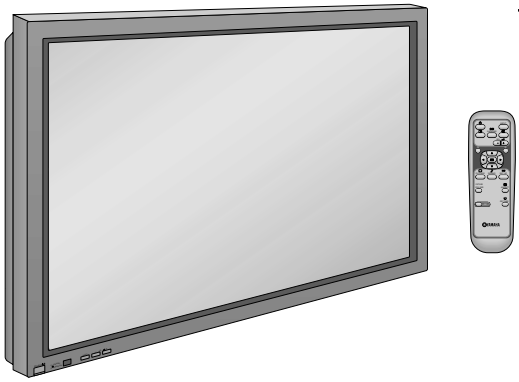
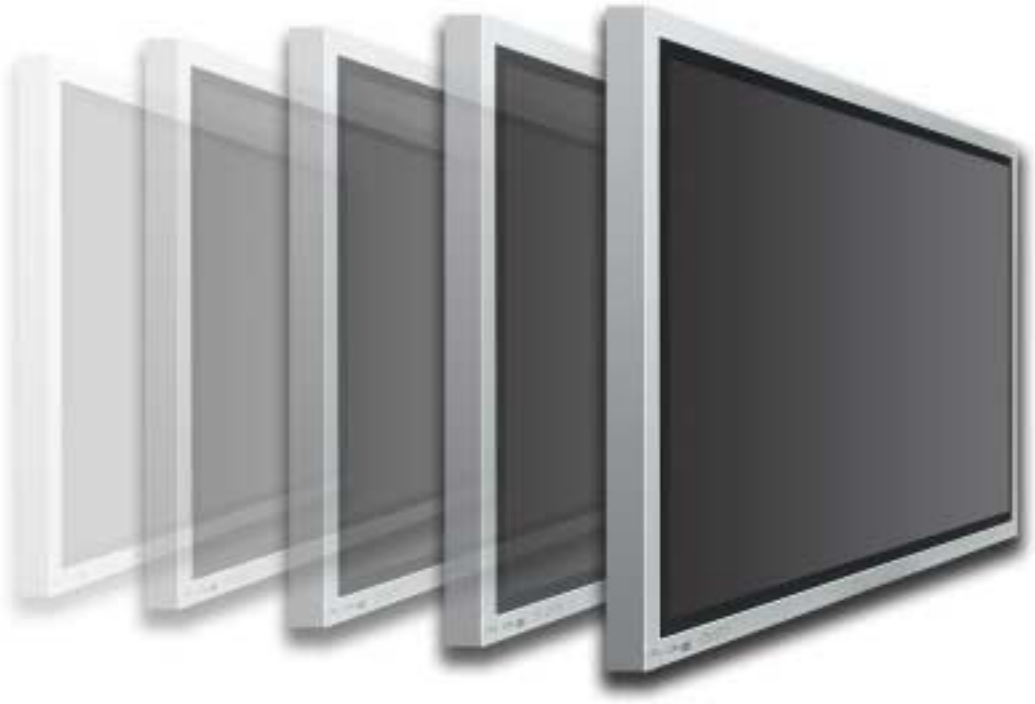
YAMAHA

R

PDM-1

HIGH DEFINITION PLASMA MONITOR





Operating Instructions

English

TQZW251

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Important Safety Notice

WARNING: To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.
Do not place containers with water (flower vase, cups, cosmetics, etc.) above the set. (including on shelves above, etc.)

WARNING: 1) To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
2) Do not remove the earthing pin on the power plug. This apparatus is equipped with a three pin earthing-type power plug. This plug will only fit an earthing-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician.
Do not defeat the purpose of the earthing plug.

WARNING
This is a class A product. In a domestic environment this product may cause radio interference in which case you may be required to take adequate measures.

CAUTION
This appliance is intended for use in environments which are relatively free of electromagnetic fields.
Using this appliance near sources of strong electromagnetic fields or where electrical noise may overlap with the input signals could cause the picture and sound to wobble or cause interference such as noise to appear.
To avoid the possibility of harm to this appliance, keep it away from sources of strong electromagnetic fields.

To prevent electric shock, ensure the grounding pin on the AC cord power plug is securely connected.

Trademark Credits
- VGA is a trademark of International Business Machines Corporation.
- Macintosh is a registered trademark of Apple Computer, USA.
- S-VGA is a registered trademark of the Video Electronics Standard Association.

Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.

Note:
Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the plasma display.
Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode.

Safety Precautions

WARNING

Setup

This plasma display is for use only with the following optional accessories. Use with any other type of optional accessories may cause instability which could result in the possibility of injury.

- Pedestal ····· PDS-150
- Wall Mounting Unit ····· PWK-150
- Speakers ····· SP-PDM1
  (In the case of connecting the speakers directly with the speaker terminals of the plasma display)

Always be sure to ask a qualified technician to carry out set-up.

Do not place the plasma display on sloped or unstable surfaces.

- The plasma display may fall off or tip over.

Do not place any objects on top of the plasma display.

- If water is spills onto the plasma display or foreign objects get inside it, a short-circuit may occur which could result in fire or electric shock. If any foreign objects get inside the plasma display, please consult your local Yamaha dealer.

If using the pedestal (optional accessory), leave a space of at least 10 cm at the top, left and right, at least 6 cm at the bottom, and at least 7 cm at the rear. If using some other setting-up method, leave a space of at least 10 cm at the top, bottom, left and right, and at least 1.9 cm at the rear.

Avoid installing this product near electronic equipment that is easy to receive electromagnetic waves.

- It may cause interference in image, sound, etc. In particular, keep video equipment away from this product.

When using the plasma display

The plasma display is designed to operate on 220 - 240 V AC, 50/60 Hz.
Do not cover the ventilation holes.

- Doing so may cause the plasma display overheat, which can cause fire or damage to the plasma display.

Do not stick any foreign objects into the plasma display.

- Do not insert any metal or flammable objects into the ventilations holes or drop them onto the plasma display, as doing so can cause fire or electric shock.

Do not remove the cover or modify it in any way.

- High voltages which can cause severe electric shocks are present inside the plasma display. For any inspection, adjustment and repair work, please contact your local Yamaha dealer.

Securely insert the power cord plug as far as it will go.

- If the plug is not fully inserted, heat may be generated which could cause fire. If the plug is damaged or the wall socket plate is loose, they shall not be used.

Do not handle the power cord plug with wet hands.

- Doing so may cause electric shocks.

Do not do anything that may damage the power cable. When disconnecting the power cable, pull on the plug body, not the cable.

- Do not damage the cable, make any modifications to it, place heavy objects on top of it, heat it, place it near any hot objects, twist it, bend it excessively or pull it. To do so may cause fire and electric shock. If the power cable is damaged, have it repaired at your local Yamaha dealer.

If the plasma display is not going to be used for any prolonged length of time, unplug the power cord plug from the wall outlet.

If problems occur during use

If a problem occurs (such as no picture or no sound), or if smoke or an abnormal odour starts to come out from the plasma display, immediately unplug the power cord plug from the wall outlet.

- If you continue to use the plasma display in this condition, fire or electric shock could result. After checking that the smoke has stopped, contact your local Yamaha dealer so that the necessary repairs can be made. Repairing the plasma display yourself is extremely dangerous, and shall never be done.

If water or foreign objects get inside the plasma display, if the plasma display is dropped, or if the cabinet becomes damages, disconnect the power cord plug immediately.

- A short circuit may occur, which could cause fire. Contact your local Yamaha dealer for any repairs that need to be made.

⚠ CAUTION

When using the plasma display

Do not bring your hands, face or objects close to the ventilation holes of the plasma display.

- Heated air comes out from the ventilation holes at the top of plasma display will be hot. Do not bring your hands or face, or objects which cannot withstand heat, close to this port, otherwise burns or deformation could result.

Be sure to disconnect all cables before moving the plasma display.

- If the plasma display is moved while some of the cables are still connected, the cables may become damaged, and fire or electric shock could result.

Disconnect the power cord plug from the wall socket as a safety precaution before carrying out any cleaning.

- Electric shocks can result if this is not done.

Clean the power cable regularly to prevent it becoming dusty.

- If dust built up on the power cord plug, the resultant humidity can damage the insulation, which could result in fire. Pull the power cord plug out from the wall outlet and wipe the mains lead with a dry cloth.

This Plasma Display radiates infrared rays, therefore it may affect other infrared communication equipment. Install your infrared sensor in a place away from direct or reflected light from your Plasma Display.

Cleaning and maintenance

The front of the display panel has been specially treated. Wipe the panel surface gently using only a cleaning cloth or a soft, lint-free cloth.

- If the surface is particularly dirty, wipe with a soft, lint-free cloth which has been soaked in pure water or water to which a small amount of neutral detergent has been added, and then wipe it evenly with a dry cloth of the same type until the surface is dry.
- Do not scratch or hit the surface of the panel with fingernails or other hard objects, otherwise the surface may become damaged. Furthermore, avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the surface may be adversely affected.

If the cabinet becomes dirty, wipe it with a soft, dry cloth.

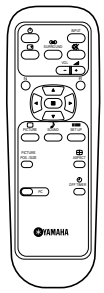
- If the cabinet is particularly dirty, soak the cloth in water to which a small amount of neutral detergent has been added and then wring the cloth dry. Use this cloth to wipe the cabinet, and then wipe it dry with a dry cloth.
- Do not allow any detergent to come into direct contact with the surface of the plasma display. If water droplets get inside the unit, operating problems may result.
- Avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the cabinet surface may be adversely affected or the coating may peel off. Furthermore, do not leave it for long periods in contact with articles made from rubber or PVC.

