

Operating Instructions

Thank you very much for purchasing this PIONEER product. Before using your Plasma Display, please carefully read the "Important Information" and these "Operating Instructions" so you will know how to operate the Plasma Display properly. Keep this manual in a safe place. You will find it useful in the future.

Notes on Installation Work:

This product is marketed assuming that it is installed by qualified personnel with enough skill and competence. Always have an installation specialist or your dealer install and set up the product. PIONEER cannot assume liabilities for damage caused by mistake in installation or routing, misuse, modification or a natural disaster.

Note for Dealers:

After installation, be sure to deliver this manual to the customer and explain to the customer how to handle the product.

Important Information

Precautions

Please read this manual carefully before using your plasma monitor and keep the manual handy for future reference.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS, UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Warning

Not for use in a computer room as defined in the Standard for the Protection of Electronic Computer/ Data Processing Equipment ANSI/NFPA 75.

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

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

Warnings and Safety Precaution

This plasma monitor is designed and manufactured to provide long, trouble-free service. No maintenance other than cleaning is required. Please see the section "Plasma monitor cleaning procedure" on the next page.

The plasma display panel consists of fine picture elements (cells) with more than 99.99 percent active cells. There may be some cells that do not produce light or remain lit.

For operating safety and to avoid damage to the unit, read carefully and observe the following instructions. To avoid shock and fire hazards:

1. Provide adequate space for ventilation to avoid internal heat build-up. Do not cover rear vents or install the unit in a closed cabinet or shelves.
If you install the unit in an enclosure, make sure there is adequate space at the top of the unit to allow hot air to rise and escape. If the monitor becomes too hot, the overheat protector will be activated and the monitor will be turned off. If this happens, turn off the power to the monitor and unplug the power cord. If the room where the monitor is installed is particularly hot, move the monitor to a cooler location, and wait for 60 minutes to cool the monitor. If the problem persists, contact your dealer for service.
2. Do not use this unit's polarized plug with extension cords or outlets unless the prongs can be completely inserted.
3. Do not expose the unit to water or moisture.
4. Avoid damage to the power cord, and do not attempt to modify the power cord.
5. Unplug the power cord during electrical storms or if the unit will not be used over a long period.
6. Do not open the cabinet which has potentially dangerous high voltage components inside. If the unit is damaged in this way the warranty will be void. Moreover, there is a serious risk of electric shock.
7. Do not attempt to service or repair the unit. The manufacturer is not liable for any bodily harm or damage caused if unqualified persons attempt service or open the back cover. Refer all service to authorized Service Centers.

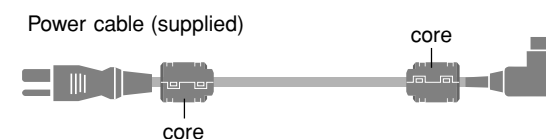
NOTE:

When you connect a computer to this monitor, use an RGB cable including the ferrite core on both ends of the cable. If you do not do this, this monitor will not conform to mandatory FCC standards.

Attaching the ferrite cores:

Set the ferrite cores on both ends of the power cable (supplied).

Close the lid tightly until the clamps click.



To avoid damage and prolong operating life:

1. Use only with 120V 60Hz AC power supply. Continued operation at line voltages greater than 120 Volts AC will shorten the life of the unit, and might even cause a fire hazard.
2. Handle the unit carefully when installing it and do not drop.
3. Set the unit away from heat, excessive dust, and direct sunlight.
4. Protect the inside of the unit from liquids and small metal objects. In case of accident, unplug the power cord and have it serviced by an authorized Service Center.
5. Do not hit or scratch the panel surface as this causes flaws on the surface of the screen.
6. For correct installation and mounting it is strongly recommended to use a trained, authorized dealer.
7. As is the case with any phosphor-based display (like a CRT monitor, for example) light output will gradually decrease over the life of a Plasma Display Panel.
8. To avoid sulfurization it is strongly recommended not to place the unit in a dressing room in a public bath or hot spring bath.
9. Do not use in a moving vehicle, as the unit could drop or topple over and cause injuries.
10. Do not place the unit on its side, upside-down or with the screen facing up or down, to avoid combustion or electric shock.

Plasma monitor cleaning procedure:

1. Use a wiping cloth (attached) or soft dry cloth to clean the front panel and bezel area. Never use solvents such as alcohol or thinner to clean these surfaces.
2. Clean plasma ventilation areas with a vacuum cleaner with a soft brush nozzle attachment.
3. To ensure proper ventilation, cleaning of the ventilation areas must be carried out monthly. More frequent cleaning may be necessary depending on the environment in which the plasma monitor is installed.

Recommendations to avoid or minimize phosphor burn-in:

Like all phosphor-based display devices and all other gas plasma displays, plasma monitors can be susceptible to phosphor burn under certain circumstances. Certain operating conditions, such as the continuous display of a

static image over a prolonged period of time, can result in phosphor burn if proper precautions are not taken. To protect your investment in this plasma monitor, please adhere to the following guidelines and recommendations for minimizing the occurrence of image burn:

- * Always enable and use your computer's screen saver function during use with a computer input source.
- * Display a moving image whenever possible.
- * Change the position of the menu display from time to time.
- * Always power down the monitor when you are finished using it.

If the plasma monitor is in long term use or continuous operation take the following measures to reduce the likelihood of phosphor burn:

- * Lower the Brightness and Contrast levels as much as possible without impairing image readability.
- * Display an image with many colors and color gradations (i.e. photographic or photo-realistic images).
- * Create image content with minimal contrast between light and dark areas, for example white characters on black backgrounds. Use complementary or pastel color whenever possible.
- * Avoid displaying images with few colors and distinct, sharply defined borders between colors.

* **Notes:** Burn-in is not covered by the warranty.

Contact your dealer for other recommended procedures that will best suit your particular application needs.

CAUTION:

WHEN POSITIONING THIS EQUIPMENT ENSURE THAT THE MAINS PLUG AND SOCKET IS EASILY ACCESSIBLE.

Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

WARNING:

Handling the cord on this product or cords associated with accessories sold with the product will expose you to lead, a chemical known to the State of California and other governmental entities to cause cancer and birth defects or other reproductive harm. **Wash hands after handling.**

IMPORTANT NOTICE

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep in a secure place. This is for your security.


This Class B digital apparatus complies with Canadian ICES-003.

Caution

This model is for use with the following optional accessories. Use with other optional accessories is capable of resulting in instability causing possible injury.

Table top stand: PDK-1014
Wall mount unit: PDK-WM03

IMPORTANT SAFETY INSTRUCTIONS**Read before operating equipment**

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12.  Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. **Damage Requiring Service** - The appliance should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the appliance; or
 - C. The appliance has been exposed to rain; or
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E. The appliance has been dropped, or the enclosure damaged.
16. **Tilt/Stability** - All televisions must comply with recommended international global safety standards for tilt and stability properties of its cabinets design.
 - Do not compromise these design standards by applying excessive pull force to the front, or top, of the cabinet which could ultimately overturn the product.
 - Also, do not endanger yourself, or children, by placing electronic equipment/toys on the top of the cabinet. Such items could unsuspectingly fall from the top of the set and cause product damage and/or personal injury.
17. **Wall Mounting** - The appliance should be mounted to a wall only as recommended by the manufacturer.
18. **Power Lines** - An outdoor antenna should be located away from power lines.
19. **Outdoor Antenna Grounding** - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electric Code, ANSI/NFP No. 70-1984, provides information with respect to proper grounding of the masts and supporting structure grounding of the lead-in wire to an antenna-discharge unit, size of grounding connectors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode.
20. **Objects and Liquid Entry** - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

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

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

DECLARATION OF CONFORMITY

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

U.S. Responsible Party:	PIONEER ELECTRONICS (USA) INC.
Address:	P.O. BOX 1760, LONG BEACH, CA.,
	90801-1760 U.S.A.
Tel. No.:	800 (421-1625)

Type of Product: Plasma Display
Equipment Classification: Class B Peripheral
Models: PRO-1410HD

We hereby declare that the equipment specified above conforms to the technical standards as specified in the FCC Rules.



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Should this product require service in the U.S.A. and you wish to locate the nearest Pioneer Authorized Independent Service Company, or if you wish to purchase replacement parts, operating instructions, service manuals, or accessories, please call the number shown below.

8 0 0 - 4 2 1 - 1 4 0 4

Please do not ship your product to Pioneer without first calling the Customer Support Division at the above listed number for assistance.

Pioneer Electronics (USA) Inc.
P.O. BOX 1760, Long Beach,
CA 90801-1760, U.S.A.

For warranty information please see the Limited Warranty sheet included with your product.

Should this product require service in Canada, please contact a Pioneer Canadian Authorized Dealer to locate the nearest Pioneer Authorized Service Company in Canada. Alternatively, please contact the Customer Satisfaction Department at the following address:

Pioneer Electronics of Canada, Inc.
Customer Satisfaction Department
300 Allstate Parkway, Markham, Ontario L3R OP2
(905)479-4411
1(877)283-5901

For warranty information please see the Limited Warranty sheet included with your product.

Si ce produit doit être réparé au Canada, veuillez vous adresser à un distributeur autorisé Pioneer du Canada pour obtenir le nom du Centre de Service Autorisé Pioneer le plus près de chez-vous. Vous pouvez aussi contacter le Service à la clientèle de Pioneer:

Pioneer Électroniques du Canada, Inc.
Service à la clientèle
300, Allstate Parkway, Markham, Ontario L3R OP2
(905)479-4411
1(877)283-5901

Pour obtenir des renseignements sur la garantie, veuillez vous reporter au feuillet sur la garantie restreinte qui accompagne le produit.

Contents of the Package

- Plasma monitor
- Power cord
- Remote control with two AAA Batteries
- Manual
- Warranty
- Safety metal fittings (2pcs)*
- Ferrite cores (2pcs)
- Cable clamps (5pcs)
- Wiping cloth

* These are fittings for fastening the unit to a wall to prevent tipping due to external shock when using the stand (optional). Fasten the safety fittings to the holes in the back of the monitor using the safety fitting mount screws (see page 2).

Options

- Wall mount unit
- Stand

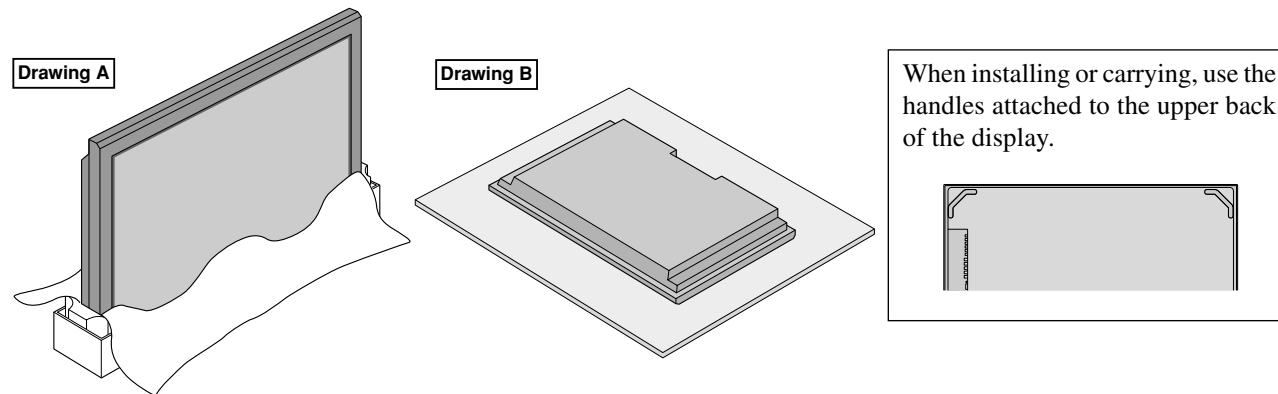
Installation

You can attach your optional mounts or stand to the plasma monitor in one of the following two ways:

- * While it is upright. (See Drawing A)
- * As it is laid down with the screen face down (See Drawing B). Lay the protective sheet, which was wrapped around the monitor when it was packaged, beneath the screen surface so as not to scratch the screen face.
- * Do not touch or hold the screen face when carrying the unit.

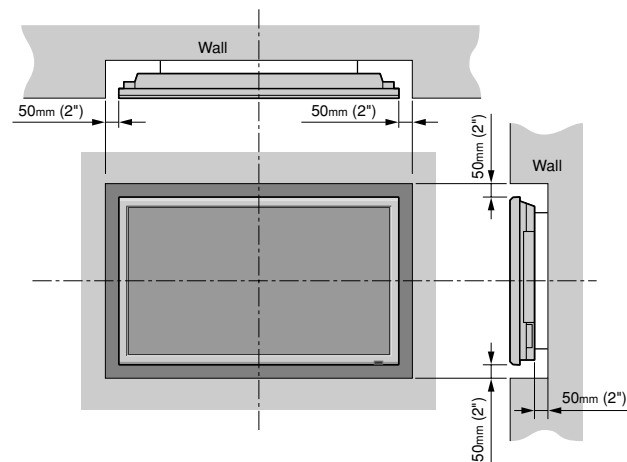
- **This device cannot be installed on its own. Be sure to use a stand or original mounting unit. (Wall mount unit, Stand, etc.)**
 - * See page 1.
 - **For correct installation and mounting it is strongly recommended to use a trained, authorized dealer.**
- Failure to follow correct mounting procedures could result in damage to the equipment or injury to the installer.
Product warranty does not cover damage caused by improper installation.

* Use only the mounting kit or stand provided by manufacturer and listed under Options.



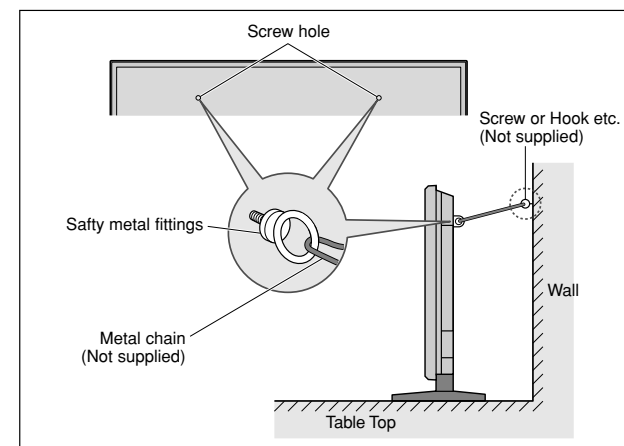
Ventilation Requirements for enclosure mounting

To allow heat to disperse, leave space between surrounding objects as shown on the diagram below when installing.



