data as TxD.
	GWB	GET WHITE BALANCE	●	●	×	×	Outputs image quality and white balance adjustment data as TxD.
H	H35	HDTV MODE 1035i	○	×	×	×	Sets HDTV mode to 1035i.
	H80	HDTV MODE 1080i	○	×	×	×	Sets HDTV mode to 1080i.
	HCN	HIGH CONTRAST NO	○	×	×	×	Turns high-contrast setting OFF.
	HCY	HIGH CONTRAST YES	○	×	×	×	Turns high-contrast setting ON.
	HMD	HOUR METER DISP.	○	×	×	×	Displays hour meter.
	HPS	HORIZONTAL POSITION	○	×	○	○	Adjusts horizontal position.
I	IDC	ID CLEAR	○	×	×	×	Clears ID.
	IDS	ID SET	○	×	○	×	Sets ID.
	IN1	INPUT1	○	○	×	×	Selects INPUT1.
	IN2	INPUT2	○	○	×	×	Selects INPUT2.
	IN3	INPUT3	○	○	×	×	Selects INPUT3.
	IN4	INPUT4	○	○	×	×	Selects INPUT4.
	IN5	INPUT5	○	○	×	×	Selects INPUT5.
K	KLN	KEY LOCK NO	○	×	×	×	Enables unit's keys/remote control.
	KLY	KEY LOCK YES	○	×	×	×	Disables unit's keys/remote control.
M	MCN	MASK CONTROL NO	○	×	×	×	Releases automatic mask position control setting.
	MCY	MASK CONTROL YES	○	×	×	×	Applies automatic mask position control setting.
	MG1	MAGNIFY LEFT UPPER	○	×	×	×	Sets 4-screen magnification setting to LEFT UPPER.
	MG2	MAGNIFY LEFT LOWER	○	×	×	×	Sets 4-screen magnification setting to LEFT LOWER.
	MG3	MAGNIFY RIGHT UPPER	○	×	×	×	Sets 4-screen magnification setting to RIGHT UPPER.
	MG4	MAGNIFY RIGHT LOWER	○	×	×	×	Sets 4-screen magnification setting to RIGHT LOWER.
	MGN	MAGNIFY NO	○	○	×	×	Turns 4-screen magnification OFF.
	MGY	MAGNIFY YES	○	○	×	×	Turns 4-screen magnification ON.
	MMN	MIRROR MODE NO	○	●	×	×	Turns mirror mode OFF (regular display).
	MMX	MIRROR MODE X	○	●	×	×	Displays left and right reversed.
	MMY	MIRROR MODE Y	○	●	×	×	Displays top and bottom reversed.
	MMZ	MIRROR MODE XY	○	●	×	×	Displays top, bottom, left and right reversed.
	MTN	VIDEO MUTE NO	●	●	×	×	Turns video mute OFF.
MTY	VIDEO MUTE YES	●	●	×	×	Turns video mute ON.	
N	NMN	NEGATIVE MODE NO	○	×	×	×	Turns inverse mode (negative-positive reversal) OFF.
	NMY	NEGATIVE MODE YES	○	×	×	×	Turns inverse mode (negative-positive reversal) ON.
	NRH	DIGITAL NR HIGH	○	×	×	×	Sets DIGITAL NR to HIGH.
	NRL	DIGITAL NR LOW	○	×	×	×	Sets DIGITAL NR to LOW.
	NRM	DIGITAL NR MIDDLE	○	×	×	×	Sets DIGITAL NR to MIDDLE.
	NRN	DIGITAL NR OFF	○	×	×	×	Turns DIGITAL NR OFF.
	NT4	COLOR SYSTEM 4.43NTSC	○	×	×	×	Sets COLOR SYSTEM to 4.43NTSC.
	NTS	COLOR SYSTEM NTSC	○	×	×	×	Sets COLOR SYSTEM to NTSC.
O	OMN	ORBITER MODE NO	○	×	×	×	Turns orbiter mode OFF.
	OMY	ORBITER MODE YES	○	×	×	×	Turns orbiter mode ON.
P	PAL	COLOR SYSTEM PAL	○	×	×	×	Sets COLOR SYSTEM to PAL.
	PCN	PC RGB NO	○	×	×	×	Sets input setting to video (SETTING: VIDEO).
	PCY	PC RGB YES	○	×	×	×	Sets input setting to 4.3 (SETTING: VGA or XGA).
	PLN	BRIGHT ENHANCE OFF	○	×	×	×	Turns center-brightness enhancement function OFF.
	PLY	BRIGHT ENHANCE ON	○	×	×	×	Turns center-brightness enhancement function ON.
	POF	POWER OFF	○	○	×	×	Turns power OFF.
	PON	POWER ON	○	○	×	×	Turns power ON.
	PS1	POWER SAVE MODE1	○	×	×	×	Sets AUTO POWER OFF to ON.
	PS2	POWER SAVE MODE2	○	×	×	×	Turns power management setting ON.
	PSN	POWER SAVE OFF	○	×	×	×	Turns AUTO POWER OFF/power management setting OFF.
	PUH	PURECINEMA HQ	○	×	×	×	Sets PURECINEMA to HY (high quality).
	PUN	PURECINEMA OFF	○	×	×	×	Turns PURECINEMA OFF.