Accessories

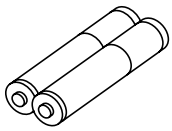
Accessories Supply

Check that you have the accessories and items shown ☑

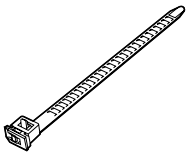
☐ Remote Control Transmitter



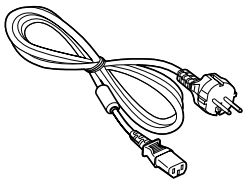
☐ Batteries for the Remote Control Transmitter (2 × R6 Size)



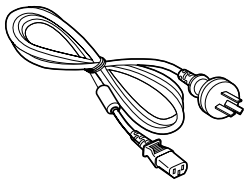
☐ Fixing bands 2 pcs



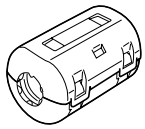
☐ AC cord



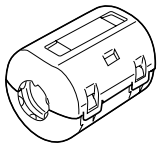
☐ AC cord (Australia)



☐ Ferrite core (small size) × 1

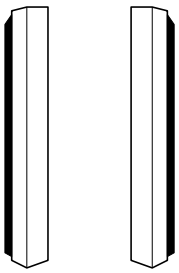


☐ Ferrite core (large size) × 2

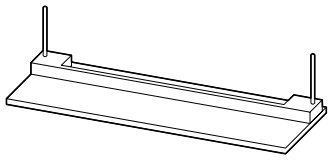


Optional Accessories

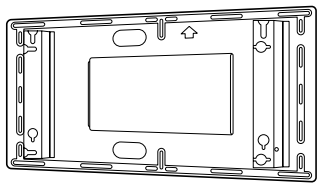
● Speakers
SP-PDM1
(Special order products)



● Pedestal
PDS-150



● Wall Mounting Unit
PWK-150

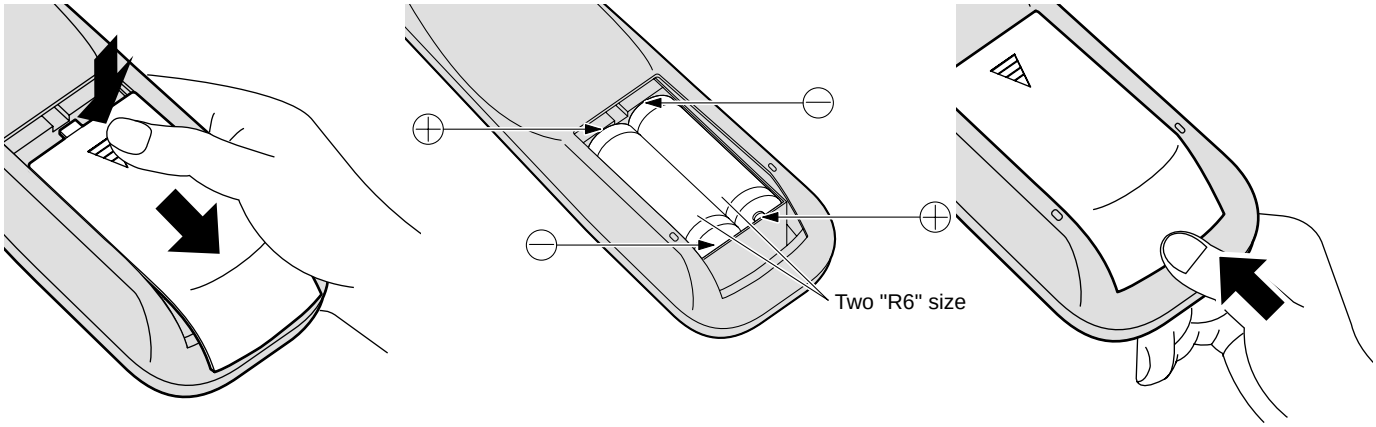


For assembling
Full instructions are supplied with each optional accessory for use with this plasma display.

Remote Control Batteries

Requires two R6 batteries.

1. Turn the transmitter face down. Press and slide off the battery cover.
2. Install the batteries as shown in the battery compartment. (Polarity + or – must match the markings in the compartment.)
3. Replace the cover and slide in reverse until the lock snaps.



Helpful Hint:
For frequent remote control users, replace old batteries with Alkaline batteries for longer life.

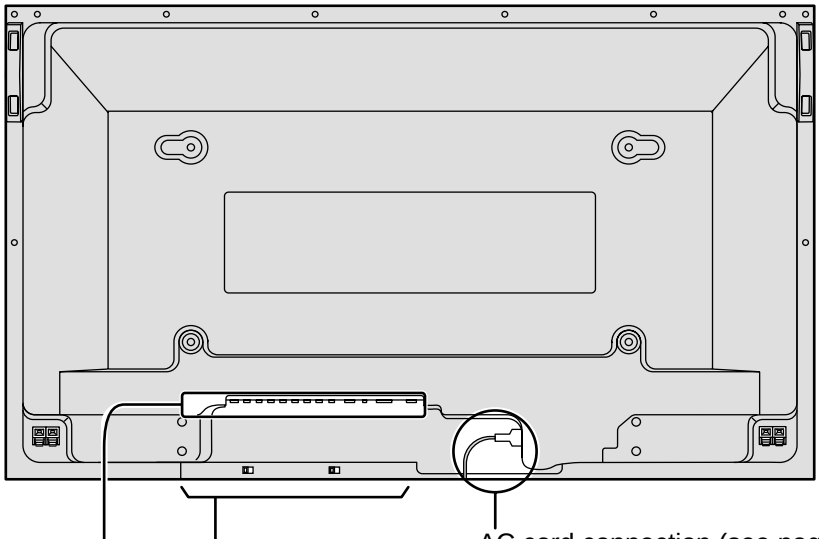
⚠ Precaution on battery use

Incorrect installation can cause battery leakage and corrosion that will damage the remote control transmitter.

Observe the following precaution:

1. Batteries shall always be replaced as a pair. Always use new batteries when replacing the old set.
2. Do not combine a used battery with a new one.
3. Do not mix battery types (example: “Zinc Carbon” with “Alkaline”).
4. Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
5. Battery replacement is necessary when remote control acts sporadically or stops operating the plasma display set.

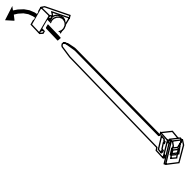
Connections



AC cord connection (see page 18)

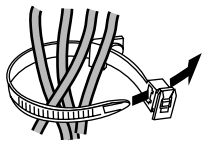
– Cable fixing bands
Secure any excess cables with bands, as required.

Pass the attached cable fixing band through the clip as shown in the figure.



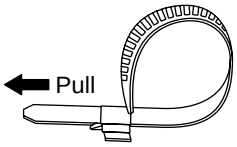
1

To secure cables connected to Terminals, wrap the cable fixing band around them then pass the pointed end through the locking block, as shown in the figure.
While ensuring there is sufficient slack in cables to minimize stress (especially in the power cord), firmly bind all cables with the supplied fixing band.

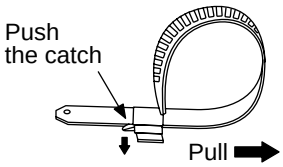


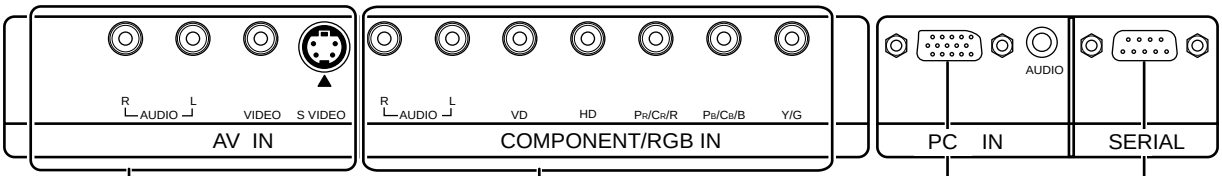
2

To tighten:



To loosen:





AV IN Terminals (see page 10, 11)

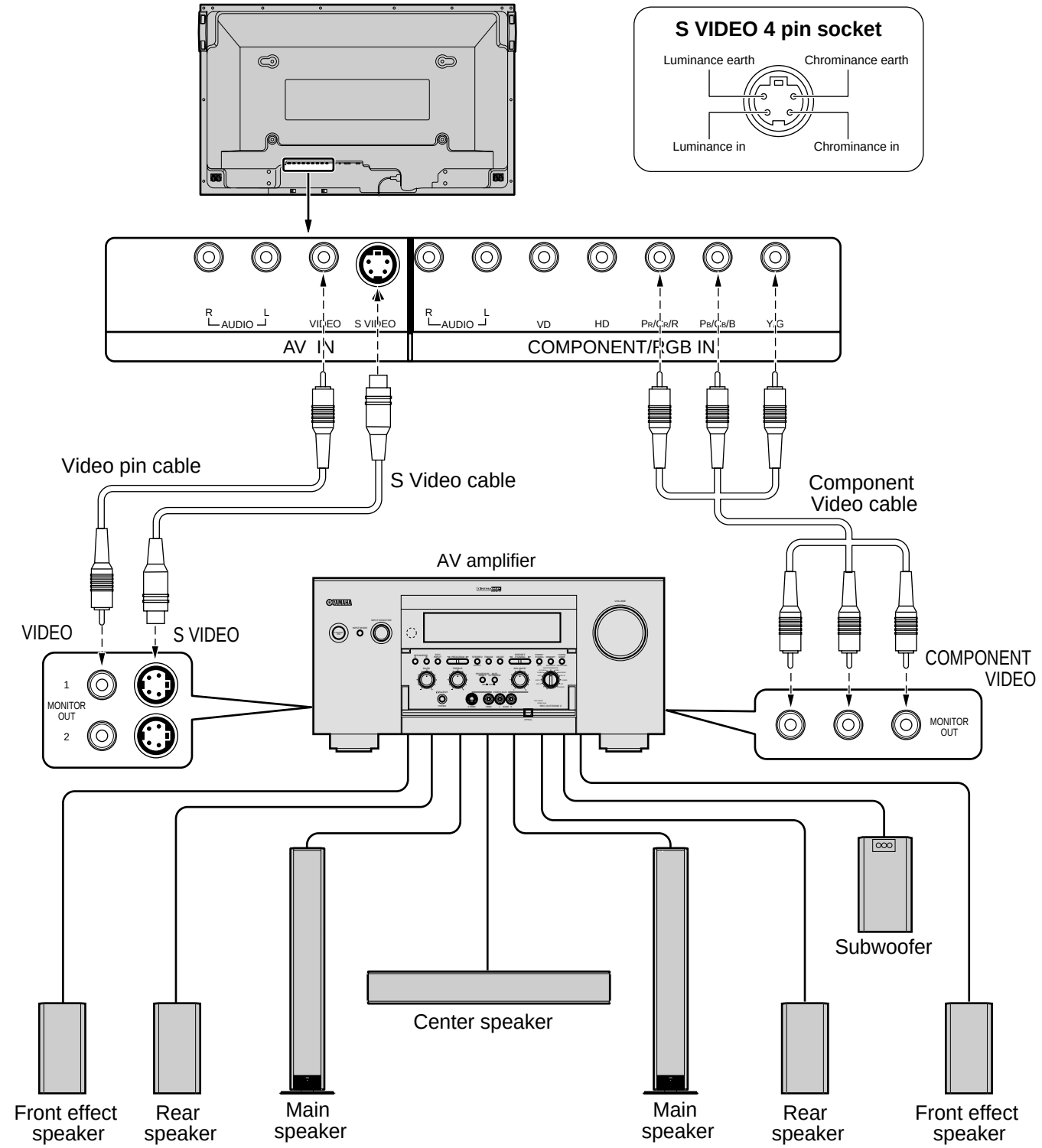
COMPONENT/RGB IN and Audio IN Terminals (see page 10, 11, 12)

From EXIT monitor Terminal on Computer (see page 13)

From SERIAL Terminal on Computer (see page 15)