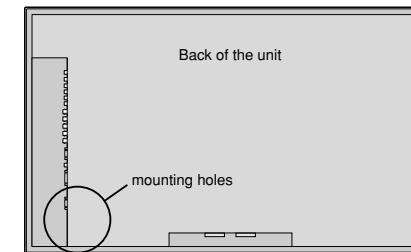
How to use the safety metal fittings and the screws for safety metal fittings

These are fittings for fastening the unit to a wall to prevent tipping due to external shock when using the stand (optional). Fasten the safety fittings to the holes in the back of the monitor using the safety fitting mount screws.

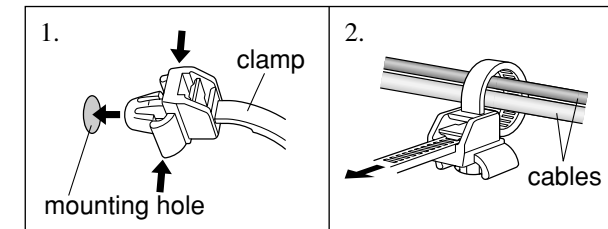


Cable Management

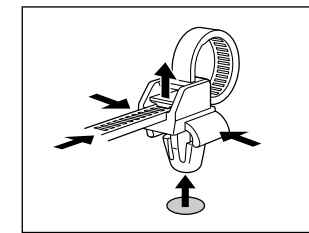
Using the cable clamps provided with the plasma display, bundle at the back of the unit the signal and audio cables connected to the display.



To attach

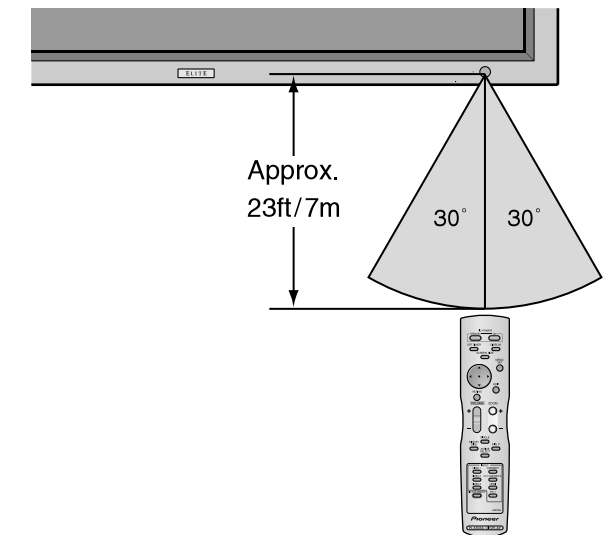


To detach



Operating Range

- * Use the remote control within a distance of about 7 m/ 23ft. from the front of the monitor's remote control sensor and at horizontal and vertical angles of up to approximately 30°.
- * The remote control operation may not function if the monitor's remote control sensor is exposed to direct sunlight or strong artificial light, or if there is an obstacle between the sensor and the remote control.



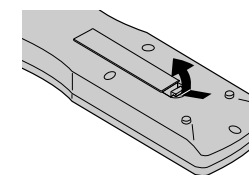
Handling the remote control

- Do not drop or mishandle the remote control.
- Do not get the remote control wet. If the remote control gets wet, wipe it dry immediately.
- Avoid heat and humidity.
- When not using the remote control for a long period, remove the batteries.
- Do not use new and old batteries together, or use different types together.
- Do not take apart the batteries, heat them, or throw them into a fire.
- When disposing of used batteries, please comply with governmental regulations or environmental public instruction's rules that apply in your country/area.

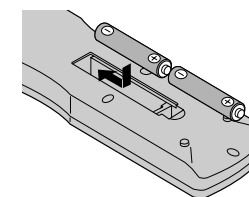
How to use the remote control Battery Installation and Replacement

Insert the 2 "AAA" batteries, making sure to set them in with the proper polarity.

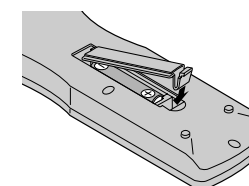
1. Press and open the cover.



2. Align the batteries according to the (+) and (-) indication inside the case.

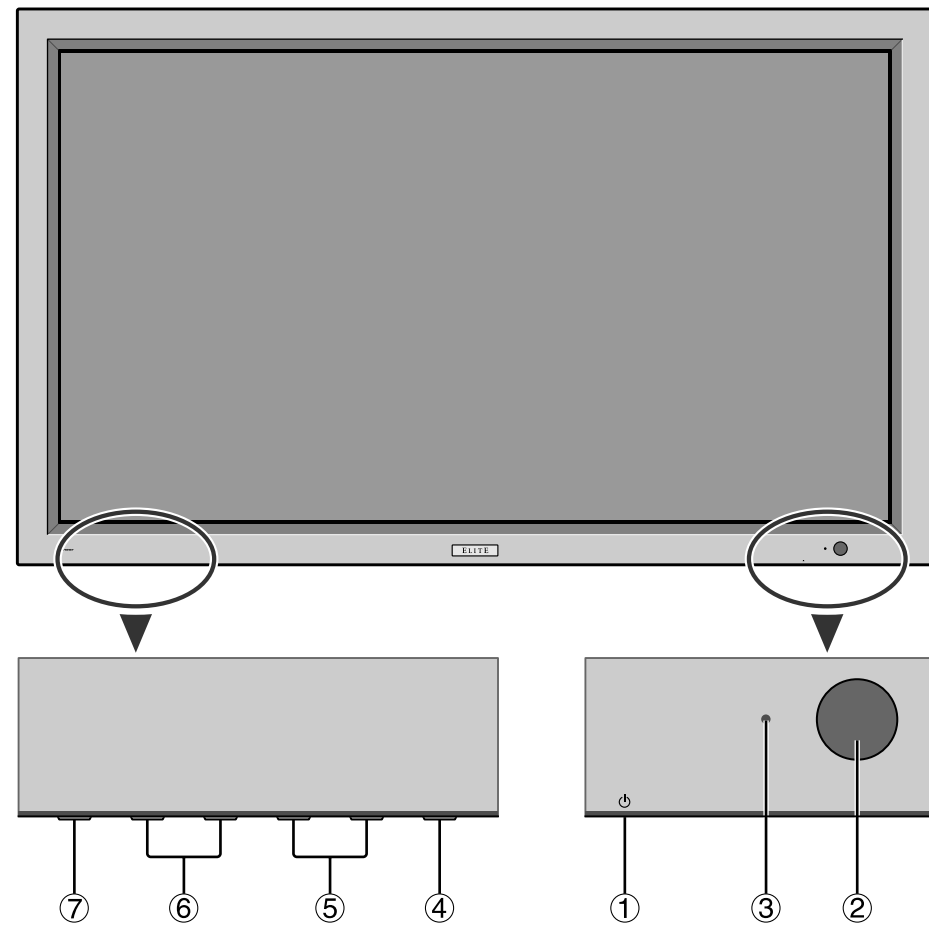


3. Replace the cover.



Part Names and Function

Front View

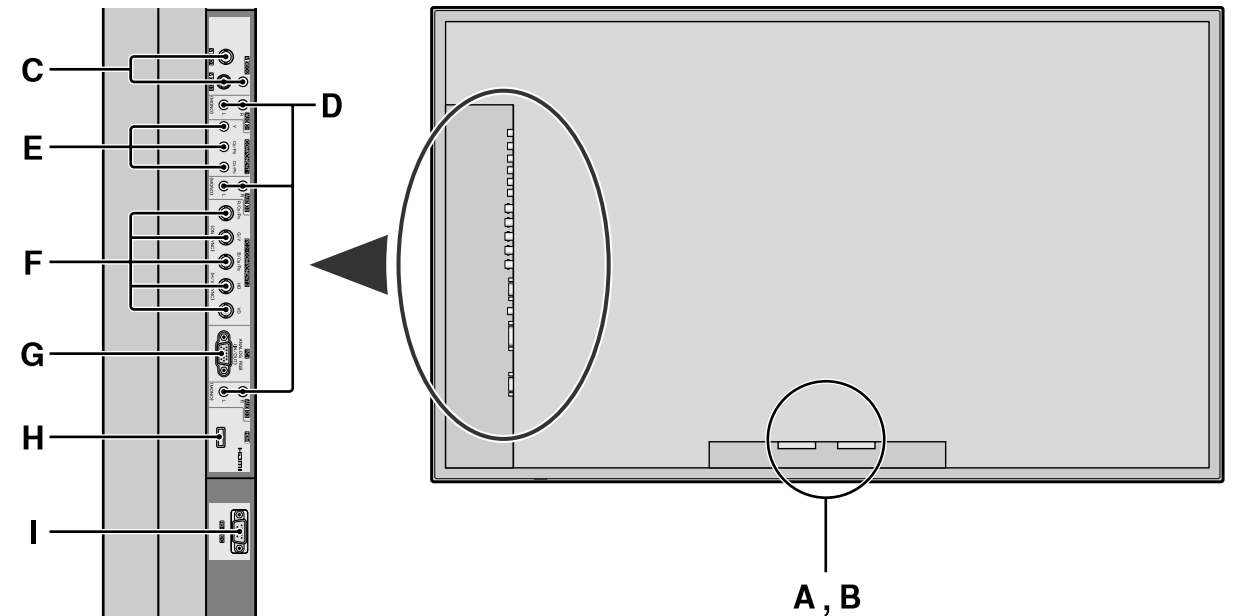


- ① **Power (⏻)**
Turns the monitor's power on and off.
- ② **Remote sensor window**
Receives the signals from the remote control.
- ③ **STANDBY/ON indicator**
When the power is on Lights green.
When the power is in the standby mode ... Lights red.
- ④ **INPUT/EXIT**
Switches the input.
The available inputs depend on the setting of "BNC INPUT" and "RGB SELECT".
Functions as the EXIT buttons in the On-Screen Display (OSD) mode.
- ⑤ **< and >**
Functions as the CURSOR (◀/▶) buttons in the On-Screen Display (OSD) mode.
- ⑥ **VOLUME ∨ and ∧**
Adjusts the volume. Functions as the CURSOR (▲/▼) buttons in the On-Screen Display (OSD) mode.
- ⑦ **MENU/SET**
Sets the On-Screen Display (OSD) mode and displays the main menu.

WARNING

The Power on/off switch does not disconnect the plasma display completely from the supply mains.

Rear View/ Terminal Board

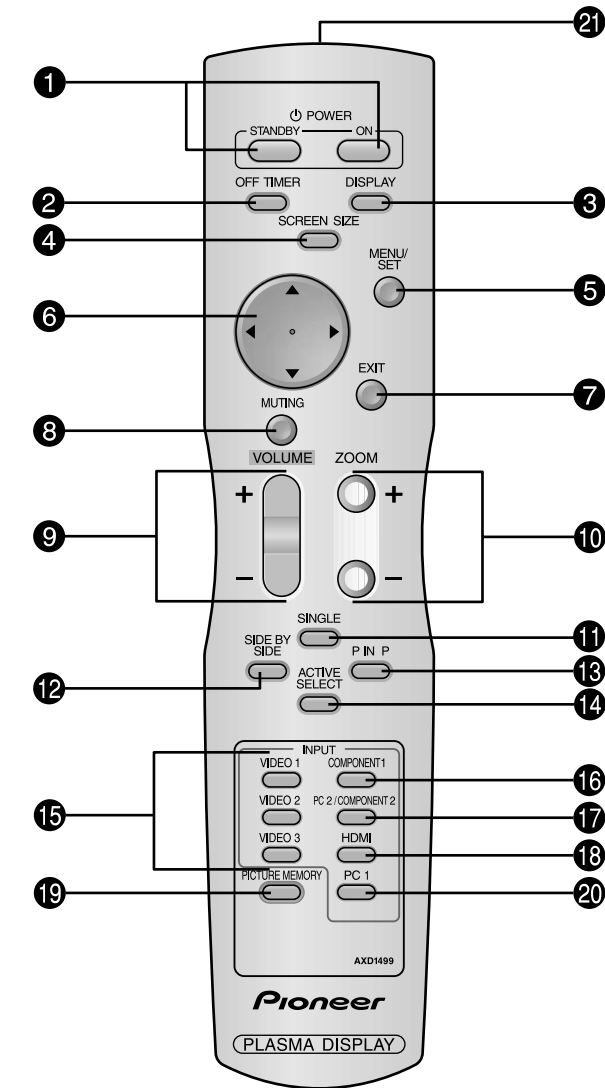


- A AC IN**
Connect the included power cord here.
- B EXT SPEAKER L and R**
Connect speakers (optional) here. Maintain the correct polarity. Connect the ⊕ (positive) speaker wire to the ⊕ EXT SPEAKER terminal and the ⊖ (negative) speaker wire to the ⊖ EXT SPEAKER terminal on both LEFT and RIGHT channels.
Please refer to your speaker's owner's manual.
- C VIDEO1, 2, 3 (BNC, RCA, S-Video)**
Connect VCR's, DVD's or Video Cameras, etc. here.
- D AUDIO1, AUDIO2, AUDIO3**
These are audio input terminals.
The input is selectable. Set which video image to allot them from the SOUND menu screen.
- E COMPONENT 1**
Connect DVD's, High Definition or Laser Discs, etc. here.
- F PC2/ COMPONENT2**
PC2: You can connect an analog RGB signal and the synchronization signal.
COMPONENT2: You can connect DVDs, High Definition sources, Laser Discs, etc. here.
This input can be set for use with an RGB or component source (see page 19).
- G PC1 (D-Sub)**
Connect an analog RGB signal from a computer, etc. here.
- H HDMI**
Connect a digital signal from a source with a HDMI output.
See page 30 for the details of Supported Signals.
- I RS-232C (D-Sub)**
Never connect any component to this connector without first consulting your Pioneer installation technician.
This connector is used for plasma display setup adjustments.



HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

Remote Control



1 POWER ON/STANDBY

Switches the power on/standby.
(This does not operate when STANDBY/ON indicator of the main unit is off.)

2 OFF TIMER

Activates the off timer for the unit.

3 DISPLAY

Displays the source settings on the screen.

4 SCREEN SIZE

Automatically detects the signal and sets the aspect ratio.
SCREEN SIZE button is not active for all signals.

5 MENU/SET

Press this button to access the OSD controls.
Press this button during the display of the main menu to go to the sub menu.

6 CURSOR (▲/▼/◀/▶)

Use these buttons to select items or settings and to adjust settings or switch the display patterns.

7 EXIT

Press this button to exit the OSD controls in the main menu. Press this button during the display of the sub menu to return to the previous menu.

8 MUTING

Mutes the sound.

9 VOLUME (+/-)

Adjusts the sound volume.

10 ZOOM (+/-)

Enlarges or reduces the image.

11 SINGLE

Cancels the split screen mode.

12 SIDE BY SIDE

Press this button to show a couple of pictures in the side-by-side mode.

13 P IN P

Press this button to show a couple of pictures in the picture-in-picture mode.

14 ACTIVE SELECT

Press this button to make the desired picture activate during split screen mode.
When the PICTURE FREEZE function is operating, this button can be used to display still images on the subscreen.

15 VIDEO1, 2, 3

Press these buttons to select the input directly.
These inputs can also be selected using the INPUT button on the monitor.

16 COMPONENT1

Press this button to select the input directly.
This input can also be selected using the INPUT button on the monitor.

17 PC2/COMPONENT2

Press this button to select the input directly.
This input can also be selected using the INPUT button on the monitor.

18 HDMI

Press this button to select the input directly.
This input can also be selected using the INPUT button on the monitor.
See page 30 for the details of Supported Signals.

19 PICTURE MEMORY

Switches sequentially between picture memory settings 1 to 6.

20 PC1

Press this button to select the input directly.
This input can also be selected using the INPUT button on the monitor.

21 Remote control signal transmitter

Transmits the remote control signals.

POWER

To turn the unit ON and OFF:

1. Plug the power cord into an active AC power outlet.
2. Press the Power button (on the unit).
The monitor's STANDBY/ON indicator turns red and the standby mode is set.
3. Press the POWER ON button (on the remote control) to turn on the unit.
The monitor's STANDBY/ON indicator will light up (green) when the unit is on.
4. Press the POWER STANDBY button (on the remote control) or the Power button (on the unit) to turn off the unit.
The monitor's STANDBY/ON indicator turns red and the standby mode is set (only when turning off the unit with the remote control).

VOLUME

To adjust the sound volume:

1. Press and hold the VOLUME ⊕ button (on the remote control or the unit) to increase to the desired level.
2. Press and hold the VOLUME ⊖ button (on the remote control or the unit) to decrease to the desired level.

MUTING

To mute the sound:

Press the MUTING button on the remote control to mute the sound press again to restore.

DISPLAY

To check the settings:

1. The screen changes each time the DISPLAY button is pressed.
2. If the button is not pressed for approximately three seconds, the menu turns off.

DIGITAL ZOOM

Digital zoom specifies the picture position and enlarges the picture.

1. (Be sure ZOOM NAV is off)

Press the ZOOM (+ or -) button to display magnifying glass. ()

To change the size of the picture:

Press the ZOOM+ button and enlarge the picture.
A press of the ZOOM- button will reduce the picture and return it to its original size.

To change the picture position:

1. Select the position with the ▲▼◀▶ buttons.
2. Press the EXIT button to delete the pointer.

OFF TIMER

To set the off timer:

The off timer can be set to turn the power off after 30, 60, 90 or 120 minutes.

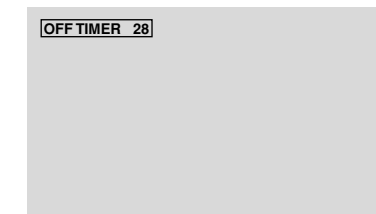
1. Press the OFF TIMER button to start the timer at 30 minutes.
2. Press the OFF TIMER button to the desired time.
3. The timer starts when the menu turns off.

→ 30 → 60 → 90 → 120 → 0



To check the remaining time:

1. Once the off timer has been set, press the OFF TIMER button once.
2. The remaining time is displayed, then turns off after a few seconds.
3. When five minutes remain the remaining time appears until it reaches zero.



To cancel the off timer:

1. Press the OFF TIMER button twice in a row.
2. The off timer is canceled.



Note:

After the power is turned off with the off timer ...
A slight current is still supplied to the monitor. When you are leaving the room or do not plan to use the system for a long period of time, turn off the power of the monitor.

WIDE Operations

SCREEN SIZE Operation (manual)

With this function, you can select one of six screen sizes.

When viewing videos or digital video discs

1. Press the SCREEN SIZE button on the remote control.

2. *Within 3 seconds ...*

Press the SCREEN SIZE button again.

The screen size switches as follows:

→ 4:3 → FULL → WIDE → ZOOM → 2.35:1 → 14:9

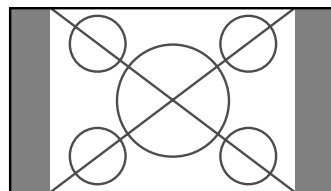
When a 720P or 1080I signal is input:

FULL ↔ 2.35:1

When displaying enhanced split screen:

4:3 ↔ FULL

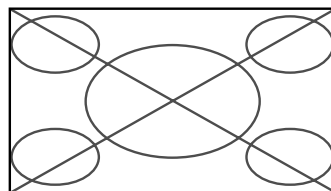
4:3 size screen



The normal size screen is displayed.

* The picture has the same size as video pictures with a 4 : 3 aspect ratio.

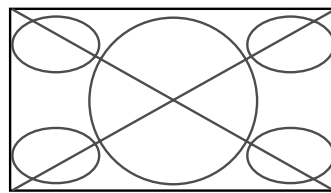
FULL size screen



The image is expanded in the horizontal direction.

* Images compressed in the horizontal direction ("squeezed images") are expanded in the horizontal direction and displayed on the entire screen with correct linearity. (Normal images are expanded in the horizontal direction.)

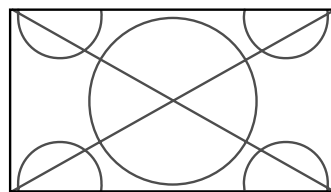
WIDE size screen



The picture is expanded in the horizontal and vertical directions at different ratios.

* Use this for watching normal video programs (4:3) with a wide screen.

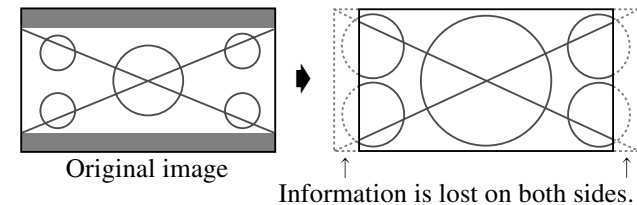
ZOOM size screen



The picture is expanded in the horizontal and vertical direction, maintaining the original proportions.

* Use this for theater size (wide) movies, etc.

2.35:1 size screen

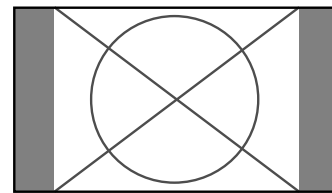


The squeezed film image is expanded to fulfill the entire screen at a ratio of 2.35:1. Black bands do not appear at the top and bottom but information is lost on the left and right margins.

• This feature is available when the input signal is video, component (480I, 480P, 720P, 1080I) or RGB (525P signal from a scan converter).

* If black bands appear on the top and bottom in the full size screen, select the 2.35:1 size screen to avoid phosphor burn-in.

14:9 size screen



The image is displayed at a 14:9 aspect ratio.

* This feature is available when the input signal is video, component (480I, 480P) or RGB (525P signal from a scan converter).

Note:

Do not allow the displayed in 4:3 mode for an extended period. This can cause a phosphor burn-in.

SCREEN SIZE Operation with Computer Signals

Switch to the wide screen mode to expand the 4 : 3 image to fill the entire screen.

1. Press the SCREEN SIZE button on the remote control.

2. *Within 3 seconds ...*

Press the SCREEN SIZE button again.

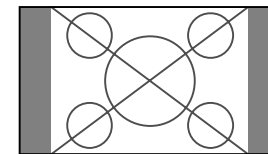
The screen size switches as follows:

→ 4:3 → FULL → ZOOM

When displaying enhanced split screen:

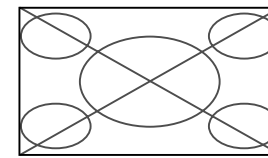
4:3 ↔ FULL

4:3 size screen (4:3 or SXGA 5:4)



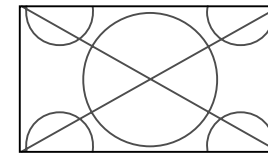
The picture has the same size as the normal computer image.

FULL size screen



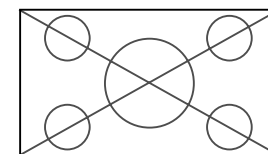
The image is expanded in the horizontal direction.

ZOOM size screen



When wide signals are input.

FULL size screen



Information

Supported resolution

See page 27 for details on the display output of the various VESA signal standards supported by the monitor.

"D BY D", a way of displaying pixels in a one-to-one correspondence with input signals, can be switched only when a 1280 dot x 768 line signal is input.

■ When 852 (848) dot × 480 line wide VGA* signals with a vertical frequency of 60 Hz and horizontal frequency of 31.7 (31.0) kHz are input

Select an appropriate setting for RGB SELECT mode referring to the "Table of Signals Supported" on page 27.

* "VGA", "SVGA" and "SXGA" are registered trademarks of IBM, Inc. of the United States.

Note:

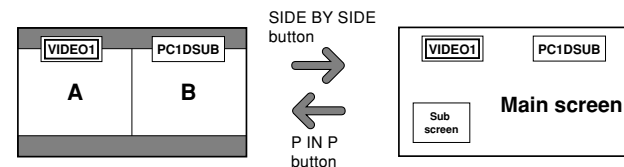
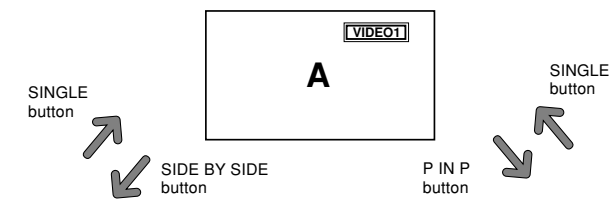
Do not allow the displayed in 4:3 mode for an extended period. This can cause a phosphor burn-in.

SPLIT SCREEN Operations

Showing a couple of pictures on the screen at the same time

* A PC-input picture may not be displayed in these modes, depending on the input signal specifications.

1. Press the button to select a screen mode from among single mode, side-by-side, and picture-in-picture.



Note:

Picture A and B on the above screen are not always of the same height.

Information

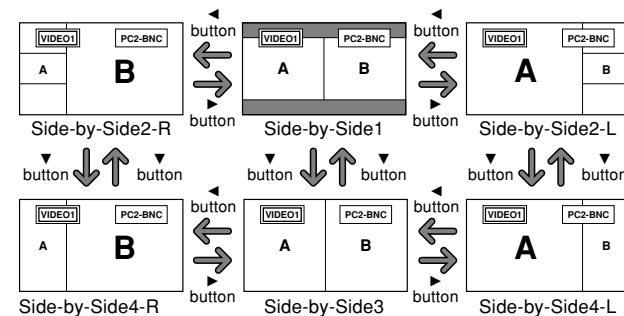
Split screen operations may not function depending on the combination of input signals. In the table below, "○" means Yes, "×" means No.

Pictures displayed on the left/sub screen (Select2)	Pictures displayed on the right/main screen (Select1)						
	VIDEO1	VIDEO2	VIDEO3	COMPONENT1	PC2 COMPONENT2	PC1	HDMI
VIDEO1	×	×	×	○	○	○	○
VIDEO2	×	×	×	○	○	○	○
VIDEO3	×	×	×	○	○	○	○
COMPONENT1	○	○	○	×	○	○	○
PC2 COMPONENT2	○	○	○	○	×	○	○
PC1	○	○	○	○	○	×	○
HDMI	○	○	○	○	○	○	×

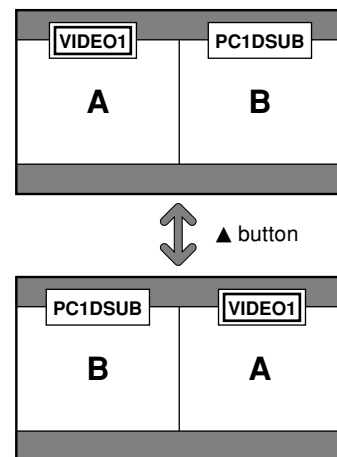
■ Split screen operations may not function depending on the type of the PC signals.

Operations in the Side-by-side mode

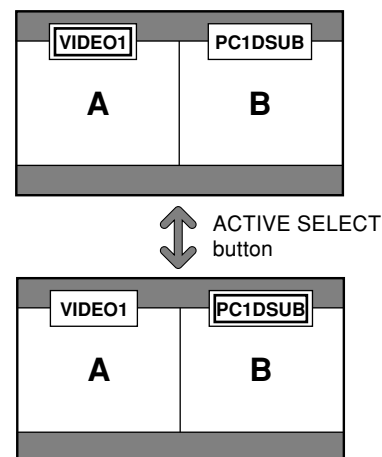
To change the picture size, press the cursor ◀▶ or ▼ button.



To swap the picture on the right and the left, press the cursor ▲ button.