## RS-232 Adjustment Mode

	Command Name	Full Name	RS-232C Adjustment Validity	Normal Validity	Numerical Direct Validity	Up/Down Validity	Function
P	PUS	PURECINEMA STANDARD	○	×	×	×	Sets PURECINEMA to STANDARD.
	PWL	POWER CONTROL MODE1	○	×	×	×	Sets power control setting to MODE1 (power-saving).
	PWN	POWER CONTROL STANDARD	○	×	×	×	Sets power control setting to STANDARD.
	PWS	POWER CONTROL MODE2	○	×	×	×	Sets power control setting to MODE2 (low deterioration).
	PWY	PC WIDE YES	○	×	×	×	Sets input setting to wide (SETTING: WVGA or WXGA).
R	RHI	R HIGH	○	×	○	○	Adjusts RED HIGH-LIGHT.
	RLW	R LOW	○	×	○	○	Adjusts RED LOW-LIGHT.
	RSL	R SIDE MASK LEVEL	○	×	○	○	Adjusts RED SIDE MASK LEVEL.
S	SCM	COLOR SYSTEM SECAM	○	×	×	×	Sets COLOR SYSTEM setting to SECAM.
	SHP	H.SHARP	○	×	○	○	Adjusts H.SHARP/H.ENHANCE.
	SHV	V.SHARP	○	×	○	○	Adjusts V.SHARP/V.ENHANCE.
	SLN	STILL NO	●	●	×	×	Releases image from stillness.
	SLY	STILL YES	●	●	×	×	Makes image still.
	SM0	SCREEN MODE 0	○	○	×	×	Sets screen size to DOT BY DOT.
	SM1	SCREEN MODE 1	○	○	×	×	Sets screen size to 4:3.
	SM2	SCREEN MODE 2	○	○	×	×	Sets screen size to FULL.
	SM3	SCREEN MODE 3	○	○	×	×	Sets screen size to ZOOM/PARTIAL.
	SM5	SCREEN MODE 5	○	○	×	×	Sets screen size to WIDE.
	STD	STANDARD W/B	○	×	×	×	Initializes image quality and white balance adjustment data.
	SV1 <sup>(NOTE)</sup>	SUB VOLUME INPUT1	○	×	○	○	Adjusts sub-volume. for INPUT1.
	SV2 <sup>(NOTE)</sup>	SUB VOLUME INPUT2	○	×	○	○	Adjusts sub-volume. for INPUT2.
	SV3 <sup>(NOTE)</sup>	SUB VOLUME INPUT3	○	×	○	○	Adjusts sub-volume. for INPUT3.
	SV4 <sup>(NOTE)</sup>	SUB VOLUME INPUT4	○	×	○	○	Adjusts sub-volume. for INPUT4.
SV5 <sup>(NOTE)</sup>	SUB VOLUME INPUT5	○	×	○	○	Adjusts sub-volume. for INPUT5.	
T	TNT	TINT	○	×	○	○	Adjusts TINT.
	TVA	COLOR SYSTEM AUTO	○	×	×	×	Sets COLOR SYSTEM to AUTO.
U	UP0	UP10	○	×	–	–	Increases adjustment value by 10.
	UP <sub>n</sub>	UP <sub>n</sub>	○	×	–	–	Increases adjustment value by n.
	UPF	UP FULL	○	×	–	–	Maximizes adjustment value.
V	VOL	VOLUME	○	○	○	○	Adjusts audio volume.
	VPS	VERTICAL POSITION	○	×	○	○	Adjusts vertical position.
	VRO	VARIABLE OUTPUT	○	×	×	×	Makes sound output variable.
	VSI	VERTICAL SIZE	○	×	○	○	Adjusts vertical size.
Y	YCM	3D Y/C MOTION	○	×	×	×	Sets 3D Y/C to MOTION.
	YCS	3D Y/C STILL	○	×	×	×	Sets 3D Y/C to still.