Basic connection

(Example) When connecting an AV amplifier

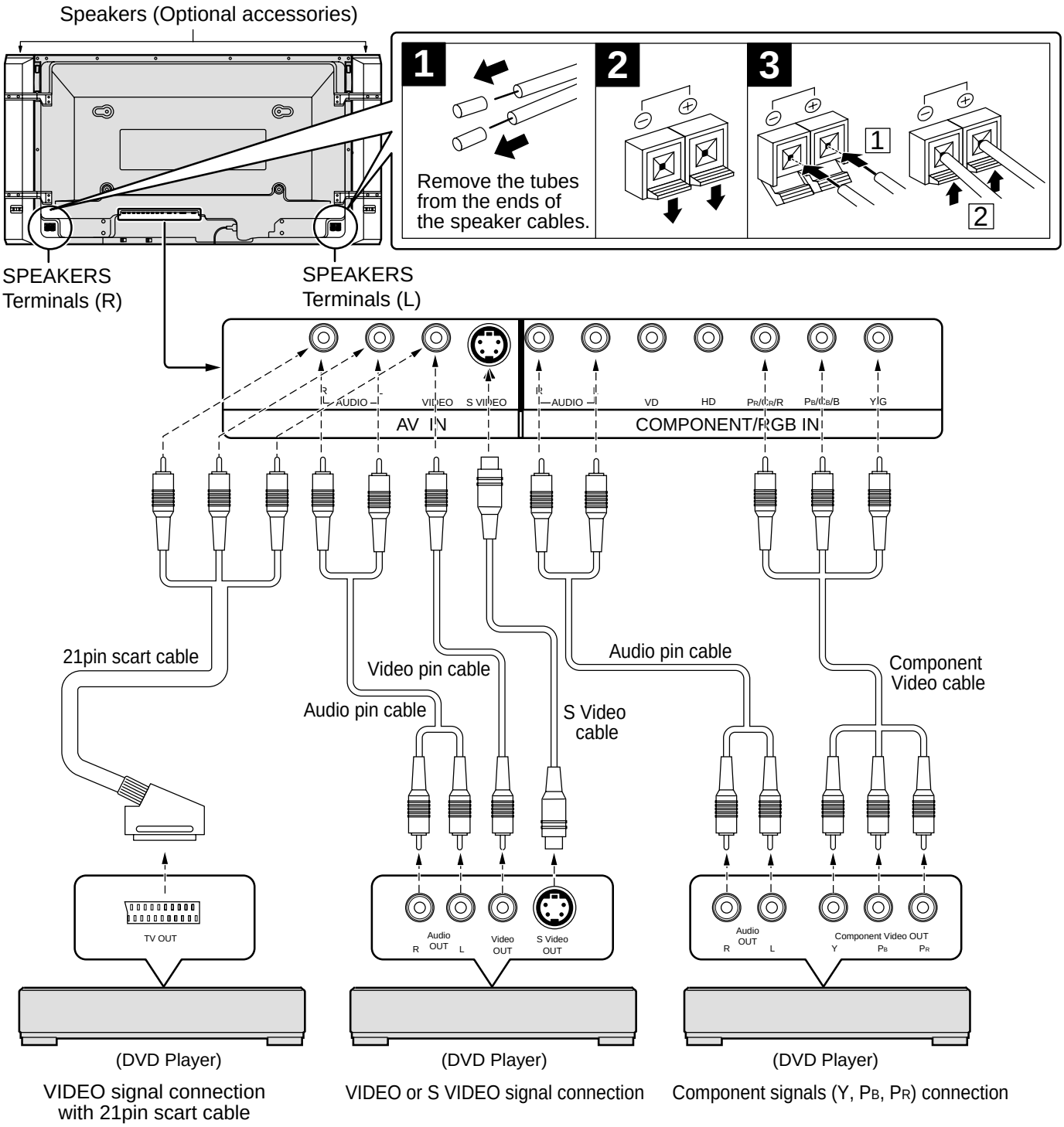


Notes:

(1) Change the “Component/RGB-in” setting in the “Setup” menu to “Component”. (see page 34)
(2) Any equipment and cables other than the display illustrated above are not included.
(3) Choose one connecting cable from Video, S Video or Component Video, that is suitable for the equipment being used.
(4) Generally the quality of images obtained varies between connection methods in the descending order of Component Video, S Video and Video.

Speaker Terminals connection

When you do not use an AV amplifier, connect the speakers directly with the speaker terminals of the plasma display. Refer to the speaker's Installation Manual for details on speaker installation.
When connecting the speakers, be sure to use only the optional accessory speakers.

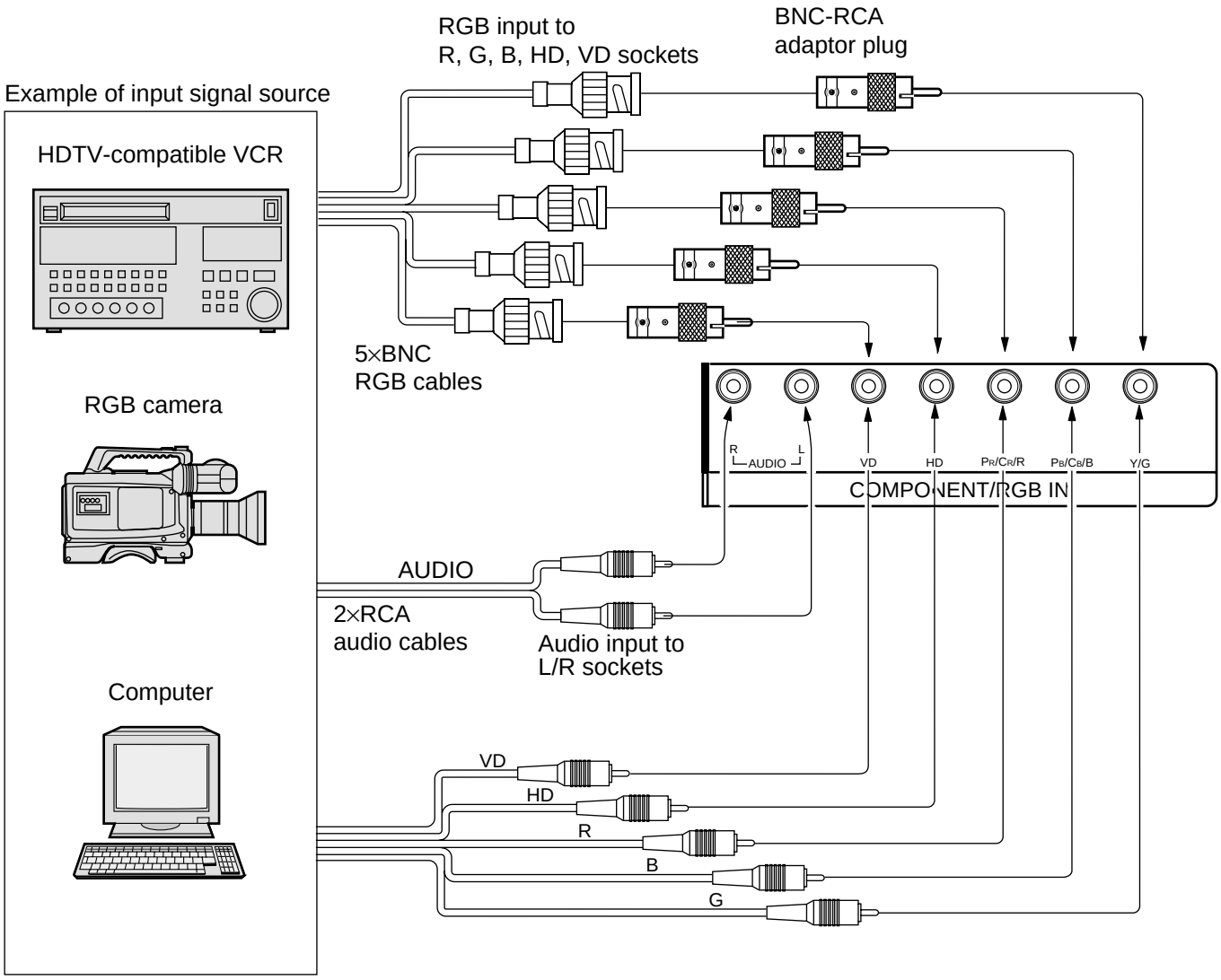


Notes:

(1) Change the "Component/RGB-in" setting in the "Setup" menu to "Component". (see page 34)
(2) Any equipment and cables other than the display illustrated above are not included.
(3) Choose one connecting cable from Video, S Video or Component Video, that is suitable for the equipment being used.
(4) Generally the quality of images obtained varies between connection methods in the descending order of Component Video, S Video and Video.
(5) When utilizing the R/G/B/Video signals from the TV OUT(SCART) terminal of a DVD player or similar, use a 4-pin cable to connect signals to the appropriate input terminal of the display.

Component/RGB Input connection

RGB signal (R, G, B, HD, VD) connection



Notes:

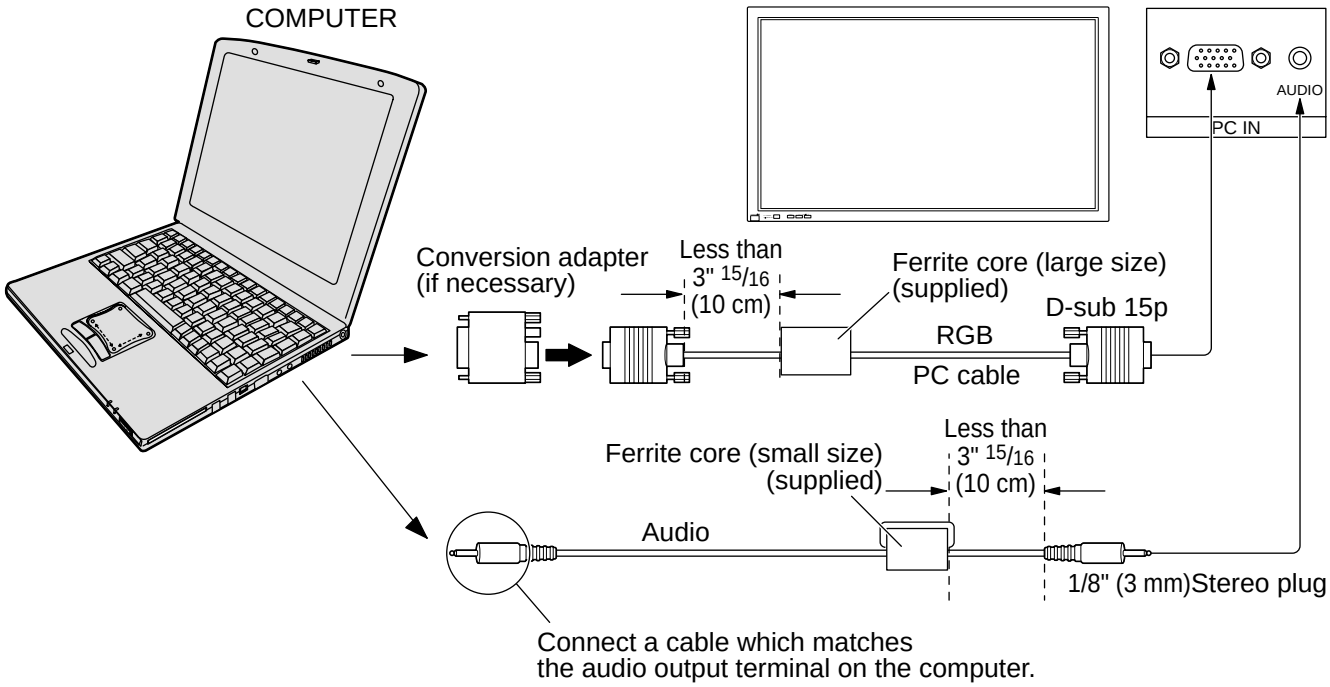
(1) Change the “Component/RGB-in” setting in the “Setup” menu to “RGB”. (see page 34)

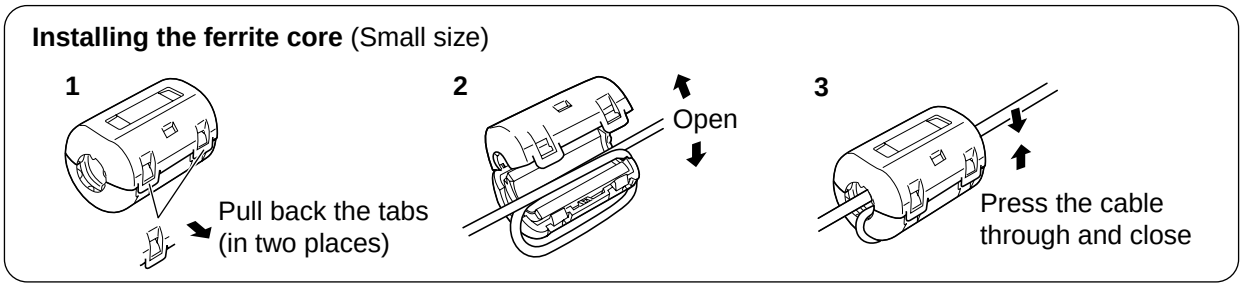
(2) Any equipment and cables other than the display illustrated above are not included.