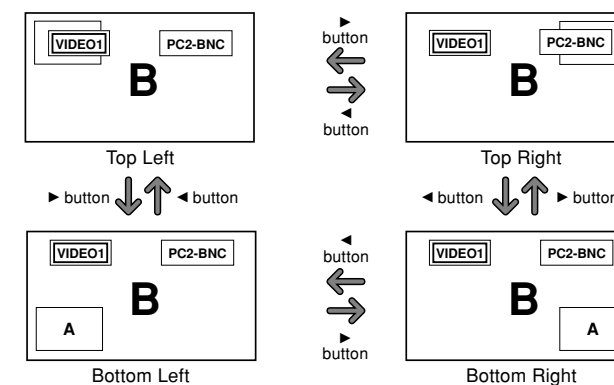


To make the desired picture active, press the ACTIVE SELECT button.

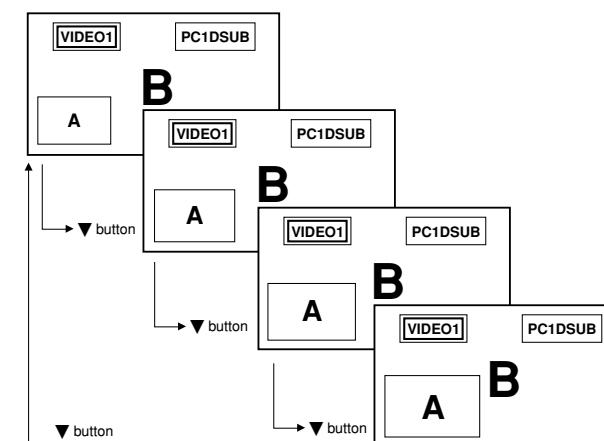


Operations in the Picture-in-picture mode

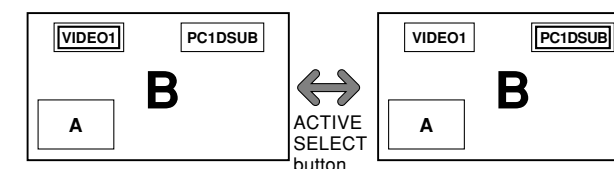
To move the position of the sub screen, press the cursor ◀▶ or ▲▼ button.



To change the size of the sub screen, press the ▼ button.



To make the desired picture active, press the ACTIVE SELECT button.



Selecting the input signals to be displayed

1. Press the ACTIVE SELECT button to make the desired picture active.
2. Press the PC1, VIDEO1, 2, 3, COMPONENT1, PC2/COMPONENT2 or HDMI button to change the selection of the input signal. The INPUT/EXIT button on the monitor can also be used to change the selection.

Zooming up pictures

1. Press the ACTIVE SELECT button to make the desired picture active.
2. Use the ZOOM (+ or -) button to enlarge the picture. For details, see "DIGITAL ZOOM" on page 7.

Adjusting the OSD controls

1. Press the ACTIVE SELECT button to make the desired picture active.
2. Press the MENU/SET button to display the MAIN MENU.
3. Adjust the setting to your preference. For details, see "OSD (On Screen Display) Controls" on page 12.

Note:

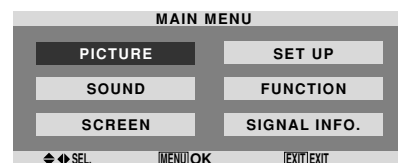
During enhanced split screen, some functions of OSD controls are not available.

OSD (On Screen Display) Controls

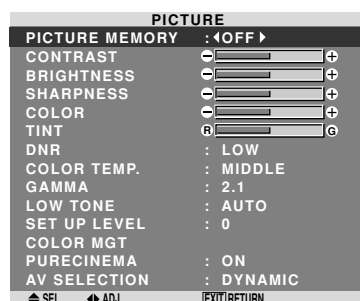
Menu Operations

The following describes how to use the menus and the selected items.

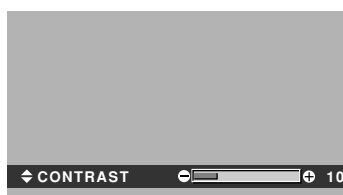
1. Press the MENU/SET button on the remote control to display the MAIN MENU.



2. Press the cursor buttons ▲ ▼ on the remote control to highlight the menu you wish to enter.
3. Press the MENU/SET button on the remote control to select a sub menu or item.



4. Adjust the level or change the setting of the selected item by using the cursor buttons ◀ ▶ on the remote control.



5. The adjustments or the settings that are stored in memory. The change is stored until you change it again.
 6. Repeat steps 2 – 5 to adjust an additional item, or press the EXIT button on the remote control to return to the main menu.
- * When adjusting using the bar at the bottom of the screen, press the ◀ or ▶ button within 5 seconds. If not, the current setting is set and the previous screen appears.

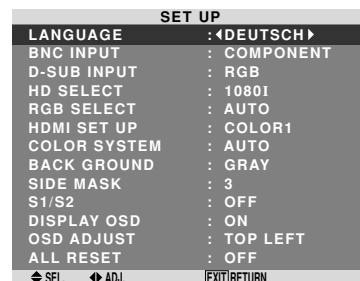
Note: The main menu disappears by pressing the EXIT button.

Setting the language for the menus

The menu display can be set to one of seven languages.

Example: Setting the menu display to “DEUTSCH”

On “LANGUAGE” of “SET UP” menu, select “DEUTSCH”.



Information

Language settings

ENGLISH	English	ITALIANO	Italian
DEUTSCH	German	SVENSKA	Swedish
FRANÇAIS	French	РУССКИЙ	Russian
ESPAÑOL	Spanish		

Menu Tree

■ : Shaded areas indicate the default value.

← → + : Press the ◀ or ▶ button to adjust.

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE	
PICTURE	PICTURE MEMORY	OFF/MEMORY1-6			YES	15	
	CONTRAST	← → + 0 ← 52 → 72			YES	15	
	BRIGHTNESS	← → + 0 ← 32 → 64			YES	15	
	SHARPNESS	← → + 0 ← 16 → 32			YES	15	
	COLOR	← → + 0 ← 32 → 64			YES	15	
	TINT	R ← → G 0 ← 32 → 64			YES	15	
	DNR	OFF/LOW/MID/HIGH			YES	15	
	COLOR TEMP.	LOW/MIDDLE LOW/MIDDLE/HIGH			YES	16	
	WHITE BALANCE	R.HIGH	← → + 0 ← 40 → 70			YES	16
		G.HIGH	← → + 0 ← 40 → 70			YES	16
		B.HIGH	← → + 0 ← 40 → 70			YES	16
		R.LOW	← → + 0 ← 40 → 70			YES	16
		G.LOW	← → + 0 ← 40 → 70			YES	16
		B.LOW	← → + 0 ← 40 → 70			YES	16
		RESET	OFF ← → ON			YES	16
	GAMMA	2.1 ← 2.2 ← 2.3 → 2.4				YES	16
	LOW TONE	AUTO ← → 1 ← → 3				YES	16
	SET UP LEVEL	0 ← → 3.75 ← → 7.5				YES	17
	COLOR MGT	RED	Y ← → M 0 ← 32 → 64			YES	17
		GREEN	C ← → Y 0 ← 32 → 64			YES	17
		BLUE	M ← → C 0 ← 32 → 64			YES	17
		YELLOW	G ← → R 0 ← 32 → 64			YES	17
		MAGENTA	R ← → B 0 ← 32 → 64			YES	17
CYAN		B ← → G 0 ← 32 → 64			YES	17	
	RESET	OFF ← → ON			YES	17	
PURECINEMA	ON ← → OFF				YES	17	
AV SELECTION	DEFAULT/MOVIE1/MOVIE2/STANDARD/DYNAMIC				YES	17	

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
SOUND	BASS	← → + 0 ← 13 → 26			YES	18
	TREBLE	← → + 0 ← 13 → 26			YES	18
	BALANCE	L ← → R -22 ← 0 → +22			YES	18
	AUDIO INPUT1	VIDEO 1-3 / COMPNT 1-2 / PC1DSUB / PC2-BNC			YES	18
	AUDIO INPUT2	VIDEO 1-3 / COMPNT 1-2 / PC1DSUB / PC2-BNC			YES	18
	AUDIO INPUT3	VIDEO 1-3 / COMPNT 1-2 / PC1DSUB / PC2-BNC			YES	18
HDMI INPUT	ON ← → OFF				YES	18

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE	
SCREEN	SCREEN SIZE	ZOOM/4:3/FULL/WIDE/14:9/2.35:1			NO	18	
	V.POSITION	← → + -64 ← 0 → +64			YES	18	
	H.POSITION	← → + -128 ← 0 → +127			YES	18	
	V.SIZE	← → + 0 ← → 64			YES	18	
	H.SIZE	← → + 0 ← → 64			YES	18	
	AUTO PICTURE	ON ← → OFF*2				NO	18
	PHASE*1	← → + *2 0 ← → 64				YES	18
CLOCK*1	← → + *2 0 ← 64 → 128				YES	18	

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
SET UP	LANGUAGE	ENGLISH/DEUTSCH/FRANÇAIS/ESPAÑOL/ITALIANO/SVENSKA/РУССКИЙ			NO	12
	BNC INPUT	RGB ← → COMPONENT			YES	19
	D-SUB INPUT	RGB			YES	19
	HD SELECT	1080I/1035I/540P			NO	19
	RGB SELECT	AUTO/STILL/MOTION/WIDE1/WIDE2/WIDE3/WIDE4/DTV			YES	19
	HDMI SET UP	COLOR1 ← → COLOR2			NO	20
	COLOR SYSTEM	AUTO/PAL/PAL-M/PAL-N/PAL 60/SECAM/4.43 NTSC/3.58NTSC			NO	20
	BACK GROUND	BLACK/GRAY			YES	20
	SIDE MASK	0 ← → 3 ← → 15			YES	21
	S1/S2	AUTO ← → OFF			YES	21
	DISPLAY OSD	ON ← → OFF			YES	21
	OSD ADJUST	TOP LEFT ← → TOP CENTER ← → TOP RIGHT ← → BTM LEFT ← → BTM CENTER ← → BTM RIGHT			YES	21
	ALL RESET	ON ← → OFF			—	21

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
FUNCTION	POWER MGT.	ON←→OFF			YES	22
	INPUT SKIP	ON←→OFF			YES	22
	SUB. P DETECT	AUTO←→OFF			YES	22
	ZOOM NAV	OFF←→S BY S	BTM LFT←→BTM RGT←→TOP RGT←→TOP LFT		YES	23
	PICTURE FREEZE	OFF←→S BY S1←→S BY S2←→BTM LEFT←→BTM RIGHT←→TOP RIGHT←→TOP LEFT			YES	23
	LONG LIFE	MANUAL/AUTO			YES	23
		ABL	100/75/50/25		YES	24
		ORBITER	OFF/AUTO1/AUTO2		YES	24
		INVERSE/WHITE	OFF/INVERSE/WHITE		YES	24
		SCREEN WIPER	ON/OFF		YES	24
		SOFT FOCUS	OFF/LEVEL1-4		YES	24
		OSD ORBITER	ON/OFF		YES	25
		OSD CONTRAST	LOW/NORMAL		YES	25

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
SIGNAL INFO.					—	25

*1 Only when AUTO PICTURE is OFF.

*2 PC only

Information

Restoring the factory default settings

Select "ALL RESET" under the SET UP menu. Note that this also restores other settings to the factory defaults.

Picture Settings Menu

Storing picture settings

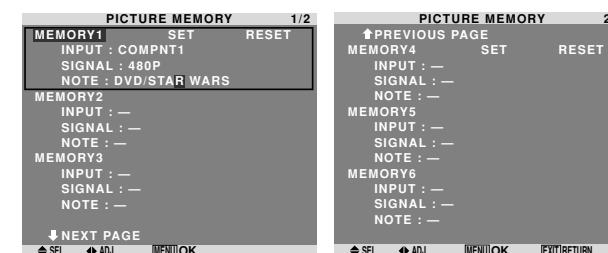
This function allows you to store in memory the current input signal and PICTURE menu settings and to recall these settings when necessary.

There are six picture memories, and notes of up to 15 characters can be added to each.

Example: Storing picture settings at MEMORY1

On "PICTURE MEMORY" of "PICTURE" menu, select "MEMORY1", then press the MENU/SET button.

The "PICTURE MEMORY" screen appears.



Information

PICTURE MEMORY Settings

OFF: Picture memory not used.

MEMORY1 to 6: Picture memory with the specified number used. Maximum memories are 6, not depending on inputs.

Setting the memory

- Use the ▲ and ▼ button to select the desired memory place, MEMORY1 to MEMORY6.
- Use the ◀ and ▶ buttons to select "SET", then press the MENU/SET button.
- If necessary, input a note.

Resetting the memory

Use the ▲ and ▼ button to select the desired memory place, MEMORY1 to MEMORY6, then use the ◀ and ▶ buttons to select "RESET", and finally press the MENU/SET button.

The memory is cleared, and "—" is displayed in the "INPUT", "SIGNAL" and "NOTE" columns.

Inputting notes

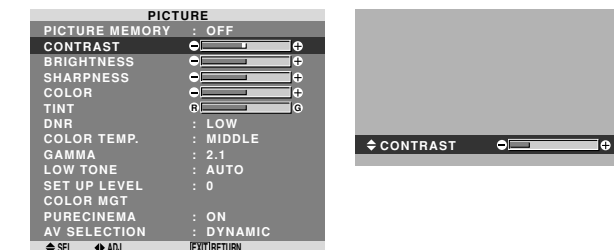
- Use the ◀ and ▶ buttons to select "NOTE", then press the MENU/SET button.
- Input the note.
 - Use the ▲ and ▼ button to select the character.
 - Use the ◀ and ▶ buttons to move the cursor.
 - Use the EXIT button to delete the character at the cursor position.
- When you have finished inputting the note, press the MENU/SET button.

Adjusting the picture

The contrast, brightness, sharpness, color and tint can be adjusted as desired.

Example: Adjusting the contrast

On "CONTRAST" of "PICTURE" menu, adjust the contrast.