(NOTE) Make sure to use commands for adjusting sub-volume (SV1~5) after first switching to the prescribed input using the input switching commands (IN1~5).

**5.5.5 GET commands**

What are GET commands?

- They are commands used for TXD output of adjustment data and the like from the plasma display's built-in microcomputer to a personal computer.
- Adjustment data, etc., is output in ASCII code.  
(NOTE) Command names are given inside brackets < >.
- Data output format

STX (02hex)	Data	Data	....	Data	ETX (03hex)
-------------	------	------	------	------	-------------

(NOTE)

- 1) GET commands will be invalid if sets have not has not been assigned ID Nos.
- 2) GET commands will be invalid if a wildcard (\*) is used in the ID No. when the command is transmitted.

1) <GPS> (GET POSITION DATA) – SCREEN adjustment data will be output as follows.

Order	Data	Size	Remarks
1	H.POSITION	3byte	
2	V.POSITION	3byte	
3	CLOCK	3byte	(NOTE)
4	PHASE	3byte	(NOTE)
5	V.SIZE	3byte	

(NOTE) If the current input signal is a video signal or digital RGB signal, the adjustment data will be output as dummy data.

2) <GWB> (GET W/B DATA) – PICTURE and WHITE BALANCE adjustment data will be output as follows.

Order	Data	Size	Remarks
1	CONTRAST	3byte	
2	Dummy data	3byte	
3	BRIGHT	3byte	
4	Dummy data	3byte	
5	COLOR	3byte	(NOTE)
6	Dummy data	3byte	
7	TINT	3byte	(NOTE)
8	Dummy data	3byte	
9	R HIGH	3byte	
10	Dummy data	3byte	
11	G HIGH	3byte	
12	Dummy data	3byte	
13	B HIGH	3byte	
14	Dummy data	3byte	
15	R LOW	3byte	
16	Dummy data	3byte	
17	G LOW	3byte	
18	Dummy data	3byte	
19	B LOW	3byte	
20	Dummy data	3byte	
21	H.ENHANCE (H.SHARP)	3byte	
22	V.ENHANCE (V.SHARP)	3byte	

(NOTE) If the current input signal is from a personal computer, the adjustment data will be output as dummy data.

## RS-232C Adjustment Mode

3) <GSS> (GET STATUS SET UP) Set data for SET UP will be output as follows.

Order	Data	Size	Output	Remarks
1	COLOR TEMP	1byte	1: COLOR TEMP1 2: COLOR TEMP2 3: COLOR TEMP3 4: COLOR TEMP4 5: COLOR TEMP5	(NOTE)
2	DIGITAL NR	1byte	0: OFF 1: LOW 2: MIDDLE 3: HIGH	(NOTE)
3	HIGH CONTRAST	1byte	0: OFF, 1: ON	
4	PURECINEMA	3byte	Same as RS-232C command	(NOTE)
5	COLOR SYSTEM	3byte	Same as RS-232C command	(NOTE)
6	CLAMP POSITION	1byte	1: AUTO 2: LOCKED	(NOTE)
7	3D Y/C MODE	1byte	M: MOTION S: STILL	(NOTE)
8	SETTING/VIDEO SIGNAL	3byte	Same as RS-232C command	(NOTE)
9	2 X 2MODE	1byte	0: OFF 1 to 4: MG to MG4	
10	BRIGHT ENHANCE	1byte	0: OFF, 1: ON	
11	HDTV MODE	3byte	Same as RS-232C command	(NOTE)
12	VIDEO INPUT	1byte	1: COMPONENT1 2: COMPONENT2	(NOTE)
13	Input functions	3byte	IN*	
14	Screen size	1byte	0: DOT BY DOT 1: 4:3 2: FULL 3: ZOOM/PARTIAL 5: WIDE	
15	SUB VOLUME (INPUT1)	2byte	0 to 60	
16	SUB VOLUME (INPUT2)	2byte	0 to 60	
17	SUB VOLUME (INPUT3)	2byte	0 to 60	(NOTE)
18	SUB VOLUME (INPUT4)	2byte	0 to 60	(NOTE)
19	SUB VOLUME (INPUT5)	2byte	0 to 60	(NOTE)