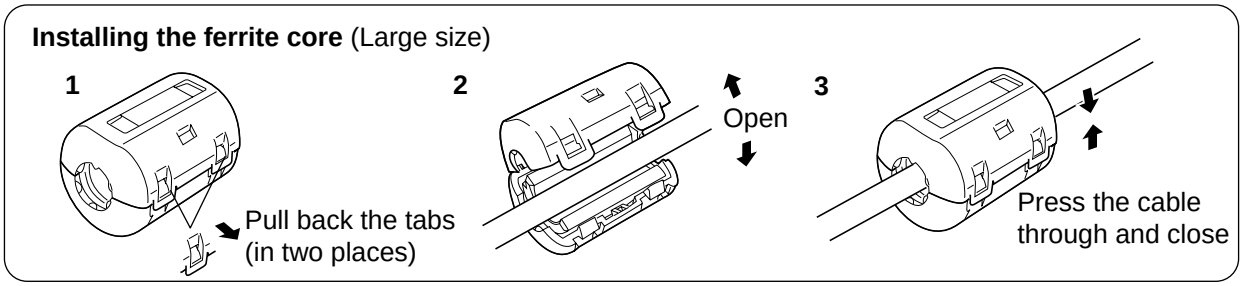
(3) Choose one connecting cable from Video, S Video or Component Video, that is suitable for the equipment being used.

(4) Generally the quality of images obtained varies between connection methods in the descending order of Component Video, S Video and Video.

PC Input Terminals connection







Notes:

(1) Computer signals which can be input are those with a horizontal scanning frequency of 15.6 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)

(2) The display resolution is a maximum 1,024 × 768 dots when the aspect mode is set to “4:3”, and 1,366 × 768 dots when the aspect mode is set to “16:9”. If the display resolution exceeds these maximums, it may not be possible to show fine detail with sufficient clarity.

(3) The PC input terminals are DDC1/2B-compatible. If the computer being connected is not DDC1/2B-compatible, you will need to make setting changes to the computer at the time of connection.

(4) Some PC models cannot be connected to the set.

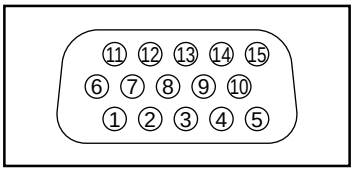
(5) There is no need to use an adapter for computers with DOS/V compatible D-sub 15P terminal.

(6) The computer shown in the illustration is for example purposes only.

(7) Additional equipment and cables shown are not supplied with this set.

(8) Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.

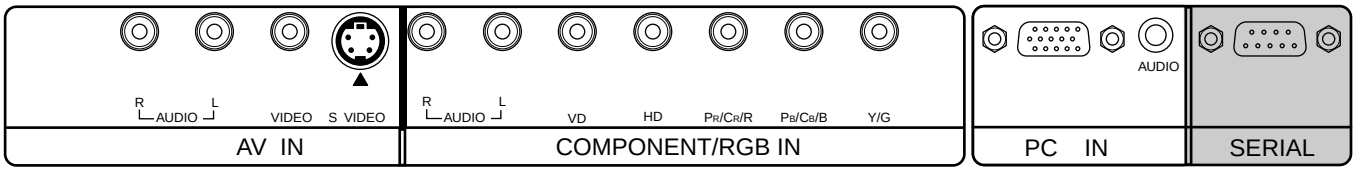
Signal Names for D-sub 15P Connector



Pin Layout for PC Input Terminal

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND (Ground)	⑪	GND (Ground)
②	G	⑦	GND (Ground)	⑫	SDA
③	B	⑧	GND (Ground)	⑬	HD/SYNC
④	GND (Ground)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	SCL

AV/Component/RGB/PC input signals



AV input **Component/RGB input** **PC RGB input**

AV input

	signal name	horizontal frequency(kHz)	vertical frequency(Hz)
1	NTSC	15.734	59.95
2	PAL	15.625	50
3	PAL60	15.734	59.95
4	SECAM	15.625	50
5	Modified NTSC	15.734	59.95

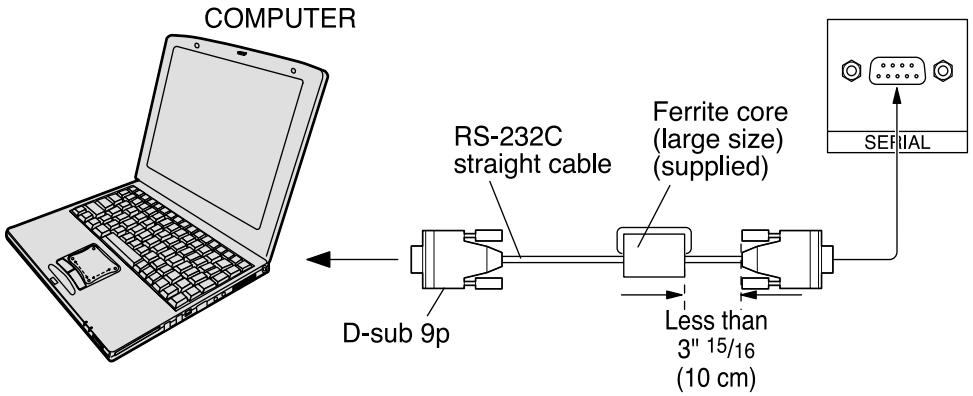
∗ Mark:
Input signal can be displayed.

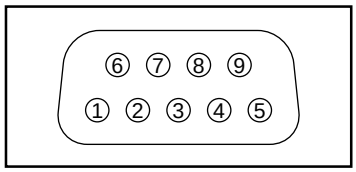
Component/RGB/PC input

	signal name	horizontal frequency(kHz)	vertical frequency(Hz)	Component	RGB	PC
1	525 (480) /60i	15.734	59.94	∗	∗	∗
2	625 (575) /50i	15.625	50	∗	∗	∗
3	525 (480) /60p	31.468	59.94	∗	∗	
4	625 (575) /50p	31.25	50	∗	∗	∗
5	750 (720) /60p	45	60	∗	∗	∗
6	1,125 (1,080) /60i	33.75	60	∗	∗	∗
7	1,125 (1,080) /50i	28.125	50	∗	∗	∗
8	1,125 (1,080) /24p	27	24	∗	∗	∗
9	1,125 (1,080) /24sF	27	48	∗	∗	∗
10	640 × 400 @70	31.5	70		∗	∗
11	640 × 480 @60	31.5	59.94		∗	∗
12	Macintosh13” (640 × 480)	35	67		∗	∗
13	640 × 480 @75	37.5	75		∗	∗
14	852 × 480 @60	31.7	60		∗	∗
15	800 × 600 @60	37.9	60		∗	∗
16	800 × 600 @75	46.9	75		∗	∗
17	800 × 600 @85	53.7	85		∗	∗
18	Macintosh16” (832 × 624)	49.7	75		∗	∗
19	1,024 × 768 @60	48.4	60		∗	∗
20	1,024 × 768 @70	56.5	70		∗	∗
21	1,024 × 768 @75	60	75		∗	∗
22	1,024 × 768 @85	68.7	85		∗	∗
23	Macintosh21” (1,152 × 870)	68.7	75		∗	∗
24	1,280 × 1,024 @60	64	60		∗	∗
25	1,280 × 1,024 @75	80	75		∗	∗
26	1,280 × 1,024 @85	91.1	85		∗	∗
27	1,600 × 1,200 @60	75	60		∗	∗

SERIAL Terminals connection

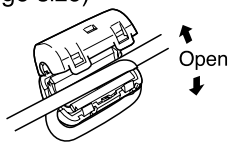
The SERIAL terminal is used when the plasma display is controlled by a computer.





Pin layout for RS-232C

Installing the ferrite core
(Large size)



Notes:
(1) Use the RS-232C cable to connect the computer to the plasma display.
(2) The computer shown is for example purposes only.
(3) Additional equipment and cables shown are not supplied with this set.

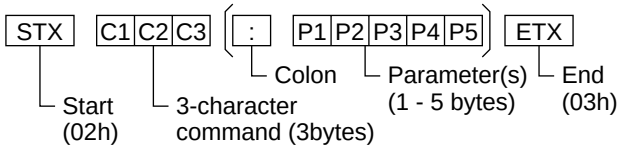
The SERIAL terminal conforms to the RS-232C interface specification, so that the plasma display can be controlled by a computer which is connected to this terminal.
The computer will require software which allows the sending and receiving of control data which satisfies the conditions given below. Use a computer application such as programming language software. Refer to the documentation for the computer application for details.

Communication parameters

Signal level	RS-232C compliant
Synchronization method	Asynchronous
Baud rate	9600 bps
Parity	None
Character length	8 bits
Stop bit	1 bit
Flow control	–

RS-232C Conversion cable	
D-sub 9-pin female	Details
②	R X D
③	T X D
⑤	GND
④ • ⑥	Non use
⑦ ⑧	Shorted
① • ⑨	NC

Basic format for control data
The transmission of control data from the computer starts with a STX signal, followed by the command, the parameters, and lastly an ETX signal in that order. If there are no parameters, then the parameter signal does not need to be sent.



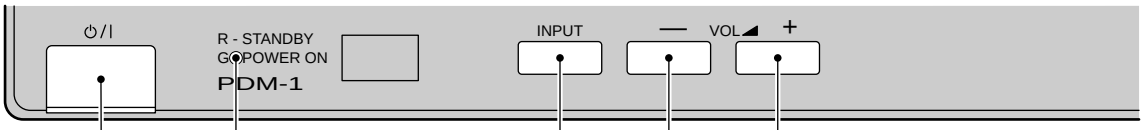
Notes:
(1) If multiple commands are transmitted, be sure to wait for the response for the first command to come from this unit before sending the next command.
(2) If an incorrect command is sent by mistake, this unit will send an “ER401” command back to the computer.