Note: If "CAN NOT ADJUST" appears ...

When trying to enter the PICTURE submenu, make sure AV SELECTION is not set to DEFAULT.

Information

Picture adjustment screen

CONTRAST: Changes the picture's white level.

BRIGHTNESS: Changes the picture's black level.

SHARPNESS: Changes the picture's sharpness.

Adjusts picture detail of VIDEO display.

COLOR: Changes the color density.

TINT: Changes the picture's tint. Adjust for natural colored skin, background, etc.

Adjusting the computer image

Only the contrast and brightness can be adjusted when a computer signal is connected.

Restoring the factory default settings

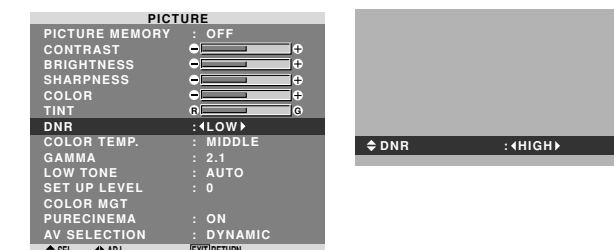
Select "DEFAULT" under the "AV SELECTION" settings.

Reducing noise in the picture

Use these settings if the picture has noise due to poor reception or when playing video tapes on which the picture quality is poor.

Example: Setting "HIGH"

On "DNR" of "PICTURE" menu, select "HIGH".



Information

DNR

* "DNR" stands for Digital Noise Reduction.

* This function reduces noise in the picture.

Types of noise reduction

There are three types of noise reduction. Each has a different level of noise reduction.

The effect increases stronger in the order of LOW, MID and HIGH.

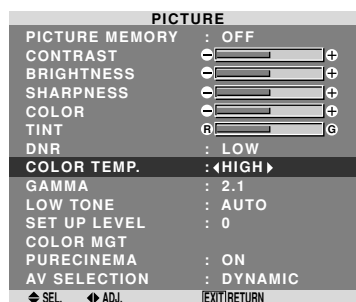
OFF: Turns the noise reduction function off.

Setting the color temperature

Use this procedure to set color tone produced by the plasma display.

Example: Setting "HIGH"

On "COLOR TEMP." of "PICTURE" menu, select "HIGH".



Information

■ Setting the color temperature

LOW: Redder
MIDDLE LOW: Slightly red
MIDDLE: Standard (slightly bluer)
HIGH: Bluer

Adjusting the color to the desired level

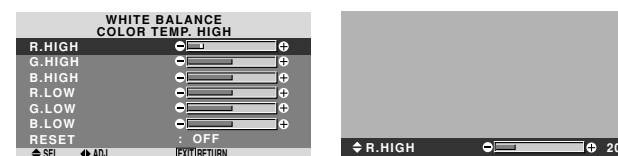
Use this procedure to adjust the white balance for each color temperature to achieve the desired color quality.

Example: Adjusting the "R.HIGH" of "HIGH" color temperature

On "COLOR TEMP." of "PICTURE" menu, select "HIGH", then press the MENU/SET button.

The "WHITE BALANCE" screen appears.

On "R.HIGH", adjust the white balance.



Information

■ Adjusting the white balance

R/G/B HIGH: White balance adjustment for white level
R/G/B LOW: White balance adjustment for black level
RESET: Resets settings to the factory default values.
Use ◀ and ▶ buttons to select "ON", then press the MENU/SET button.

■ Restoring the factory default settings

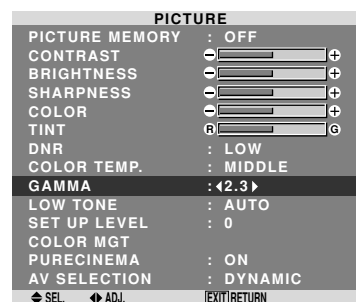
Select "RESET" under the WHITE BALANCE menu.

Changing the Gamma Curve

This feature adjusts the brightness of the midtone areas while keeping shadows and highlights unchanged.

Example: Setting "2.3"

On "GAMMA" of "PICTURE" menu, select "2.3".



Information

■ GAMMA settings

The picture becomes darker as the number increases (in the sequence of 2.1, 2.2, 2.3, 2.4).

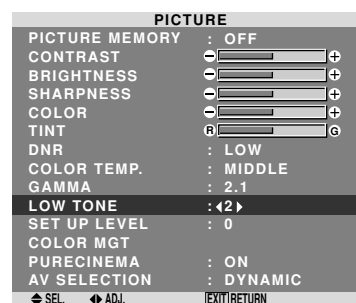
* These values are approximate.

Making the Low Tone adjustments

This feature allows more detailed tone to be reproduced especially in the dark area.

Example: Setting "2"

On "LOW TONE" of "PICTURE" menu, select "2".



Information

■ LOW TONE settings

AUTO: Will automatically appraise the picture and make adjustments.

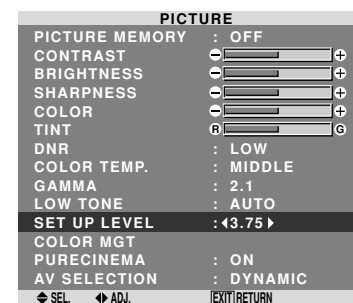
- 1: Will apply the dither method suitable for still pictures.
- 2: Will apply the dither method suitable for motion pictures.
- 3: Will apply the error diffusion method.

Adjusting the pedestal level (black level)

This feature adjusts the video black level in a video image.

Example: Setting "3.75"

On "SET UP LEVEL" of "PICTURE" menu, select "3.75".



Information

■ SET UP LEVEL settings

0: Normal status
3.75: 3.75% lower than normal
7.5: 7.5% lower than normal

Adjusting the colors

Use this procedure to adjust hue and color density for red, green, blue, yellow, magenta and cyan.

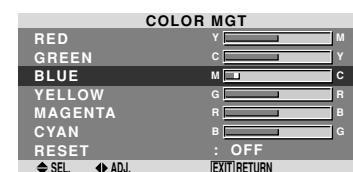
You can accentuate the green color of trees, the blue of the sky, etc.

Example: Adjusting the color management for blue

On "PICTURE" menu, select "COLOR MGT", then press the MENU/SET button.

The "COLOR MGT" screen appears.

On "BLUE" of "COLOR MGT", adjust the color management.



Information

■ COLOR MGT settings

RED: Makes red's adjustment
GREEN: Makes green's adjustment
BLUE: Makes blue's adjustment
YELLOW: Makes yellow's adjustment
MAGENTA: Makes magenta's adjustment
CYAN: Makes cyan's adjustment
RESET: Resets settings to the factory default value.
Use ◀ and ▶ buttons to select "ON", then press the MENU/SET button.

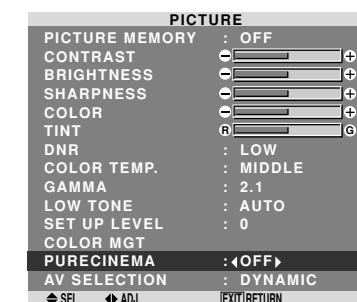
Setting the picture to suit the movie

The film image is automatically discriminated and projected in an image mode suited to the picture.

[NTSC, PAL, PAL60, 480I (60Hz), 525I (60Hz), 1035I (60Hz), 1080I (60Hz) only]

Example: Setting the "PURECINEMA" to "OFF"

On "PURECINEMA" of "PICTURE" menu, select "OFF".



Information

■ PURECINEMA

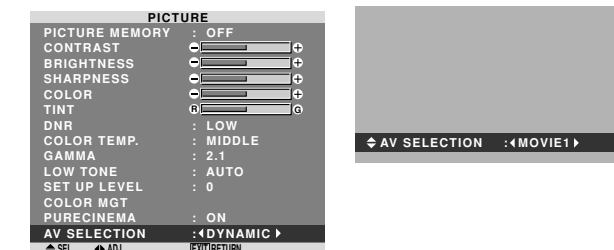
ON: Automatic discrimination of the image and projection in PURECINEMA.
OFF: PURECINEMA does not function.

Setting the picture modes according to the brightness of the room

There are four picture modes that can be used effectively according to the environment in which you are viewing the display.

Example: Setting the "MOVIE1" mode

On "AV SELECTION" of "PICTURE" menu, select "MOVIE1".



Information

■ Types of AV SELECTION

MOVIE1, 2: Set this mode when watching video in a dark room.

This mode provides darker, finer pictures, like the screen in movie theaters.

For a darker image, select MOVIE2.

STANDARD: Set this mode when watching video in a bright room.

This mode provides pictures with distinct differences between light and dark sections.

DYNAMIC: This mode provides brighter pictures than STANDARD.

DEFAULT: Use this to reset the picture to the factory default settings.

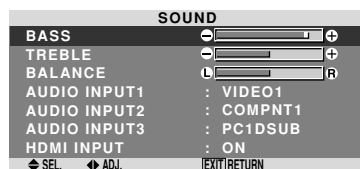
SOUND Settings Menu

Adjusting the treble, bass and left/right balance and audio input select

The treble, bass and left/right balance can be adjusted to suit your tastes.

Example: Adjusting the bass

On "BASS" of "SOUND" menu, adjust the bass.



Note : If "CAN NOT ADJUST" appears...
Set "AUDIO INPUT" on the SOUND menu correctly.

Information

■ SOUND settings menu

BASS: Controls the level of low frequency sound.
TREBLE: Controls the level of high frequency sound.
BALANCE: Controls the balance of the left and right channels.

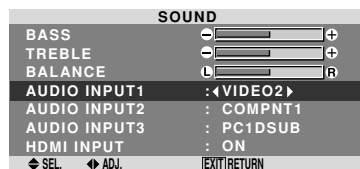
Setting the allocation of the audio connectors

Setting the AUDIO 1, 2, and 3 connectors to the desired input.

Example: Setting "AUDIO INPUT1" to "VIDEO 2"

On "AUDIO INPUT1" of "SOUND" menu, select "VIDEO2".

The available sources depend on the settings of input.



Information

■ AUDIO INPUT

A single audio input cannot be selected as the audio channel for more than one input terminal.

■ HDMI INPUT

ON: Enables the digital audio input signal transmitted via the HDMI terminal.

OFF: Disables the digital audio input signal.

SCREEN Settings Menu

Adjusting the Position, Size, PHASE, CLOCK

The position of the image can be adjusted and flickering of the image can be corrected.

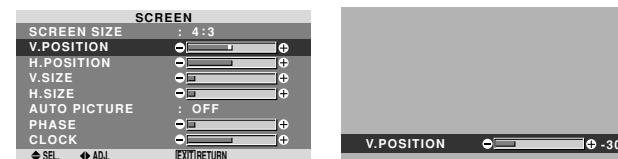
Example: Adjusting the vertical position in the normal mode

On "V.POSITION" of "SCREEN" menu, adjust the position. The mode switches as follows each time the ◀ or ▶ button is pressed:

4:3 ↔ FULL

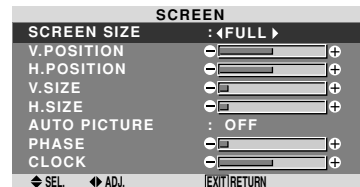
* The mode can also be switched by pressing the SCREEN SIZE button on the remote control.

* The settings on the SCREEN menu are not preset at the factory.



Information

■ When "AUTO PICTURE" is "OFF"



When Auto Picture is off, the PHASE and the CLOCK items are displayed so that you can adjust them.

■ Adjusting the Auto Picture

ON: The CLOCK, PHASE and Position adjustments are made automatically.

Not available for digital ZOOM.

OFF: The CLOCK, PHASE and Position adjustments are made manually.

* If PHASE can't be adjusted, set Auto Picture to OFF and adjust manually.

■ Adjusting the position of the image

V.POSITION: Adjusts the vertical position of the image.

H.POSITION: Adjusts the horizontal position of the image.

V.SIZE: Adjusts the vertical size of the image. (Except for WIDE mode)

H.SIZE: Adjusts the horizontal size of the image. (Except for WIDE mode)

PHASE*: Adjusts for flickering.

CLOCK*: Adjusts for striped patterns on the image.

* The CLOCK and PHASE features are available only when the "Auto Picture" is off.

* The AUTO PICTURE, PHASE and CLOCK are available only for RGB signals.

But, these features are not available for moving pictures on RGB, VIDEO or COMPONENT.

SET UP Settings Menu

Setting the BNC connectors

Select whether to set the input of the 5 BNC connectors to RGB and component.

Example: Set the BNC INPUT mode to "RGB"

On "BNC INPUT" of "SET UP" menu, select "RGB".



Information

■ BNC INPUT Settings

RGB: Use the 5BNC terminals for PC2/COMPONENT2 input.

COMP.: Use the 3BNC terminals for PC2/COMPONENT2 input.

Checking the signal being transmitted to PC1 terminal

Use this to confirm the signal being transmitted to the PC1 terminal.

It is set to RGB and can not be adjusted.

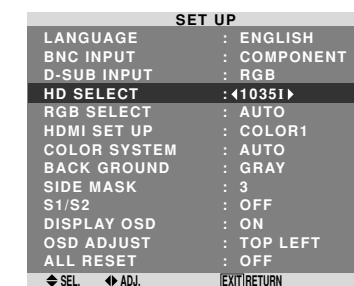


Setting high definition images to the suitable screen size

Use this procedure to set whether the number of vertical lines of the input high definition image is 1080I or 1035I or 540P.

Example: Setting the "HD SELECT" mode to "1035I"

On "HD SELECT" of "SET UP" menu, select "1035I".



Information

■ HD SELECT modes

These 3 modes are not displayed in correct image automatically.

1080I: Standard digital broadcasts

1035I: Japanese "High Vision" signal format

540P: Special Digital broadcasts (for example : DTC100)

Setting a computer image to the correct RGB select screen

With the computer image, select the RGB Select mode for a moving image such as (video) mode, wide mode or digital broadcast.

Example: Setting the "RGB SELECT" mode to "MOTION"

On "RGB SELECT" of "SET UP" menu, select "MOTION".