(NOTE) For set data unrelated to the current input function, input signal and settings, dummy data will be output.



4) <GSO> (GET STATUS OPTION) Set data for OPTION will be output as follows.

Order	Data	Size	Output	Remarks
1	POWER CONTROL	3byte	Same as RS-232C command	
2	OSD display	1byte	0: OSD display disabled 1: OSD display enabled	
3	FULL MASK	3byte	Same as RS-232C command	
4	R SIDE MASK LEVEL	3byte	Adjustment value	
5	G SIDE MASK LEVEL	3byte	Adjustment value	
6	B SIDE MASK LEVEL	3byte	Adjustment value	
7	MASK CONTROL	1byte	0: Fixed, 1: Shifts	
8	ORBITER MODE	1byte	0: OFF, 1: ON	
9	INVERSE MODE	1byte	0: OFF, 1: ON	
10	COLOR MODE	1byte	1: COLOR MODE1 2: COLOR MODE2	
11	MIRROR MODE	1byte	X: Left-right reversal Y: Top-bottom reversal Z: Top-bottom and left-right reversal N: OFF	
12	FAN CONTROL	1byte	A: AUTO M: MAX	
13	MONITOR NAME	12byte		
14	SLOT INPUT	1byte	0: VIDEO (RGB) 1: COMPONENT1 2: COMPONENT2	(NOTE)
15	TEMPERATURE	3byte		
16	HOUR METER	5byte		
17	KEY LOCK	1byte	0: Lock released 1: Lock applied	

(NOTE) Dummy data will be output when the PDA-5002 is connected.

**TEMPERATURE (3 bytes)/2 + 5 = Outside air temperature (°C) sensor value**

(NOTE) Control the above sensor value so it does not exceed the values shown below.

PDP-503CMX/PDP-503MXE: 45

PDP-433CMX/PDP-433MXE: 53

**When installing it, measure the surrounding temperature to make sure that all conditions stipulated in surrounding temperature conditions in "3. Installation Environment" are satisfied. Be particularly sure to confirm this when installing it as stipulated in 3.5, 3.6 Special Installation.**

## Combination Connection

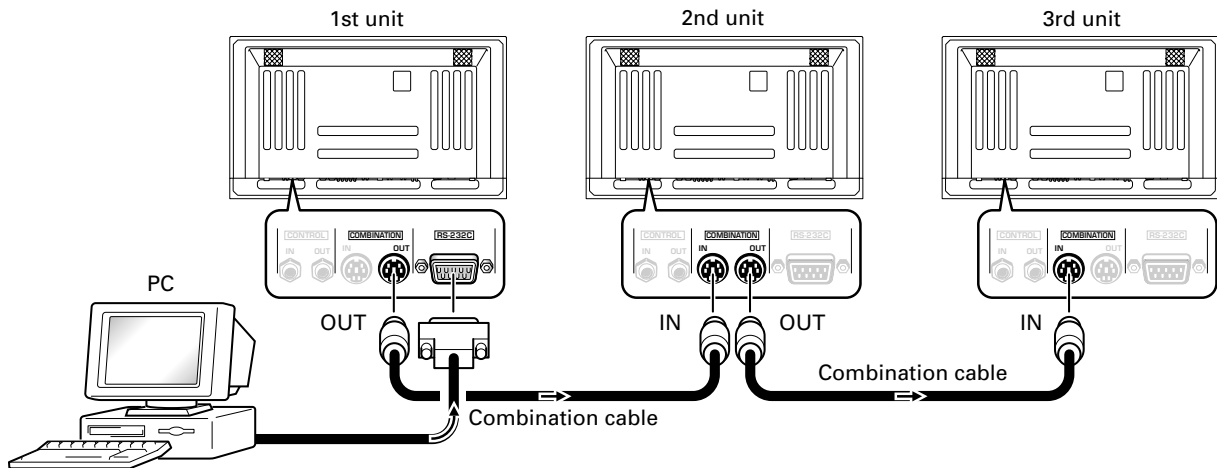
### 5.6 Combination Connection

This is useful for controlling/adjusting a number of sets from a single PC.