Command

Command	Parameter	Control details
PON	None	Power ON
POF	None	Power OFF
AVL	**	Volume 00 - 63
AMT	0	Audio mute OFF
	1	Audio mute ON
IIS	None	Input select (toggle)
	VID	AV Mode
	YP1	Component / RGB mode (processed as a $Y/P_B/P_R$ or RGB signals as set by this unit)
	RG1	PC Mode
DAM	None	Screen mode select (toggle)
	NORM	4 : 3
	ZOOM	Zoom
	FULL	16 : 9
	JUST	Just
	SELF	Auto

With the power off, this display responds to PON command only.

Basic Controls



Main Power On/Off Switch

Power Indicator

The Power Indicator will light.

- Power-OFF ..... Indicator not illuminated (The unit will still consume some power as long as the power cord is still inserted into the wall outlet.)
- Stand-by ⏻ .... Red
- Power-ON ..... Green

INPUT button (AV(S Video), Component/RGB and PC Mode Selection)

Press the "INPUT" button to select AV (S Video), Component/RGB and PC input signal modes sequentially.
(see page 19)

Volume Adjustment

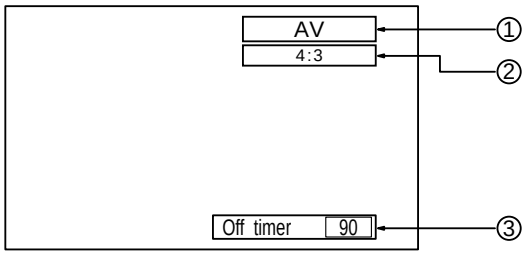
Press the Volume Up "+" or Down "–" button to increase or decrease the sound volume level.

Stand-by (ON/OFF) button

The plasma display must first be plugged into the wall outlet and turned on at the power switch (see page 18).
Press this button to turn the plasma display On, from Stanby mode. Press it again to turn the plasma display Off to Stanby mode.

Status button

Press the "Status" button to display the current system status.



① AV(S Video), Component/RGB, PC mode
② Aspect mode (see page 22)
③ Off timer
The off timer indicator is displayed only when the off timer has been set.

N button

(see page 25, 26, 28, 29)

PICTURE button

(see page 28)

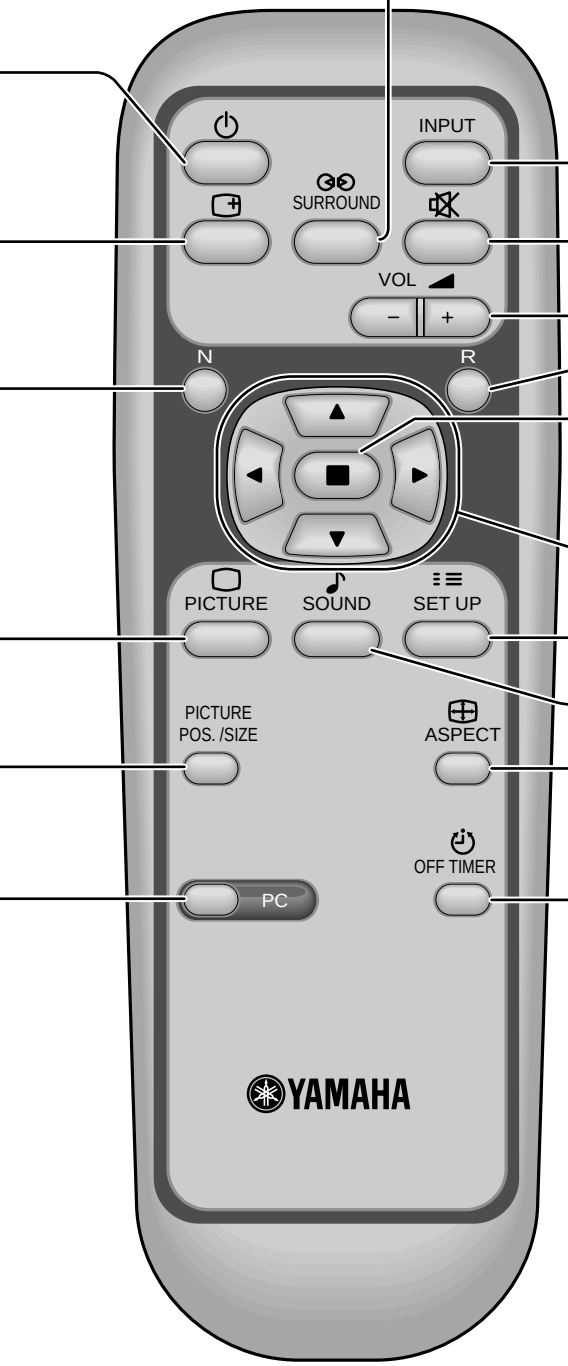
PICTURE POS./SIZE button

(see page 24)

PC button

Press the "PC" mode selection button to select the PC mode.
This button is used to switch directly to PC mode.

SURROUND button
(see page 27)



INPUT button
(AV(S Video), Component/RGB and PC Mode Selection)
Press to select AV(S Video), Component/RGB and PC input signal modes sequentially. (see page 19)

Sound mute On/Off (see page 26)

Volume Adjustment
Press the Volume Up “+” or Down “–” button to increase or decrease the sound volume level.

R button (see page 21)

ACTION button
Press to make selections

POSITION buttons

SET UP button (see page 20)

SOUND button (see page 26)

ASPECT button
Press to adjust the aspect. (see page 22)

OFF TIMER button
The plasma display can be preset to switch to stand-by after a fixed period. The setting changes to 30 minutes, 60 minutes, 90 minutes and 0 minutes (off timer cancelled) each time the button is pressed.

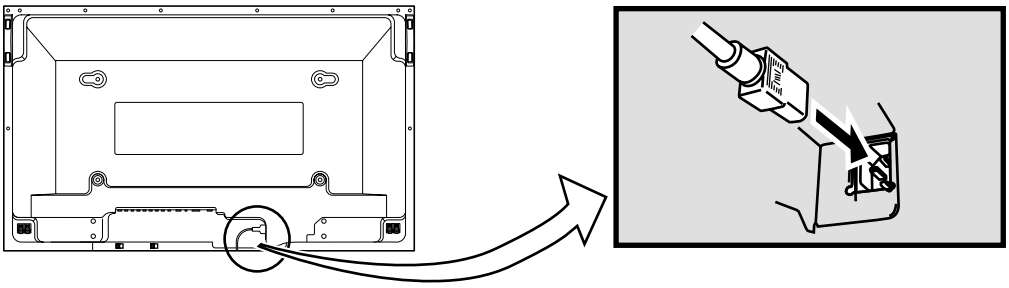
30 → 60 → 90 → 0

When three minutes remain, “Off timer 3” will flash. The off timer is cancelled if a power interruption occurs.

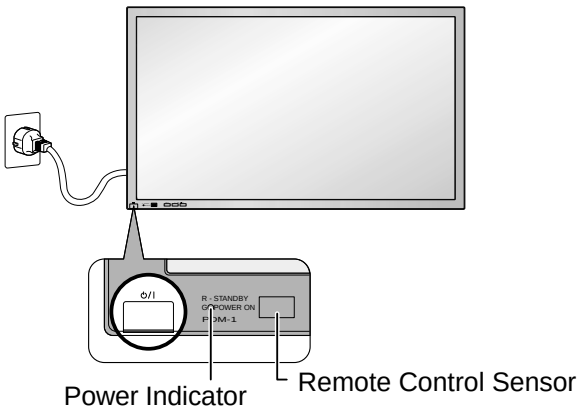
Power On/Off and input signal selection

AC cord connection

Connecting the AC cord plug to the plasma display.



Power On/Off



Connecting the plug to the Wall Outlet
Note:
Main plug types vary between countries. The power plug shown at left may, therefore, not be the type fitted to your set.

Press the ⏻/| switch on the plasma display to turn the set on:Power-On.

Power Indicator: Green

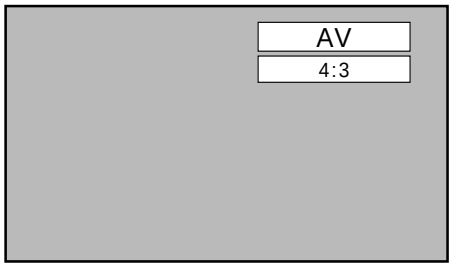
Example: The screen below is displayed for a while after the plasma display is turned on. (setting condition is an example.)

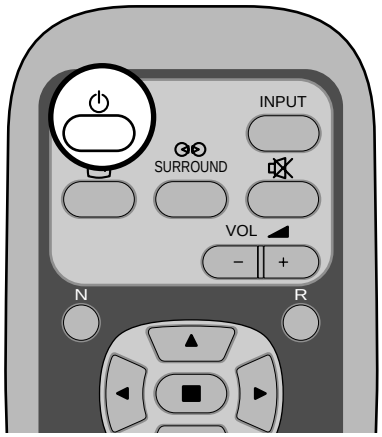
When the Power is turned on for the first time, the Language selection screen is displayed.

From the second time on, language selection can be done from the setup menu. (see page 19)

Select the desired language using the ▲ and ▼ keys and press the ACTION ■ button.

From the second time on, the below screen is displayed for a while (setting condition is an example).





Press the ⏻ button on the remote control to turn the plasma display off.

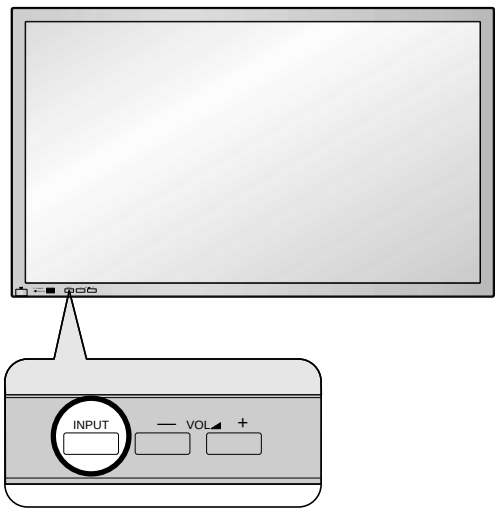
Power Indicator: Red (standby)

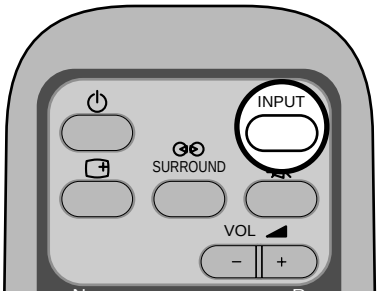
Press the ⏻ button on the remote control to turn the plasma display on.

Power Indicator: Green

Turn the power to the plasma display set off by pressing the ⏻/| switch on the plasma display, when the plasma display is on or in standby mode.

Select the input signal





Press the INPUT button to select the input AV signal desired from equipment such as a VCR which has been connected to the plasma display.