Information**RGB SELECT modes**

One of these 8 modes must be selected in order to display the following signals correctly.

AUTO: Select the suitable mode for the specifications of input signals as listed in the table "Computer input signals supported by this system" on page 27.

STILL: To display VESA standard signals. (Use this mode for a still image from a computer.)

MOTION: The video signal (from a scan converter) will be converted to RGB signals to make the picture more easily viewable. (Use this mode for a motion image from a computer.)

WIDE1: When an 852 dot × 480 line signal with a horizontal frequency of 31.7kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE1.

WIDE2: When an 848 dot × 480 line signal with a horizontal frequency of 31.0 kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE2.

WIDE3: When an 1920 dot × 1200 line signal with a horizontal frequency of 74.0 kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE3.

WIDE4: When an 1280 dot × 768 line signal with a horizontal frequency of 59.8 kHz or an 1680 dot × 1050 line signal with a horizontal frequency of 60 kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE4.

DTV: Set this mode when watching digital broadcasting (480P).

See page 27 for the details of the above settings.

Setting the black level for HDMI signal

Set the black level for the signal transmitted via the HDMI terminal.

Example: Setting "COLOR2"

On "HDMI SET UP" of "SET UP" menu, select "COLOR2".

SET UP	
LANGUAGE	: ENGLISH
BNC INPUT	: COMPONENT
D-SUB INPUT	: RGB
HD SELECT	: 1080I
RGB SELECT	: AUTO
HDMI SET UP	: <COLOR2>
COLOR SYSTEM	: AUTO
BACK GROUND	: GRAY
SIDE MASK	: 3
S1/S2	: OFF
DISPLAY OSD	: ON
OSD ADJUST	: TOP LEFT
ALL RESET	: OFF
◀SEL ▶ADJ. EXIT/RETURN	

Information**HDMI SET UP settings**

COLOR1: When connected to the SET TOP BOX, DVD etc. Change "COLOR1" into "COLOR2" if the black level appears gray.

COLOR2: Darker black level (real black).

Setting the video signal format

Use these operations to set the color systems of composite video signals or Y/C input signals.

Example: Setting the color system to "3.58 NTSC"

On "COLOR SYSTEM" of "SET UP" menu, select "3.58NTSC".

SET UP	
LANGUAGE	: ENGLISH
BNC INPUT	: COMPONENT
D-SUB INPUT	: RGB
HD SELECT	: 1080I
RGB SELECT	: AUTO
HDMI SET UP	: COLOR1
COLOR SYSTEM	: <3.58NTSC>
BACK GROUND	: GRAY
SIDE MASK	: 3
S1/S2	: OFF
DISPLAY OSD	: ON
OSD ADJUST	: TOP LEFT
ALL RESET	: OFF
◀SEL ▶ADJ. EXIT/RETURN	

Information**Video signal formats**

Different countries use different formats for video signals. Set to the color system used in your current country.

AUTO: The color systems are automatically identified and the format is set accordingly.

PAL: This is the standard format used mainly in the United Kingdom and Germany.

SECAM: This is the standard format used mainly in France and Russia.

4.43 NTSC, PAL60: This format is used for videos in countries using PAL and SECAM video signals.

3.58 NTSC: This is the standard format used mainly in the United States and Japan.

PAL-M: This is the standard format used mainly in Brazil.

PAL-N: This is the standard format used mainly in Argentina.

Setting the background color when no signal is being input

The color displayed on the background when there is no signal can be set to gray.

Example: Setting "BACK GROUND" to "BLACK"

On "BACK GROUND" of "SET UP" menu, select "BLACK".

SET UP	
LANGUAGE	: ENGLISH
BNC INPUT	: COMPONENT
D-SUB INPUT	: RGB
HD SELECT	: 1080I
RGB SELECT	: AUTO
HDMI SET UP	: COLOR1
COLOR SYSTEM	: AUTO
BACK GROUND	: <BLACK>
SIDE MASK	: 3
S1/S2	: OFF
DISPLAY OSD	: ON
OSD ADJUST	: TOP LEFT
ALL RESET	: OFF
◀SEL ▶ADJ. EXIT/RETURN	

Information**BACK GROUND Settings**

BLACK: Sets the background color to black.

GRAY: Sets the background color to gray.

Setting this makes it easier to see that there is no signal.

Setting the gray level for the SIDE MASK

Use this procedure to set the gray level for the parts on the screen on which nothing is displayed when the screen is set to the 4:3 size.

Example: Setting "SIDE MASK" to "5"

On "SIDE MASK" of "SET UP" menu, select "5".

SET UP	
LANGUAGE	: ENGLISH
BNC INPUT	: COMPONENT
D-SUB INPUT	: RGB
HD SELECT	: 1080I
RGB SELECT	: AUTO
HDMI SET UP	: COLOR1
COLOR SYSTEM	: AUTO
BACK GROUND	: GRAY
SIDE MASK	: <5>
S1/S2	: OFF
DISPLAY OSD	: ON
OSD ADJUST	: TOP LEFT
ALL RESET	: OFF
◀SEL ▶ADJ. EXIT/RETURN	

Information**SIDE MASK settings**

This adjusts the brightness of the black (the gray level) for the sides of the screen.

The standard is 0 (black). The level can be adjusted from 0 to 15. The factory setting is 3 (dark gray).

Setting the screen size for S1/S2 video input

If the S-video signal contains screen size information, the image will be automatically adjusted to fit the screen when this S1/S2 is set to AUTO.

This feature is available only when an S-video signal is input via the VIDEO3 terminal.

Example: Setting "S1/S2" to "AUTO"

On "S1/S2" of "SET UP" menu, select "AUTO".

SET UP	
LANGUAGE	: ENGLISH
BNC INPUT	: COMPONENT
D-SUB INPUT	: RGB
HD SELECT	: 1080I
RGB SELECT	: AUTO
HDMI SET UP	: COLOR1
COLOR SYSTEM	: AUTO
BACK GROUND	: GRAY
SIDE MASK	: 3
S1/S2	: <AUTO>
DISPLAY OSD	: ON
OSD ADJUST	: TOP LEFT
ALL RESET	: OFF
◀SEL ▶ADJ. EXIT/RETURN	

Information**S1/S2 settings**

AUTO: Adjusts the screen size automatically according to the S1/S2 video signal.

OFF: Turns the S1/S2 function off.

Turning on/off the information display

When this is set to OFF, the information will not be displayed even if you press the DISPLAY button.

Example: Turning the DISPLAY OSD off

On "DISPLAY OSD" of "SET UP" menu, select "OFF".

SET UP	
LANGUAGE	: ENGLISH
BNC INPUT	: COMPONENT
D-SUB INPUT	: RGB
HD SELECT	: 1080I
RGB SELECT	: AUTO
HDMI SET UP	: COLOR1
COLOR SYSTEM	: AUTO
BACK GROUND	: GRAY
SIDE MASK	: 3
S1/S2	: OFF
DISPLAY OSD	: <OFF>
OSD ADJUST	: TOP LEFT
ALL RESET	: OFF
◀SEL ▶ADJ. EXIT/RETURN	

Information**DISPLAY OSD settings**

ON: The informations on screen size, volume control, etc. will be shown.

OFF: The informations on screen size, volume control, etc. will not be shown.

The DISPLAY button on the remote control will not function either.

Setting the position of the menu

Adjusts the position of the menu when it appears on the screen.

Example: Set the position to "TOP CENTER"

On "OSD ADJ." of "SET UP" menu, select "TOP CENTER".

SET UP	
LANGUAGE	: ENGLISH
BNC INPUT	: COMPONENT
D-SUB INPUT	: RGB
HD SELECT	: 1080I
RGB SELECT	: AUTO
HDMI SET UP	: COLOR1
COLOR SYSTEM	: AUTO
BACK GROUND	: GRAY
SIDE MASK	: 3
S1/S2	: OFF
DISPLAY OSD	: ON
OSD ADJUST	: <TOP CENTER>
ALL RESET	: OFF
◀SEL ▶ADJ. EXIT/RETURN	

Information**OSD ADJUST settings**

TOP LEFT	TOP CENTER	TOP RIGHT
BTM LEFT	BTM CENTER	BTM RIGHT

Resetting to the default values

Use these operations to restore all the settings (PICTURE, SOUND, SCREEN, SET UP, etc) to the factory default values.

Refer to page 13 for items to be reset.

On "ALL RESET" of "SET UP" menu, select "ON", then press the MENU/SET button.

SET UP	
LANGUAGE	: ENGLISH
BNC INPUT	: COMPONENT
D-SUB INPUT	: RGB
HD SELECT	: 1080I
RGB SELECT	: AUTO
HDMI SET UP	: COLOR1
COLOR SYSTEM	: AUTO
BACK GROUND	: GRAY
SIDE MASK	: 3
S1/S2	: OFF
DISPLAY OSD	: ON
OSD ADJUST	: TOP LEFT
ALL RESET	: <ON>
◀SEL ▶ADJ. EXIT/RETURN	

ALL RESET	
SETTING NOW	

When the "SETTING NOW" screen disappears, then all the settings are restored to the default values.

Function Settings Menu

Setting the power management for computer images

This energy-saving (power management) function automatically reduces the monitor's power consumption if no operation is performed for a certain amount of time. Example: Turning the power management function on On "POWER MGT." of "FUNCTION" menu, select "ON".

FUNCTION	
POWER MGT.	: <ON>
INPUT SKIP	: OFF
SUB. P DETECT	: AUTO
ZOOM NAV	: BTM LEFT
PICTURE FREEZE	: S BY S1
LONG LIFE	: MANUAL
◀SEL	▶ADJ. EXIT/RETURN

Information

■ Power management function

- * The power management function automatically reduces the monitor's power consumption if the computer's keyboard or mouse is not operated for a certain amount of time. This function can be used when using the monitor with a computer.
- * If the computer's power is not turned on or if the computer and selector tuner are not properly connected, the system is set to the off state.
- * For instructions on using the computer's power management function, refer to the computer's operating instructions.

■ Power management settings

ON: In this mode the power management function is turned on.
OFF: In this mode the power management function is turned off.

■ Power management function and STANDBY/ON indicator

The STANDBY/ON indicator indicates the status of the power management function. See below for indicator status and description.

STANDBY/ON indicator

Power management mode	STANDBY/ON indicator	Power management operating status	Description	Turning the picture back on
On	Green	Not activated.	Horizontal and vertical synchronizing signals are present from the computer.	Picture already on.
Off	Red	Activated.	Horizontal and/or vertical synchronizing signals are not sent from the computer.	Operate the keyboard or mouse. The picture reappears.

Setting the Input Skip

When this is ON, signals which are not present will be skipped over and only pictures whose signals are being transmitted will be displayed. This setting is valid only for the INPUT/EXIT button on the unit.

Example: Set to "ON"

On "INPUT SKIP" of "FUNCTION" menu, select "ON".

FUNCTION	
POWER MGT.	: OFF
INPUT SKIP	: <ON>
SUB. P DETECT	: AUTO
ZOOM NAV	: BTM LEFT
PICTURE FREEZE	: S BY S1
LONG LIFE	: MANUAL
◀SEL	▶ADJ. EXIT/RETURN

Information

■ INPUT SKIP settings

- OFF: Regardless of the presence of the signal, scan and display all signals.
- ON: If no input signal is present, skip that signal.
- * "SETTING NOW" will appear during the input search.

Erasing the sub screen image when there is no input signal

This function automatically erases the black frame of the sub screen when there is no sub screen input signal. This feature is available only when the picture-in-picture mode is selected.

Example: Set to "OFF"

On "SUB. P DETECT" of "FUNCTION" menu, select "OFF".

FUNCTION	
POWER MGT.	: OFF
INPUT SKIP	: OFF
SUB. P DETECT	: <OFF>
ZOOM NAV	: BTM LEFT
PICTURE FREEZE	: S BY S1
LONG LIFE	: MANUAL
◀SEL	▶ADJ. EXIT/RETURN

Information

■ SUB. P DETECT Function

- * The sub screen disappears when the input signal is lost.
- * Loss of the input signal means a condition in which the video signal and the sync signal are not present.
- * Under conditions in which the sub screen has disappeared, the ZOOM NAV and PICTURE FREEZE functions will not work. The SCREEN SIZE button will not function either.

■ SUB. P DETECT settings

AUTO: The black frame disappears 3 seconds after the input signal is lost.
OFF: Turns off the SUB. P DETECT function.

Displaying the entire image during DIGITAL ZOOM operations

Use this function to display the entire image within the sub screen together with an enlarged image on the main screen.

Example: Setting "ZOOM NAV" to "S BY S"

On "ZOOM NAV" of "FUNCTION" menu, select "S BY S".

FUNCTION	
POWER MGT.	: OFF
INPUT SKIP	: OFF
SUB. P DETECT	: AUTO
ZOOM NAV	: <S BY S>
PICTURE FREEZE	: S BY S1
LONG LIFE	: MANUAL
◀SEL	▶ADJ. EXIT/RETURN

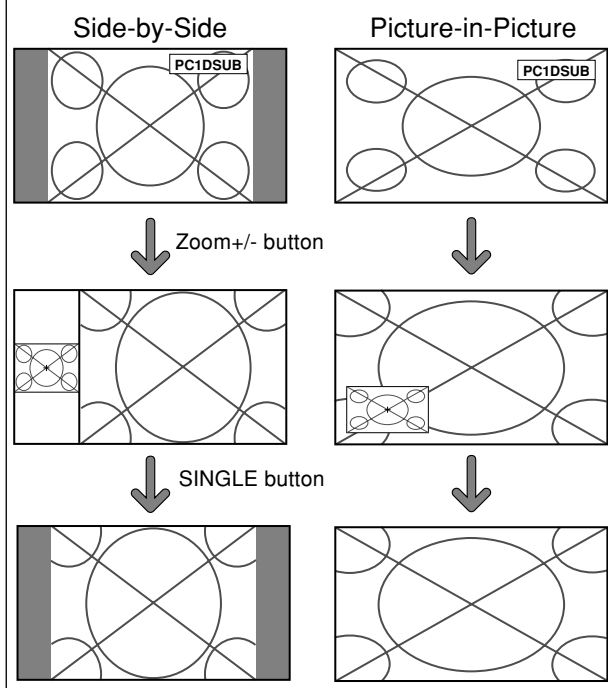
Information

■ ZOOM NAV Function

- * This feature is available only for PC1 or PC2 input signals.
- * This feature does not function during multi screen mode.
- * This feature does not function while PICTURE FREEZE is operating.
- * Providing a 2-screen display will cancel this function.