By carrying out combination connection and then assigning IDs to each of the sets, it becomes possible to control/adjust a number of sets either all at once or individually.

#### 5.6.1 Connections

Carry out connections as shown below. You can then control/adjust the units from the PC.



#### NOTE

You may use either combination input or control port RS-232C connector, but not both at once. Using both simultaneously will result in malfunction or system breakdown.

Don't connect combination inputs to other combination inputs, or combination outputs to other combination outputs. It may cause a trouble.

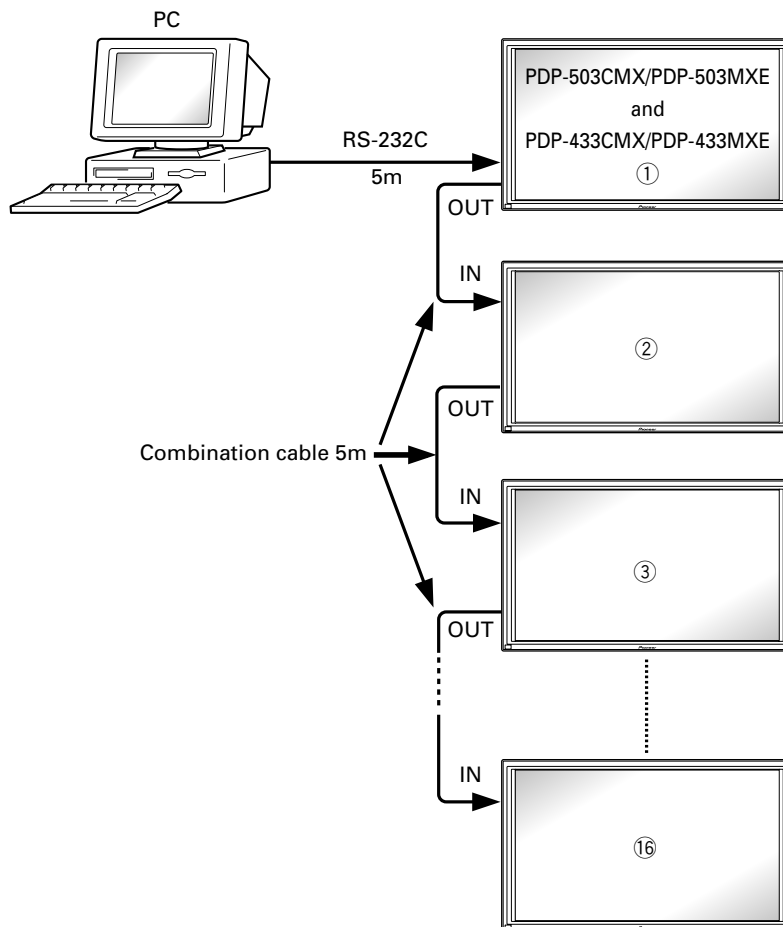
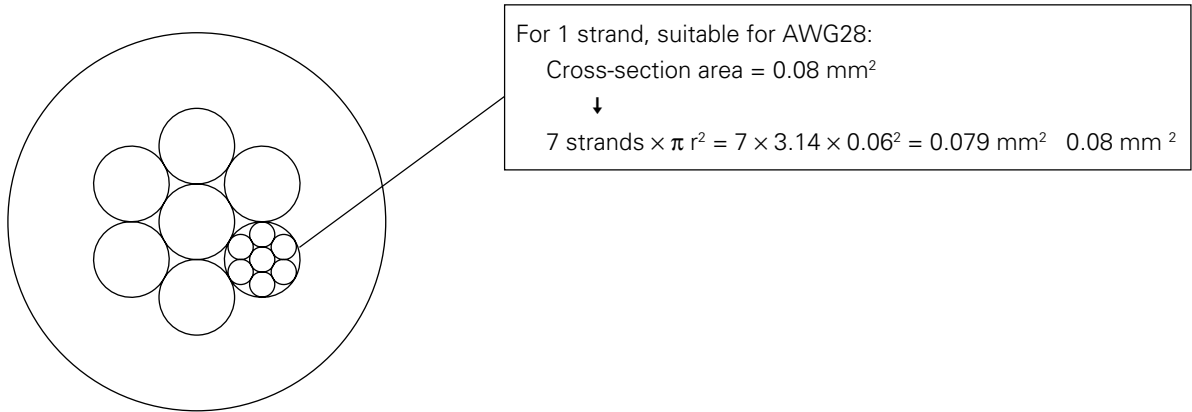
General purpose Mini Din 6-pin (straight) cables may be used as combination cables.