Input signals will change as follows:

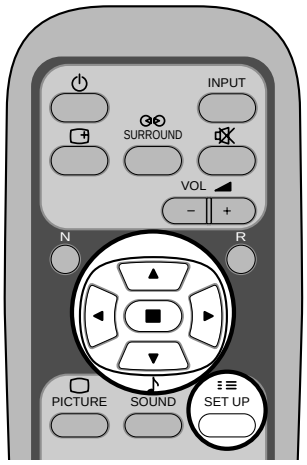
For Component Input (see page 34)

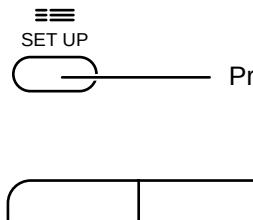
→ AV ⟶ Component ⟶ PC →

For RGB Input (see page 34)

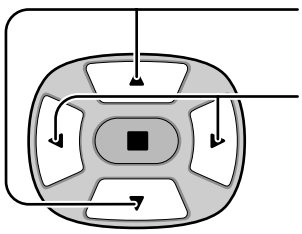
→ AV ⟶ RGB ⟶ PC →

Selecting the On-Screen Menu Language



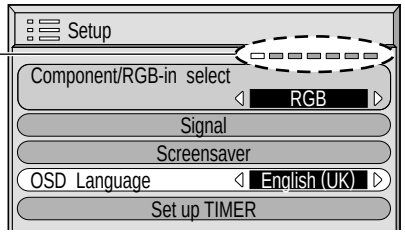


Press to display the Setup menu.



Press to select the OSD Language.

Press to select your preferred language.

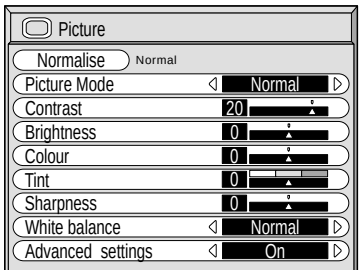


Selectable languages

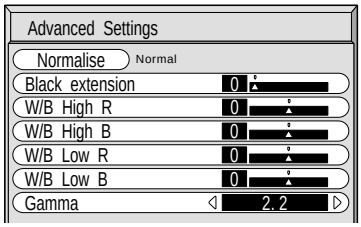
English(UK)
Deutsch
Français
Italiano
Español
ENGLISH(US)
中文 ·····(Chinese)

On-Screen Menu Display from Remote Control

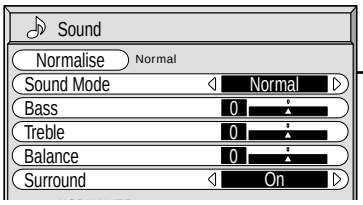
To Picture adjust menu
(see page 28)



To Advanced Settings
(see page 28, 29)

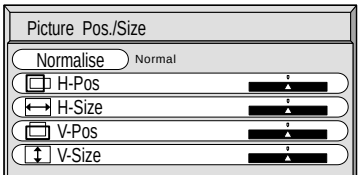


To Sound adjust menu
(see page 26)

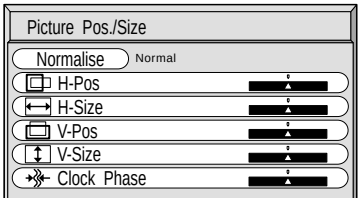


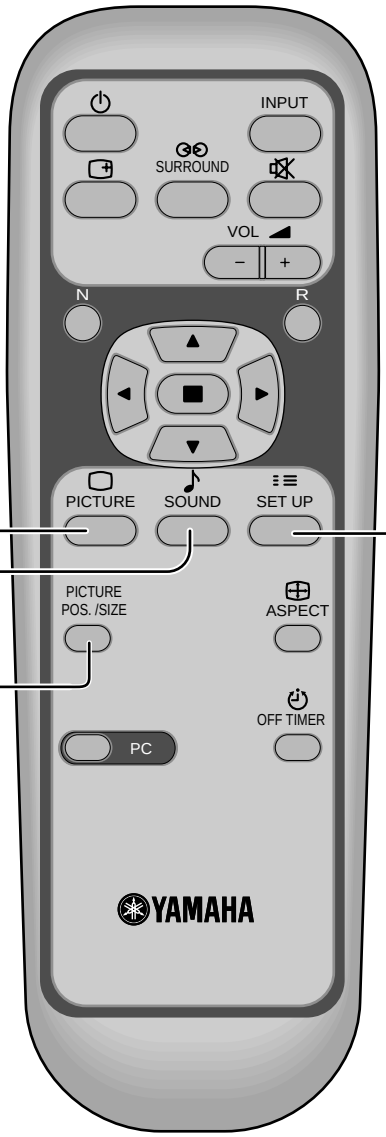
To Picture Pos./Size adjust menu (see page 24)

During “AV(S Video)” and “Component” input signal modes.

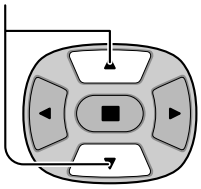


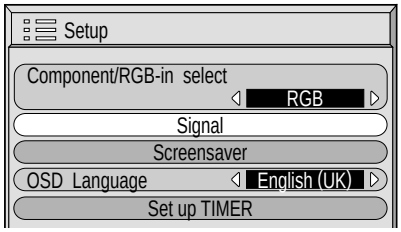
During “RGB” and “PC” input signal modes.

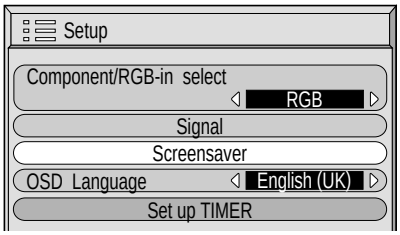


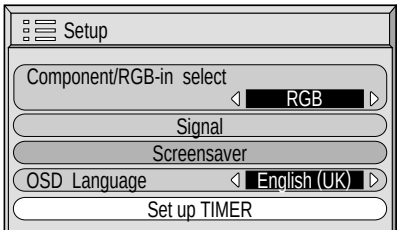


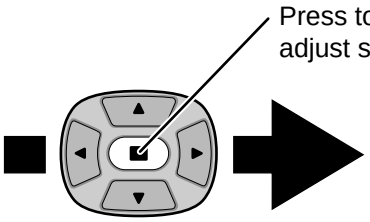
Press to select each item.

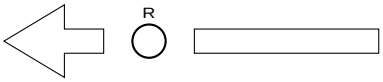






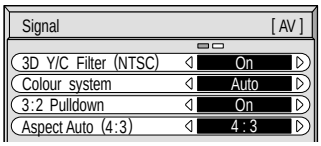






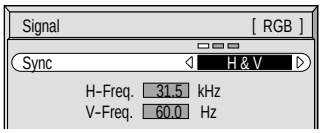
Press the R buttun to return to “Setup” menu.

To Signal screen for AV (see page 34, 35)

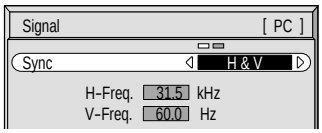


To Signal screen for Component (see page 35)

To Signal screen for RGB (see page 36)

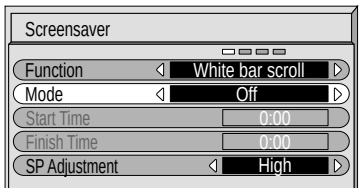


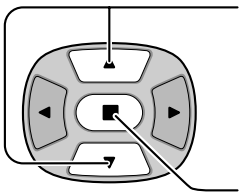
To Signal screen for PC (see page 36)

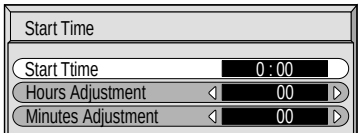


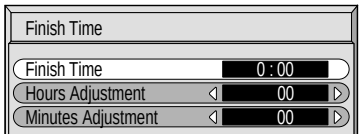
Note:
“Signal” setup menu displays different setting condition for each input signals. (see page 19)

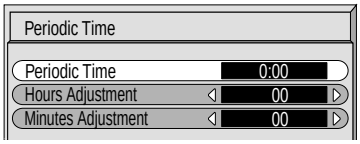
To setup Screensaver (see page 32)

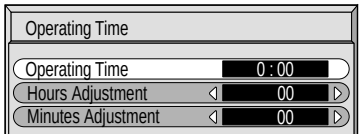


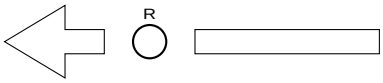






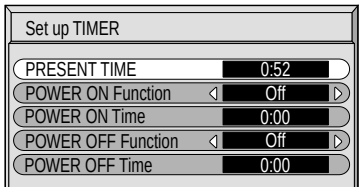




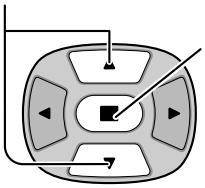


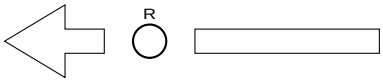
Press the R buttun to return to “Screensaver” menu.

To Set up Timer selection screen (see page 30)

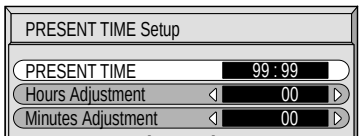


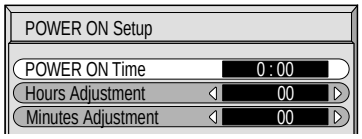
Press to select each Timer adjustment items.

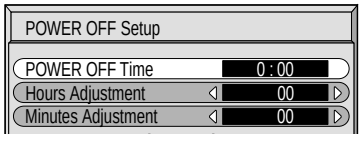




Press the R buttun to return to “Setup” menu.

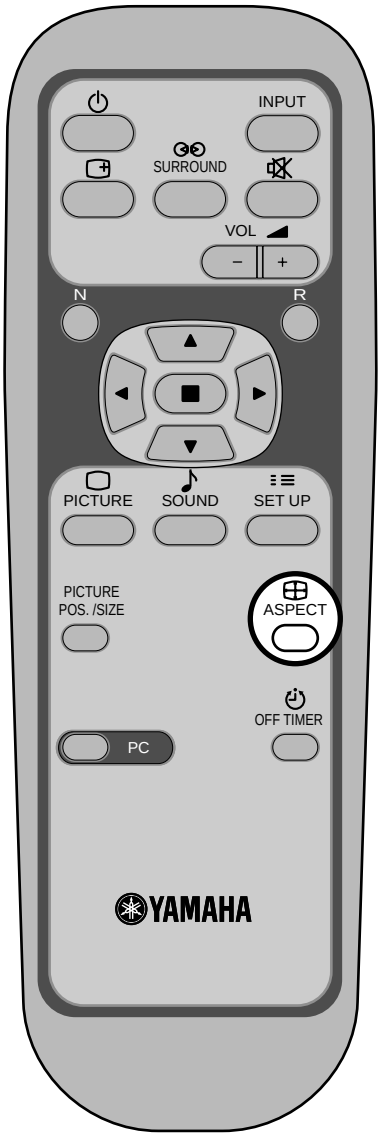




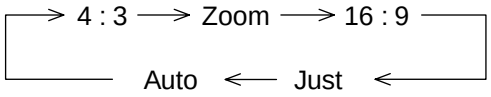


ASPECT Controls

The plasma display will allow you to enjoy viewing the picture at its maximum size, including wide screen cinema format picture.



ASPECT button
The aspect mode changes each time the ASPECT button is pressed.