■ ZOOM NAV settings

OFF: Will not show the entire image on the sub screen.
S BY S: Will show the entire image on the sub screen of side-by-side mode.
BTM LFT~TOP LFT: Will show the entire image on the sub screen of picture-in-picture mode.



Displaying still images in the sub screen

This feature enables display in the sub screen of still images captured by pressing the ACTIVE SELECT button.

Example: Setting "PICTURE FREEZE" to "BTM LEFT"

On "PICTURE FREEZE" of "FUNCTION" menu, select "BTM LEFT".

FUNCTION	
POWER MGT.	: OFF
INPUT SKIP	: OFF
SUB. P DETECT	: AUTO
ZOOM NAV	: BTM LEFT
PICTURE FREEZE	: <BTM LEFT>
LONG LIFE	: MANUAL
◀SEL	▶ADJ. EXIT/RETURN

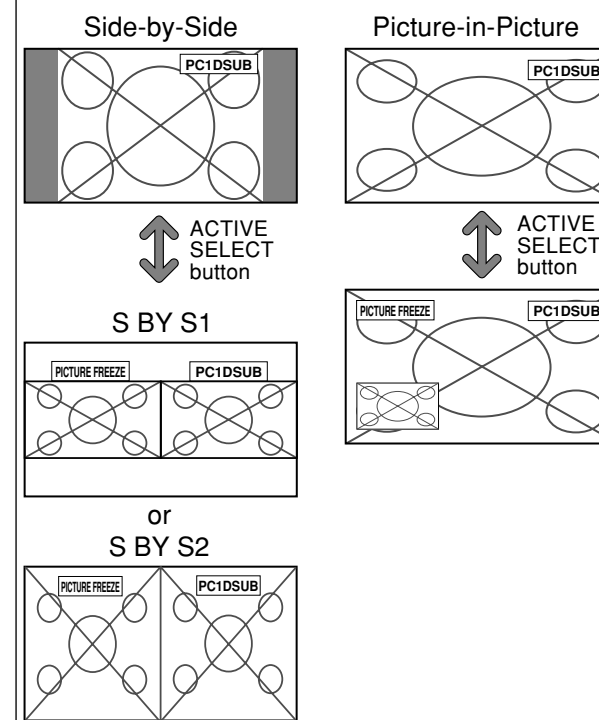
Information

■ PICTURE FREEZE Function

- * This feature is available only for PC1 or PC2 input signals.
- * This feature does not function during multi screen mode.
- * Digital zoom is not available while this function is operating.
- * A further press of the ACTIVE SELECT button while this function is operating will cancel this function.
- * Providing a 2-screen display will cancel this function.

■ PICTURE FREEZE settings

OFF: Will not show the still image.
S BY S1, 2: The still images captured by pressing the ACTIVE SELECT button will be shown on the sub screen of side-by-side mode.
BTM LEFT~TOP LEFT: The still images captured by pressing the ACTIVE SELECT button will be shown on the sub screen of picture-in-picture mode.



Reducing burn-in of the screen

The brightness of the screen, the position of the picture, positive/negative mode and screen wiper are adjusted to reduce burn-in of the screen.

On "LONG LIFE" of "FUNCTION" menu, select "MANUAL", then press the MENU/SET button. The "LONG LIFE" screen appears.

LONG LIFE	
ABL	: <100>
ORBITER	: OFF
INVERSE/WHITE	: OFF
SCREEN WIPER	: OFF
SOFT FOCUS	: OFF
OSD ORBITER	: ON
OSD CONTRAST	: LOW
◀SEL	▶ADJ. EXIT/RETURN

Information**■ When set to AUTO**

Set automatically, as described below.

ABL: 100
ORBITER: AUTO1
INVERSE/WHITE: OFF
SCREEN WIPER: OFF
SOFT FOCUS: OFF
OSD ORBITER: ON
OSD CONTRAST: LOW

ABL (Auto Brightness Limiter)

Use this to activate the brightness limiter.

Example: Setting "ABL" to "75"

On "ABL" of "LONG LIFE" menu, select "75".

LONG LIFE	
ABL	: <75 >
ORBITER	: OFF
INVERSE/WHITE	: OFF
SCREEN WIPER	: OFF
SOFT FOCUS	: OFF
OSD ORBITER	: ON
OSD CONTRAST	: LOW
◀ SEL. ▶ ADJ. [EXIT] RETURN	

Information**■ ABL settings**

100: The brightness of the screen is adjusted automatically to suit the picture quality.

75, 50, 25: Sets maximum brightness.

The brightness level decreases in the order of 75, 50, 25. 25 provides minimum brightness.

* These values are approximate.

ORBITER

Use this to set the picture shift.

Example: Setting "ORBITER" to "AUTO1"

On "ORBITER" of "LONG LIFE" menu, select "AUTO1".

LONG LIFE	
ABL	: 100
ORBITER	: <AUTO1 >
INVERSE/WHITE	: OFF
SCREEN WIPER	: OFF
SOFT FOCUS	: OFF
OSD ORBITER	: ON
OSD CONTRAST	: LOW
◀ SEL. ▶ ADJ. [EXIT] RETURN	

Information**■ ORBITER settings**

OFF: Orbiter mode does not function.

This is the default setting when PC signal is input.

AUTO1: The picture moves around the screen intermittently, making the picture smaller. This is the default setting when a Video or a COMPONENT signal is input. Set to "OFF" when these signals are not used.

AUTO2: The picture moves around the screen intermittently, making the picture bigger.

* When a Video or a COMPONENT signal is input, the AUTO1 and 2 functions will affect only the moving picture and will not make the screen smaller or bigger.

INVERSE/WHITE

Use this to set the inverse mode or to display a white screen.

Example: Setting "INVERSE/WHITE" to "WHITE"

On "INVERSE/WHITE" of "LONG LIFE" menu, select "WHITE".

LONG LIFE	
ABL	: 100
ORBITER	: OFF
INVERSE/WHITE	: <WHITE >
SCREEN WIPER	: OFF
SOFT FOCUS	: OFF
OSD ORBITER	: ON
OSD CONTRAST	: LOW
◀ SEL. ▶ ADJ. [EXIT] RETURN	

Information**■ INVERSE/WHITE Settings**

OFF: Inverse/white mode does not function.

INVERSE: The picture is displayed alternately between positive image and negative image.

WHITE: The entire screen turns white.

SCREEN WIPER

When this is set to ON, a white vertical bar moves repeatedly from the left and of the screen to the right end at a constant speed.

Example: Setting "SCREEN WIPER" to "ON"

On "SCREEN WIPER" of "LONG LIFE" menu, select "ON".

LONG LIFE	
ABL	: 100
ORBITER	: OFF
INVERSE/WHITE	: OFF
SCREEN WIPER	: <ON >
SOFT FOCUS	: OFF
OSD ORBITER	: ON
OSD CONTRAST	: LOW
◀ SEL. ▶ ADJ. [EXIT] RETURN	

Information**■ SCREEN WIPER**

ON: The white vertical bar appears.

OFF: Screen wiper mode does not function.

SOFT FOCUS

Reduces edges and softens the image.

Example: Setting "SOFT FOCUS" to "LEVEL2"

On "SOFT FOCUS" of "LONG LIFE" menu, select "LEVEL2".

LONG LIFE	
ABL	: 100
ORBITER	: OFF
INVERSE/WHITE	: OFF
SCREEN WIPER	: OFF
SOFT FOCUS	: <LEVEL2 >
OSD ORBITER	: ON
OSD CONTRAST	: LOW
◀ SEL. ▶ ADJ. [EXIT] RETURN	

Information**■ SOFT FOCUS settings**

OFF: Turns the SOFT FOCUS function off.

LEVEL1, 2, 3, 4: Activates the SOFT FOCUS setting.

The higher numbers create a softer image.

"SHARPNESS" can not be adjusted on the "PICTURE" menu.

OSD ORBITER

Use this to set OSD menu shift.

Example: Setting "OSD ORBITER" to "OFF"

On "OSD ORBITER" of "LONG LIFE" menu, select "OFF".

LONG LIFE	
ABL	: 100
ORBITER	: OFF
INVERSE/WHITE	: OFF
SCREEN WIPER	: OFF
SOFT FOCUS	: OFF
OSD ORBITER	: <OFF >
OSD CONTRAST	: LOW
◀ SEL. ▶ ADJ. [EXIT] RETURN	

Information**■ OSD ORBITER settings**

ON: The position of the menu will be shifted by eight dots each time OSD is displayed.

OFF: OSD will be displayed at the same position.

OSD CONTRAST

Use this to reduce the brightness of OSD menu.

Example: Setting "OSD CONTRAST" to "NORMAL"

On "OSD CONTRAST" of "LONG LIFE" menu, select "NORMAL".

LONG LIFE	
ABL	: 100
ORBITER	: OFF
INVERSE/WHITE	: OFF
SCREEN WIPER	: OFF
SOFT FOCUS	: OFF
OSD ORBITER	: ON
OSD CONTRAST	: <NORMAL >
◀ SEL. ▶ ADJ. [EXIT] RETURN	

Information**■ OSD CONTRAST settings**

NORMAL: OSD brightness is set to normal.

LOW: OSD brightness is set to lower.

Signal Information Menu**Checking the frequencies, polarities of input signals, and resolution**

Use this function to check the frequencies and polarities of the signals currently being input from a computer, etc.

On "MAIN MENU", select "SIGNAL INFO.", then press the MENU/SET button.

The "SIGNAL INFORMATION" is displayed.

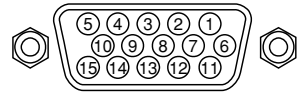
SIGNAL INFORMATION	
H. FREQUENCY	: 48.4kHz
V. FREQUENCY	: 60.0Hz
H. POLARITY	: NEGATIVE
V. POLARITY	: NEGATIVE
MEMORY	: 24
RESOLUTION	: 1024 x 768
[EXIT] RETURN	

PC: MEMORY will be displayed.
Others: MODE will be displayed.

Pin Assignments

mini D-Sub 15-pin connector (Analog)

PC 1



Pin No.	Signal (Analog)
1	Red
2	Green or sync-on-green
3	Blue
4	No connection
5	Ground
6	Red ground
7	Green ground
8	Blue ground
9	No connection
10	Sync signal ground
11	No connection
12	Bi-directional DATA (SDA)
13	Horizontal sync or Composite sync
14	Vertical sync
15	Data clock

Table of Signals Supported

Supported resolution

- When the screen size is 4:3, each signal is converted to a 1024 dots×768 lines signal. (Except for *2,3,4)
- When the screen size is D BY D, the picture is displayed in the original resolution.
- When the screen size is FULL, each signal is converted to a 1365 dots×768 lines signal. (Except for *3)