(NOTE) In order to output RS-232C signals from the combination OUT terminal, it is necessary to assign an ID. For more details see "5.5.3 ID Assignment".

## Combination Connection

If the following connection conditions are observed, extension of operations to as many as 16 units is guaranteed.

- Conditions:
- ① Length of RS-232C cable connecting PC to PDP-503CMX/PDP-503MXE and PDP-433CMX/PDP-433MXE: 5 m
  - ② Combination cable length: 5 m for each
  - ③ Wire specifications for linking cable: Mini Din 6-pin straight (7 strand cable)



(NOTE) Refer to section 2.3, "Controls and Connectors" regarding the number of units that can be connected when series connection is made while using a video output terminal (INPUT 1 or 4).

## KEY LOCK/UNLOCK

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### 5.7 KEY LOCK/UNLOCK

#### 5.7.1 Functions

The KEY LOCK function disables the remote control unit and the main unit operation panel, preventing unauthorized persons from tampering with the unit after installation (RS-232C commands remain effective). Attempting to operate the remote control unit or the main unit operation panel will cause "KEY LOCK" to be displayed in the upper right corner of the screen. The unit is factory preset to KEY UNLOCK, meaning that the remote control unit and main unit operation panel are both enabled.

#### 5.7.2 How to switch KEY LOCK/UNLOCK

Two settings methods are available:

- 1) With the operating panel of the main unit (A hidden button is provided for this purpose.)

Change the setting between KEY LOCK and KEY UNLOCK using the KEY LOCK/UNLOCK button hidden between the STANDBY/ON and INPUT buttons. Pressing the KEY LOCK/UNLOCK button while in menu mode or integrator mode automatically places the unit in normal operating mode and at the same time invokes the KEY LOCK status.

- 2) Using RS-232C Commands

Issue the <AJY> command to enter RS-232C adjustment mode. Then issue the <KLY> command to invoke KEY LOCK or the <KLN> command to invoke KEY UNLOCK.

### 5.8 Regarding the problem of images becoming burnt onto the screen

If the same image is shown on the screen for a prolonged period of time (i.e. a still picture or a closed-captioning etc.), then this image may become permanently burnt onto the screen. This problem can be managed by changing image composition, source rotation or other methods. Additionally, this unit also offers the following methods of reducing the likelihood of images from becoming burnt onto the screen.

① Setting the Mask control

Every time you turn the unit on, the built-in microcomputer moves the picture border randomly.

NOTE: This only applies when there is a side mask, for example with the 4:3 screen size.

② Automatic brightness adjustment (detection of still pictures)

This function detects pictures that have little or no movement and automatically adjusts the brightness.

③ Side mask adjustment

Side mask adjustment may be used to adjust the brightness of the area around the periphery of the display in which no picture is displayed when displaying images at 4:3 size or other reduced sizes, thus helping to prevent the burning of side mask border lines into the screen caused by differences in the brightness of displayed images and the side mask area. (Please refer to "5.4.3.4 Adjusting the side mask".)

Adjustment is also possible using RS-232C commands (please refer to "5.5.4 List of RS-232C commands").

④ Full mask (Full Screen Color Wash) setting

This function turns the entire screen a single color - white, red, green or blue - using a PDP internal signal (please refer to "5.4.3.10 Setting FULL MASK").

Setting is also possible using RS-232C commands (please refer to "5.5.4 List of RS-232C commands").