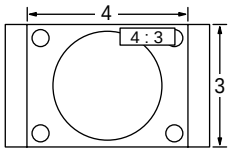
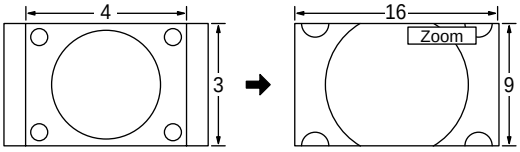
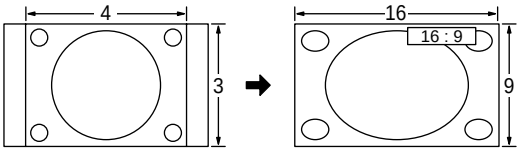
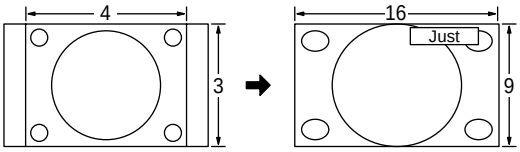
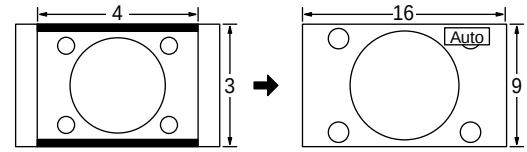
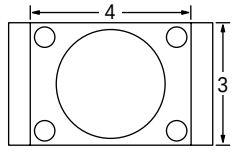


Notes:

(1) During RGB and PC input signal modes, the mode switches between “4:3”, “Zoom” and “16:9” only.

(2) For a 1,125i (1,080i), 750p (720p) signal input during “Component” input signal mode, the mode is set to “16:9” mode, and switching is not possible.
For a 525i (480i), 625i (575i), 525p (480p) and 625p (575p) signal input during “Component” input signal mode, “Auto” can not be selected.

(3) The aspect mode is memorized separately for each input terminal (AV(S Video), Component, RGB and PC).

Mode	Picture	Explanation
4 : 3		4:3 will display a 4:3 picture at its standard 4:3 size.
Zoom		Zoom mode magnifies the central section of the picture.
16 : 9		16:9 will display the picture at its maximum size but with sight elongation.
Just		Just mode will display a 4:3 picture at its maximum size but with aspect correction applied to the center of the screen so that elongation is only apparent at the left and right edges of the screen. The size of the picture will depend on the original signal.
Auto	 For an elongated image Image is expanded  For a 4:3 image Changes in accordance with the Aspect Auto mode setting (see page 35)	The display will automatically become enlarged (depending on the picture source), allowing you to view the picture at its maximum size. **Note:** Auto mode is designed to automatically adjust the aspect ratio to handle a mix of 16:9 and 4:3 program material. Certain 4:3 program material, such as stock market data screens, may occasionally cause the image size to change unexpectedly. When viewing such programs, it is recommended that the ASPECT be set to 4:3.

Note:
Do not allow 4:3 mode to be displayed for an extended period, as this can cause a permanent after-image to remain on the plasma display panel.

Adjusting Picture Pos./Size

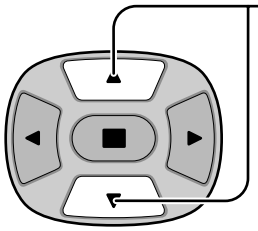
Adjusting screen

1

PICTURE POS. /SIZE

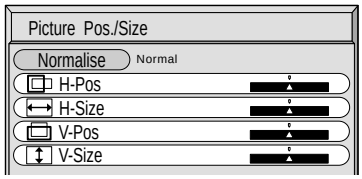
Press to display the Picture Pos./Size menu.

2

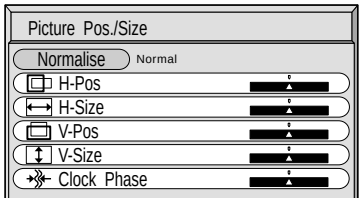


Press to select H-Pos/H-Size/V-Pos/V-Size/Clock Phase.

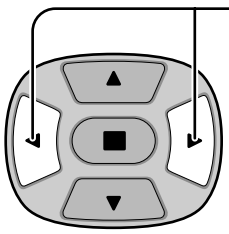
During “AV(S Video)” and “Component” input signal modes.



During “RGB” and “PC” input signal modes.



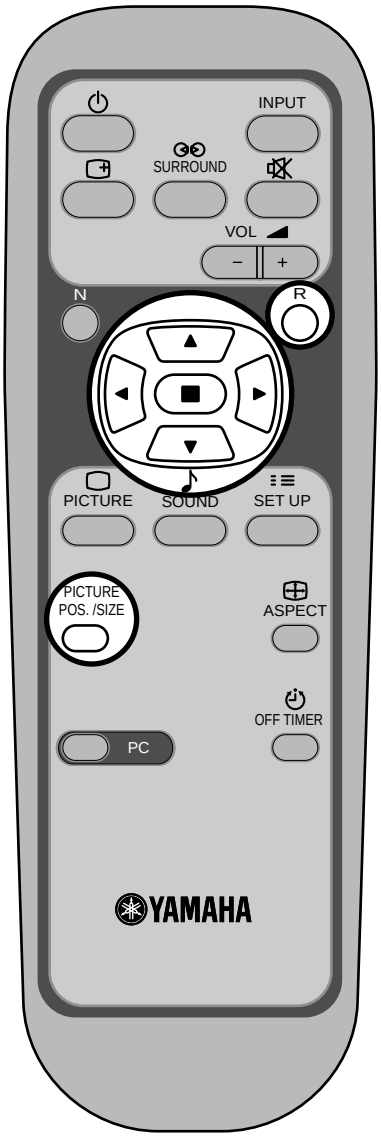
3



Press to adjust Pos./Size.

R

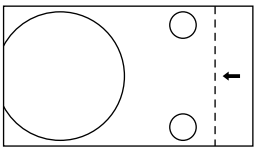
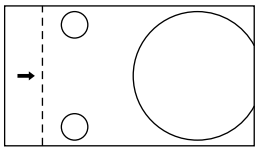
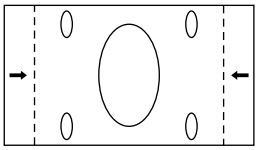
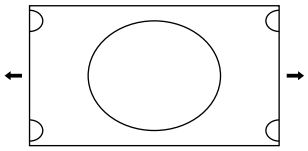
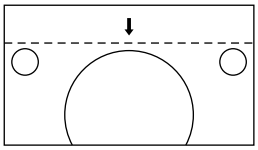
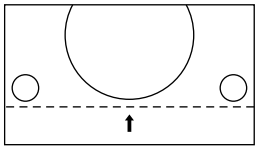
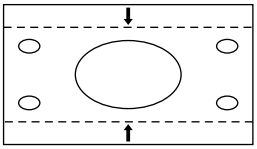
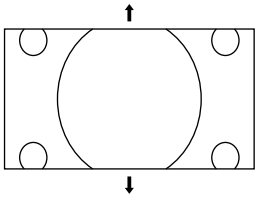
Press to exit from adjust mode.



Notes:

(1) Adjustment details are memorized separately for different input signal formats (Adjustments for component signals are memorized for 525i (480i), 625i (575i), 525p (480p), 1,125i (1,080i) and 625p (575p), 750p (720p) each, and RGB/PC signals are memorized for each frequency.)

(2) If a “Cue” or “Rew” signal from a VCR or DVD player is received, the picture position will shift up or down. This picture position movement cannot be controlled by the Picture Pos./Size function.

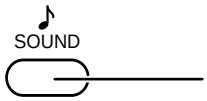
H-Pos	When the Position Left "◄" button is pressed. 	When the Position Right "►" button is pressed. 
H-Size	When the Position Left "◄" button is pressed. 	When the Position Right "►" button is pressed. 
V-Pos	When the Position Left "◄" button is pressed. 	When the Position Right "►" button is pressed. 
V-Size	When the Position Left "◄" button is pressed. 	When the Position Right "►" button is pressed. 
Clock Phase (RGB/PC in Mode)	Flickering and distortion can be eliminated by using the Position Left "◄" or Right "►" button to carry out adjustment.	

Helpful Hint (N / Normalise Normalisation)

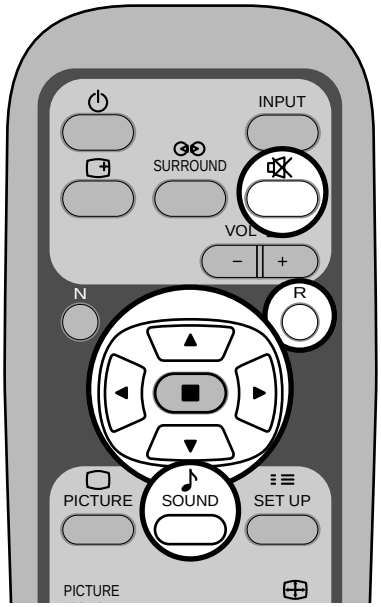
While the Picture Pos./Size display is active, if either the N button on the remote control is pressed at any time or the ■ (ACTION button) is pressed during "Normalise", then all adjustment values are returned to the factory settings.

Sound Adjustment

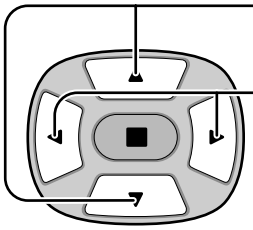
1



Press to display the Sound menu.



2 Select to adjust each item.



Press to select the desired adjustment menu.

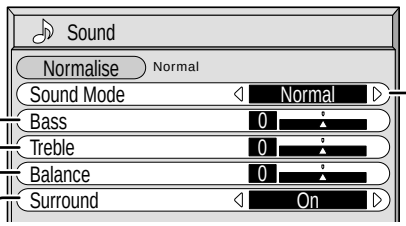
Select the desired level by listening to the sound.

Bass
Adjusts low sounds

Treble
Adjusts high sounds

Balance
Adjusts left and right volumes

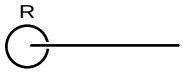
Surround (see next page)
Select On or Off



Normal — Emits the original sound.

Auto — Automatically controls proper volume level.

- To end adjustments



Press the R button

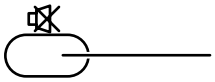
Note:
Press the SURROUND button to directly turn the surround effect On and Off. (see next page)
Bass, Treble and Surround settings are memorized separately for each Sound mode. (Normal, Auto)

Helpful Hint (N / Normalise Normalisation)

While the “Sound” menu is displayed, if either the N button on the remote control is pressed at any time or the ■ (ACTION button) is pressed during “Normalise”, then all adjustment values are returned to the factory settings.