Computer input signals supported by this system

Model Signal Type	Dots × lines	Vertical frequency (Hz)	Horizontal frequency (kHz)	Sync Polarity		Presence		Screen Size			RGB select*5	Memory	
				Horizontal	Vertical	Horizontal	Vertical	4:3	D BY D	FULL (16:9)			
IBM PC/AT*8 compatible computers	640×400	70.1	31.5	NEG	NEG	YES	YES	YES*2	--	YES	--	4	
		640×480	59.9	31.5	NEG	NEG	YES	YES	YES	--	YES	STILL	5
			72.8	37.9	NEG	NEG	YES	YES	YES	--	YES	--	7
			75.0	37.5	NEG	NEG	YES	YES	YES	--	YES	STILL	8
			85.0	43.3	NEG	NEG	YES	YES	YES	--	YES	--	9
			100.4	51.1	NEG	NEG	YES	YES	YES	--	YES	--	41
	120.4	61.3	NEG	NEG	YES	YES	YES	--	YES	--	42		
	848×480	60.0	31.0	POS	POS	YES	YES	--	--	YES	WIDE2	19	
	852×480*1	60.0	31.7	NEG	NEG	YES	YES	--	--	YES	WIDE1	17	
	800×600	56.3	35.2	POS	POS	YES	YES	YES	--	YES	STILL	11	
		60.3	37.9	POS	POS	YES	YES	YES	--	YES	STILL	12	
		72.2	48.1	POS	POS	YES	YES	YES	--	YES	--	13	
		75.0	46.9	POS	POS	YES	YES	YES	--	YES	--	14	
		85.1	53.7	POS	POS	YES	YES	YES	--	YES	--	15	
		99.8	63.0	POS	POS	YES	YES	YES	--	YES	--	43	
	1024×768	120.0	75.7	POS	POS	YES	YES	YES	--	YES	--	44	
		60.0	48.4	NEG	NEG	YES	YES	YES*3	--	YES	STILL	24	
		70.1	56.5	NEG	NEG	YES	YES	YES*3	--	YES	--	25	
		75.0	60.0	POS	POS	YES	YES	YES*3	--	YES	STILL	26	
		85.0	68.7	POS	POS	YES	YES	YES*3	--	YES	--	27	
	1152×864	100.6	80.5	NEG	NEG	YES	YES	YES*3	--	YES	--	45	
		75.0	67.5	POS	POS	YES	YES	YES	--	YES	STILL	51	
		1280×768	56.2	45.1	NEG	NEG	YES	YES	--	YES	YES	WIDE1	52
	59.8		48.0	NEG	POS	YES	YES	--	YES	YES	WIDE4	23	
	69.8*9		56.0*9	NEG	POS	YES	YES	--	YES	YES	WIDE1	66	
	1280×800*9	60.0	49.7	NEG	NEG	YES	YES	--	--	YES	WIDE1	21	
	1280×854*9	60.0	53.1	NEG	NEG	YES	YES	--	--	YES	WIDE2	37	
	1360×765	60.0	47.7	POS	POS	YES	YES	--	--	YES*3	WIDE1	22	
	1360×768	60.0	47.7	POS	POS	YES	YES	--	--	YES*3	WIDE1	22	
	1376×768	59.9	48.3	NEG	POS	YES	YES	--	--	YES	WIDE2	53	
	1280×1024	60.0	64.0	POS	POS	YES	YES	YES*4	--	YES	STILL	29	
		75.0	80.0	POS	POS	YES	YES	YES*4	--	YES	--	30	
		85.0	91.1	POS	POS	YES	YES	YES*4	--	YES	--	40	
		100.1	108.5	POS	POS	YES	YES	YES*4	--	YES	--	47	
	1680×1050*9	60.0	65.3	NEG	NEG	YES	YES	--	--	YES	WIDE4	38	
	1600×1200	60.0	75.0	POS	POS	YES	YES	YES	--	YES	--	54	
		65.0	81.3	POS	POS	YES	YES	YES	--	YES	--	55	
		70.0	87.5	POS	POS	YES	YES	YES	--	YES	--	56	
		75.0	93.8	POS	POS	YES	YES	YES	--	YES	--	57	
		85.0	106.3	POS	POS	YES	YES	YES	--	YES	--	58	
	1920×1200*9	60.0	74.6	NEG	NEG	YES	YES	--	--	YES	WIDE2	81	
	1920×1200RB*9	60.0	74.0	NEG	NEG	YES	YES	--	--	YES	WIDE3	88	
Apple Macintosh*6 *8	640×480	66.7	35.0	Sync on G	Sync on G	--	--	YES	--	YES	--	6	
	832×624	74.6	49.7	Sync on G	Sync on G	--	--	YES	--	YES	--	16	
	1024×768	74.9	60.2	Sync on G	Sync on G	--	--	YES*3	--	YES	WIDE1	28	
	1152×870	75.1	68.7	Sync on G	Sync on G	--	--	YES	--	YES	WIDE1	39	
	1440×900*9	60.0	56.0	NEG	NEG	YES	YES	--	--	YES	--	89	
Work Station (EWS4800)*8	1280×1024	60.0	64.6	NEG	NEG	YES	YES	YES*4	--	YES	--	29	
		71.2	75.1	NEG	NEG	YES	YES	YES*4	--	YES	--	48	
Work Station(HP)*8	1280×1024	72.0	78.1	--	--	--	--	YES*4	--	YES	--	59	
Work Station (SUN)*8	1152×900	66.0	61.8	C Sync	C Sync	--	--	YES	--	YES	--	60	
		76.0	71.7	C Sync	C Sync	--	--	YES	--	YES	--	61	
	1280×1024	76.1	81.1	C Sync	C Sync	--	--	YES*4	--	YES	--	30	
Work Station (SGI)	1024×768	60.0	49.7	--	--	--	--	YES*3	--	YES	--	62	
	1280×1024	60.0	63.9	--	--	--	--	YES*4	--	YES	--	29	
IDC-3000G													
NTSC525P	640×480	59.9	31.5	NEG	NEG	YES	YES	YES*7	--	YES*7	MOTION	32	

Troubleshooting

- *1 Only when using a graphic accelerator board that is capable of displaying 852 × 480.
- *2 This signal is converted to a 1024 dots × 640 lines signal.
- *3 The picture is displayed in the original resolution.
- *4 The aspect ratio is 5:4. This signal is converted to a 960 dots × 768 lines signal.
- *5 Normally the RGB select mode suite for the input signals is set automatically. If the picture is not displayed properly, set the RGB mode prepared for the input signals listed in the table above.
- *6 To connect the monitor to Macintosh computer, use the monitor adapter (D-Sub 15-pin) to your computer's video port.
- *7 Other screen modes (ZOOM and WIDE) are available as well.
- *8 When viewing a moving picture at a vertical frequency greater than 65Hz, the picture may sometimes be unstable (jumpy). If this occurs, please set the refresh rate of the external equipment to 60Hz.
To view 480I@60Hz (480 interlaced lines, 60Hz refresh rate) when sync polarity is "Sync on Green", set "RGB SELECT" to "MOTION".
- *9 CVT standard compliant.

NOTE:

- While the input signals comply with the resolution listed in the table above, you may have to adjust the position and size of the picture or the fine picture because of errors in synchronization of your computer.
- When a 1280 dots × 1024 lines signal or 1600 dots × 1200 lines signal is input to the monitor, the picture will be compressed.
- This monitor has a resolution of 1365 dots × 768 lines. It is recommended that the input signal should be XGA, wide XGA, or equivalent.
- With digital input some signals are not accepted.
- The sync may be disturbed when a nonstandard signal other than the aforementioned is input.
- If you are connecting a composite sync signal, use the HD terminal.

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If the picture quality is poor or there is some other problem, check the adjustments, operations, etc., before requesting service.

Symptom	Checks	Remedy
Mechanical sound is heard. The unit emits a crackling sound.	<ul style="list-style-type: none"> • Maybe the sound from the cooling fans used to prevent over heating. • Are the image and sound normal? 	<ul style="list-style-type: none"> • If there are no abnormalities in the image and sound, the noise is caused by the cabinet reacting to changes in temperature. This will not affect performance.
Picture is disturbed. Sound is noisy. Remote control operates erroneously. The remote control does not work.	<ul style="list-style-type: none"> • Is a connected component set directly in front or at the side of the display? • Are the remote control's batteries worn out? 	<ul style="list-style-type: none"> • Leave some space between the display and the connected components. • Replace both batteries with new ones.
Monitor's power does not turn on when the remote control's power button is pressed.	<ul style="list-style-type: none"> • Is the monitor's power cord plugged into a power outlet? • Are all the monitor's indicators off? • Are the remote control's batteries worn out? 	<ul style="list-style-type: none"> • Plug the monitor's power cord into a power outlet. • Press the power button on the monitor to turn on the power. • Replace both batteries with new ones.
Monitor does not operate when the remote control's buttons are pressed.	<ul style="list-style-type: none"> • Is the remote control pointed at the monitor, or is there an obstacle between the remote control and the monitor? • Is direct sunlight or strong artificial light shining on the monitor's remote control sensor? • Are the remote control's batteries worn out? 	<ul style="list-style-type: none"> • Point the remote control at the monitor's remote control sensor when pressing buttons, or remove the obstacle. • Eliminate the light by closing curtains, pointing the light in a different direction, etc. • Replace both batteries with new ones.
No sound or picture is produced.	<ul style="list-style-type: none"> • Is the monitor's power cord plugged into a power outlet? 	<ul style="list-style-type: none"> • Plug the monitor's power cord into a power outlet.
Picture appears but no sound is produced.	<ul style="list-style-type: none"> • Is the volume set at the minimum? • Is the muting mode set? • Are the speakers properly connected? • Is AUDIO INPUT set correctly? 	<ul style="list-style-type: none"> • Increase the volume. • Press the remote control's MUTING button. • Connect the speakers properly. • Set AUDIO INPUT on the SOUND menu correctly.
Poor picture with VIDEO signal input.	<ul style="list-style-type: none"> • Improper control setting. • Local interference. • Cable interconnections. • Input impedance is not correct level. 	<ul style="list-style-type: none"> • Adjust picture control as needed. Try another location for the monitor. Be sure all connections are secure.
Poor picture with RGB signal input.	<ul style="list-style-type: none"> • Improper control setting. • Incorrect RGB connector pin connections. 	<ul style="list-style-type: none"> • Adjust picture controls as needed. Check pin assignments and connections.
Tint is poor or colors are weak.	<ul style="list-style-type: none"> • Are the tint and colors properly adjusted? 	<ul style="list-style-type: none"> • Adjust the tint and color (under PICTURE).
Nothing appears on screen.	<ul style="list-style-type: none"> • Is the computer's power turned on? • Is a source connected? • Is the power management function in the standby or off mode? 	<ul style="list-style-type: none"> • Turn on the computer's power. • Connect source to the monitor. • Operate the computer (move the mouse, etc.).
Part of picture is cut off or picture is not centered.	<ul style="list-style-type: none"> • Is the position adjustment appropriate? 	<ul style="list-style-type: none"> • Adjust the SCREEN properly.
Image is too large or too small.	<ul style="list-style-type: none"> • Is the screen size adjustment appropriate? 	<ul style="list-style-type: none"> • Press the SCREEN SIZE button on the remote control and adjust properly.
Picture is unstable.	<ul style="list-style-type: none"> • Is the computer's resolution setting appropriate? 	<ul style="list-style-type: none"> • Set to the proper resolution.
STANDBY/ON indicator is lighted in red.	<ul style="list-style-type: none"> • Horizontal and / or vertical sync signal is not present when the Intelligent Power Manager control is on. 	<ul style="list-style-type: none"> • Check the input signal.
STANDBY/ON indicator is blinking in red.	<ul style="list-style-type: none"> • The temperature inside the main unit has become too high and has activated the protector. 	<ul style="list-style-type: none"> • Promptly switch off the power of the main unit and wait until the internal temperature drops. See *1.
STANDBY/ON indicator is blinking in green and red, or green.	<p style="text-align: center;">—————</p>	<ul style="list-style-type: none"> • Promptly switch off the power of the main unit. See *2.

*1 Overheat protector

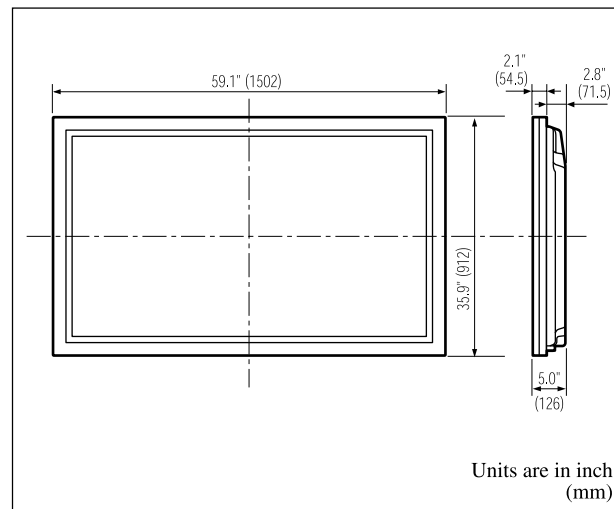
If the monitor becomes too hot, the overheat protector will be activated and the monitor will be turned off. If this happens, turn off the power to the monitor and unplug the power cord. If the room where the monitor is installed is particularly hot, move the monitor to a cooler location and wait for the monitor to cool for 60 minutes. If the problem persists, contact your dealer.

*2 In the following case, power off the monitor immediately and contact your dealer or authorized Service Center.

The monitor turns off 5 seconds after powering on and then the STANDBY/ON indicator blinks. It indicates that the power supply circuit, plasma display panel, temperature sensor, or one or more fans have been damaged.

Specifications

Screen Size	53.2"(H)×29.9"(V) inches 1351(H)×760(V) mm diagonal 61"
Aspect Ratio	16 : 9
Resolution	1365(H)×768(V) pixels
Signals	
Synchronization Range	Horizontal : 15.8 to 110 kHz (automatic : step scan) Vertical : 59.8 to 120 Hz (automatic : step scan)
Input Signals	RGB, NTSC (3.58/4.43), PAL (B,G,M,N), PAL60, SECAM, HD*1, DVD*1, DTV*1
Input Terminals	
PC	
Visual 1 (Analog)	mini D-sub 15-pin×1
Visual 2 (Analog)	BNC (R, G, B, H/CS, V)×1*2
Video	
Visual 1	BNC×1
Visual 2	RCA-pin×1
Visual 3	S-Video:DIN 4-pin×1
COMPONENT	
Visual 1	RCA-pin (Y, PB[CB], PR[CR])×1*1
Visual 2	BNC (Y, PB[CB], PR[CR])×1*1.*2
HDMI	HDMI connector*3
Audio	
	Stereo RCA×3 (Selectable)
RS-232C	D-sub 9-pin×1
Sound output	9W+9W at 6 ohm
Power Supply	AC120V 60Hz
Current Rating	6.7A (maximum)
Power Consumption	540W (typical) (standby 0.9W)
Dimensions	59.1 (W)×35.9 (H)×5.0 (D) inches 1502 (W)×912 (H)×126(D) mm
Weight	149.9 lbs / 68.0 kg (without stand)
Environmental Considerations	
Operating Temperature	0°C to 40°C / 32°F to 104°F
Other Features	Motion compensated 3D Scan Converter (NTSC, PAL, 480I, 525I, 1035I, 1080I), 2-3 pull down Converter (NTSC, 480I, 525I, 1035I, 1080I (60Hz)), 2-2 pull down Converter (PAL, NTSC, 480I, 525I), Digital Zoom Function (100-900% Selectable), Self Diagnosis, Image Burn reduction tools (ABL, INVERSE, WHITE, ORBITER, SCREEN WIPER), Color Temperature select (high/middle/middle low/low, user has 4 memories), Auto Picture, Input Skip, Color MGT, Low Tone (3 mode), Gamma Correction (4 mode), Plug and play (DDC1, DDC2b, HDMI:E-DDC), Split screen operations



The features and specifications may be subject to change without notice.

***1 COMPONENT input signals supported on this system**

480P (60 Hz)	480I (60 Hz)	525P (60 Hz)
525I (60 Hz)	720P (60 Hz)	1035I (60 Hz)
1080I (60 Hz)		

***2 The 5-BNC connectors are used as PC2 and COMPONENT2 input.**

Select one of them under "BNC INPUT".

***3 HDMI input signals supported on this system.**

Supported Signals

- 640×480P @ 59.94/60Hz
- 1280×720P @ 59.94/60Hz
- 1920×1080I @ 59.94/60Hz
- 720×480P @ 59.94/60Hz
- 1440 (720)×480I @ 59.94/60Hz

Note: In some cases a signal on the plasma monitor may not be displayed properly. The problem may be an inconsistency with standards from the source equipment (DVD, Set-top box, etc...). If you do experience such a problem please contact your dealer and also the manufacturer of the source equipment.

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