In the case that an image has been burnt onto the screen, FULL MASK can be used as an emergency measure to reduce the symptoms (although it will be impossible to completely remove the burnt-on image).

In addition, proper 'aging' of the screen through use of FULL MASK in advance will make the screen less prone to the problem of images becoming burnt onto it.

⑤ Power control setting

In this setting, image burning does not occur easily on parts of an overall dark screen where the peak brightness is not increased.

⑥ Orbiter mode setting

The display position on the screen is moved slightly.

⑦ Inverse mode (negative-positive reversal) setting

The image displayed is negative-positive reversed. It is an emergency measure taken in a case where a still image has been burnt onto the screen during display to reduce the symptoms. (It cannot completely remove the burnt-on image.)

## **Cautions on connecting camera images**

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### **5.9 Cautions on connecting camera images**

Connecting virtually still moving images such as the images of a monitor camera may damage the panel, reduce the service life or cause malfunction.

The picture quality must be set before connecting such images.

For instructions on setting the picture quality, contact the PIONEER sales department.

This setting is not required when connecting still images from a computer or digital camera.

### 6.1 Operating Precautions and recommendations

- 1) If the display shuts down on its own and will not power up again, please try the followings.  
Turn off the main power switch to the plasma display, wait for 1 or 2 minutes, then turn on the power again.  
If the display shuts down, there may be a internal problem, Consult with Pioneer Authorized Service Center.  
If it remains powered up, you may continue using it.
  
- 2) If the same image is shown on the screen for a prolonged period of time (i.e. a still picture or a closed-captioning, etc.), then this image may become permanently burnt onto the screen.  
This problem can be managed by changing image composition, source rotation or other methods.  
(NOTE) Please see section "5.8 Regarding the problem of images becoming burnt onto the screen" for details.
  
- 3) The following signals cause inferior image quality:
  - Multifold-generation video sources copy of VTR signals
  - Copyright protected signals
  - Scrambled CATV signals
  - Signals with significantly phase-shifted sync and video signals
  
- 4) This is normal./When the ambient temperature rises above 35 °C (this is a guideline), the fan will begin to spin, and as the temperature rises higher, the fan gradually spins faster. This is normal.
  
- 5) About the plasma panel's screen-saver feature (Direction of still images)  
Brightness will drop slightly when photo images or slow-moving images, such as those supplied by a PC, are shown for extended periods. The unit detects the lack of motion, and automatically dims the screen brightness to protect the plasma display panel. This is normal and does not indicate a problem.
  - The feature generally kicks in approximately three minutes after powering-up or switching input in normal operating mode/menu mode.

# Maintenance and Cleaning

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## 1) Unplug the power cord from the outlet.

## 2) Cabinet and remote control unit

Never use solvents such as benzene or thinner, which can damage or destroy the coating on the cabinet or the remote control unit.

Remove dirt by lightly wiping with a soft cloth.

If necessary, slightly moisten the cloth with neutral detergent, diluted with water. In humid conditions, wipe off condensation with a dry cloth.

## 3) Screen (front protection panel)

The screen surface (front protection panel) is coated with a delicate anti-glare material. To clean the screen dust off and wipe lightly with a soft cloth. Do not rub with tissue paper or hard abrasive materials.

Never use solvents such as benzene or thinner, which can discolor the screen or render it opaque.

For cleaning, we recommend the following cloth and fluid.

Name	Part Number
Cleaning cloth, wiping cloth	AED1197
Cleaning cloth: Minimax	GED-009
Cleaning liquid: B4	GEM1004

For light soiling, brush off dust and lightly wipe with Minimax. In case of heavy soiling, brush off dust, then wipe with Minimax with its corner lightly moistened with B4. Be sure to wipe with dry Minimax after B4 dries out as there may be unevenness remaining otherwise.

## 4) Vents

Every month, remove dirt from the vent openings that house fans on the sides and rear of the main unit, using a vacuum cleaner set to its lowest suction setting. Be sure to switch off the power on the main unit before cleaning the vents.

Blocked vents can lead to dangerously high internal temperatures, resulting in malfunctions or fire.

## 5) Readjustment of White Balance

The unit uses phosphor elements, as do CRTs. These phosphors degrade over time, reducing brightness. Since green and blue phosphors degrade faster than red, we recommend readjusting the white balance every 1000 hours.