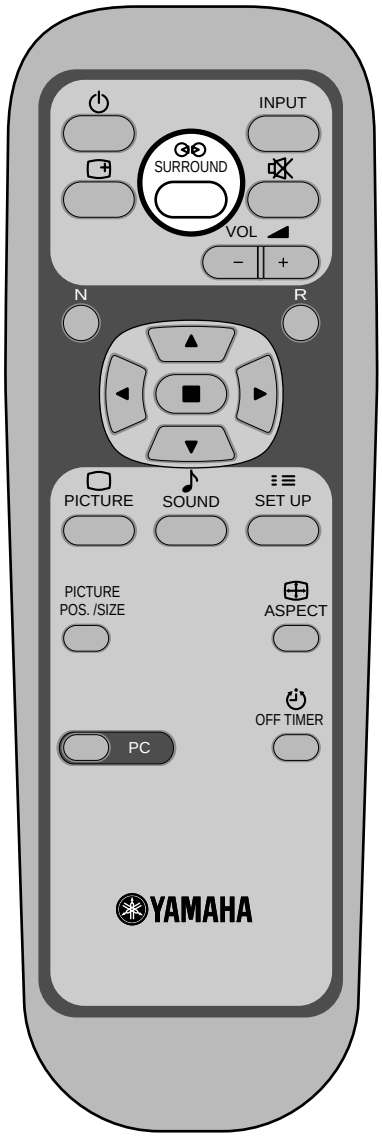
Mute

Useful when answering the phone or receiving unexpected visitors.



Press this button to mute the sound.
Press again to reactivate sound. Sound is also reactivated when power is turned off or volume level is changed.

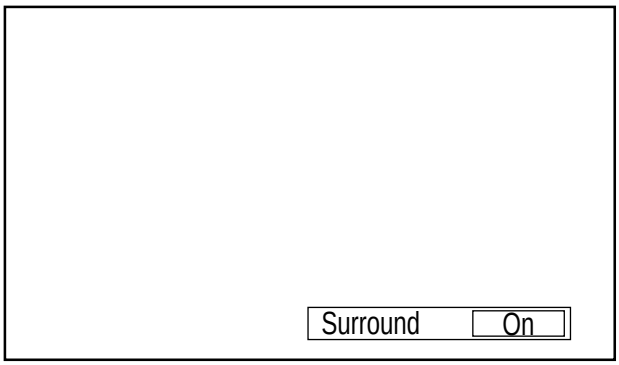
Surround Controls



SURROUND Button
The benefits of surround sound are enormous. You can be completely enveloped in sound; just as if you were at a concert hall or cinema.

The surround setting switches on and off each time the SURROUND button is pressed.

On ⟷ Off

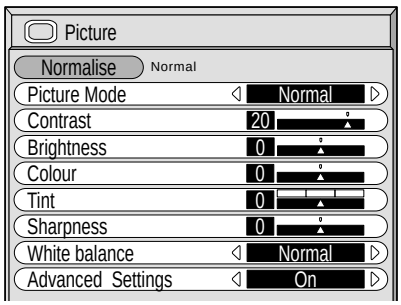


Note:
The surround settings are memorized separately for each Sound mode. (Normal, Auto)

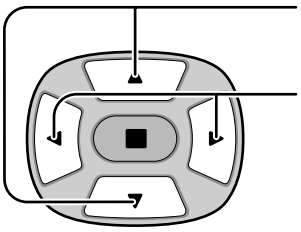
Picture Adjustments

1 PICTURE

Press to display the Picture menu.

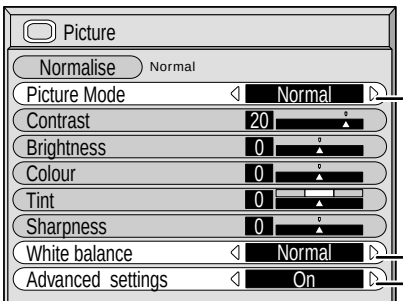


2 Select to adjust each item.



Press to select the menu to adjust.

Select the desired level by looking at the picture behind the menu.



Press the left ◄ or right ► button to switch between modes.

Normal ⟷ Dynamic ⟷ Cinema

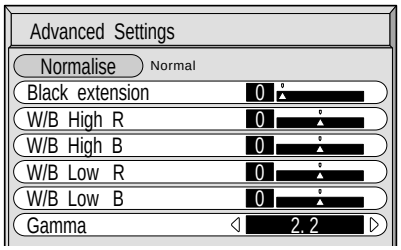
Normal
For viewing in standard (evening lighting) environments.
This menu selects the normal levels of Brightness and Contrast.

Dynamic
For viewing in brighter environments.
This menu selects higher than normal levels of Brightness and Contrast.

Cinema
Ideal for movies.

Note:
If you would like to change the picture and colour of the selected Picture menu to something else, adjust using the items in the Picture menu. (see next page)

Press the left ◄ or right ► button to select “On”. Press the down ▼ button to enter Advanced Settings mode.
Advanced Settings On
Enables fine picture adjustment at a professional level (see next page).



Advanced Settings Off
Displays images with settings of the Picture menu.

Press the left ◄ or right ► button to switch between modes.

Normal ⟷ Cool ⟷ Warm

Helpful Hint (N / Normalise Normalisation)

While the “Picture” menu is displayed, if either the N button on the remote control is pressed at any time or the ■ (ACTION button) is pressed during “Normalise”, then all adjustment values are returned to the factory settings.

Item	Effect		Adjustments
Contrast	◀ Less	▶ More	Selects the proper brightness and density for the room.
Brightness	◀ Darker	▶ Brighter	Adjusts for easier viewing of dark pictures such as night scenes and black hair.
Colour	◀ Less	▶ More	Adjusts colour saturation.
Tint (NTSC only)	◀ Reddish	▶ Greenish	Adjust for nice skin colour.
Sharpness	◀ Less	▶ More	Adjusts picture sharpness.

Notes:
(1) "Colour" and "Tint" settings cannot be adjusted for "RGB" and "PC" input signal modes.
(2) You can change the level of each Function (Contrast, Brightness, Colour, Tint, Sharpness) for each Picture Menu.
(3) The setting details for normal, dynamic and cinema respectively are memorized separately for each input mode (AV(S Video), Component, RGB and PC).
(4) The "Tint" setting can be adjusted for NTSC signal only during "AV (S Video)" input signal.

Note:
In PICTURE, there is not a noticeable change even when contrast is increased with a bright picture or reduced with a dark picture.

Advanced Settings

Item	Effect		Details
Black extension	◀ Less	▶ More	Adjusts the dark shades of the image in gradiation.
W/B High R	◀ Less	▶ More	Adjusts the white balance for light red areas.
W/B High B	◀ Less	▶ More	Adjusts the white balance for light blue areas.
W/B Low R	◀ Less	▶ More	Adjusts the white balance for dark red areas.
W/B Low B	◀ Less	▶ More	Adjusts the white balance for dark blue areas.
Gamma	◀ Down	▶ Up	2.0 ⟷ 2.2 ⟷ 2.5

Notes:
(1) Carry out "W/B" adjustment as follows.
Ⓐ Adjust the white balance of the bright sections using the "W/B High R" and "W/B High B" settings.
Ⓑ Adjust the white balance of the dark sections using the "W/B Low R" and "W/B Low B" settings.
Ⓒ Repeat steps Ⓐ and Ⓑ to adjust.
Steps Ⓐ and Ⓑ affect each other's settings, so repeat each step in turn to make the adjustment.
(2) The adjustment values are memorized separately for each input mode (AV(S Video), Component, RGB and PC).
(3) The adjustment range values should be used as an adjustment reference.

Helpful Hint (N / Normalise Normalisation)

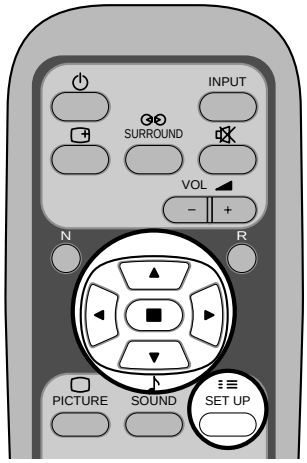
On the remote control unit, while the "Advanced settings" menu is displayed, if either the N button is pressed at any time or the ■ (ACTION button) is pressed during "Normalise", then all adjustment values are returned to the factory settings.

Set up TIMER

The timer can switch the plasma display On or Off.

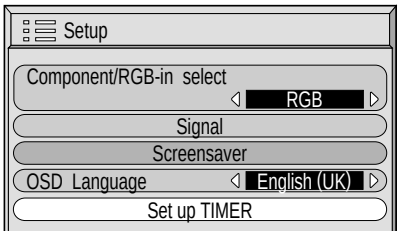
Before attempting Timer Set, confirm the PRESENT TIME and adjust if necessary.
Then set POWER ON Time / POWER OFF Time.

Display the Set up TIMER screen

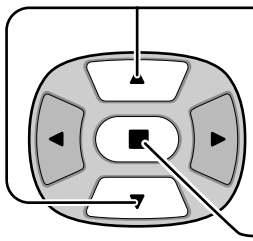


1 SET UP

Press to display the Setup menu screen.

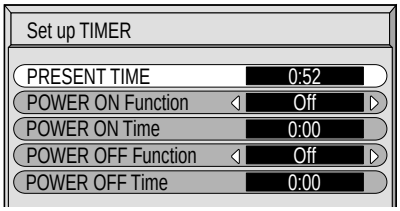


2



Press to select Set up TIMER.

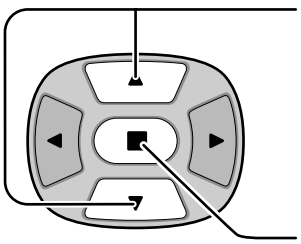
Press to display the Set up TIMER screen.



PRESENT TIME Set

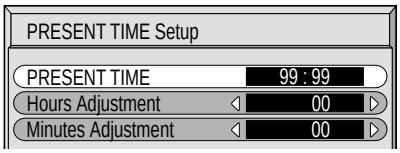
To set up PRESENT TIME, follow the procedure described below.

1

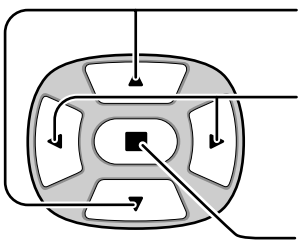


Press to select PRESENT TIME.

Press to display the PRESENT TIME Setting screen.



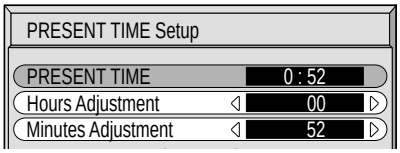
2



Press to select Hours Adjustment / Minutes Adjustment.

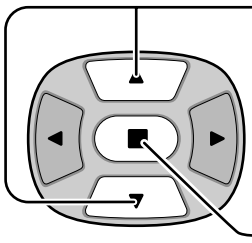
Press to set up Hours or Minutes.
► button: Forward
◄ button: Back

Press to store PRESENT TIME Setup.



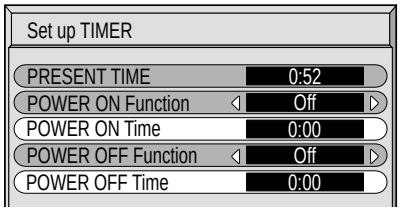
TIMER Set

1

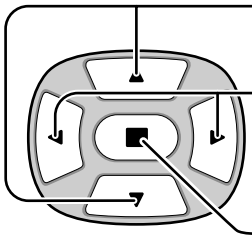


Press to select
POWER ON Time/POWER OFF Time.

Press to display the POWER ON Setup/
POWER OFF Setup screen.



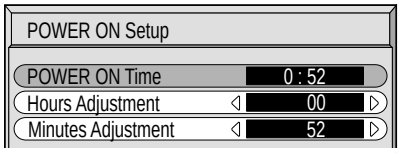
2

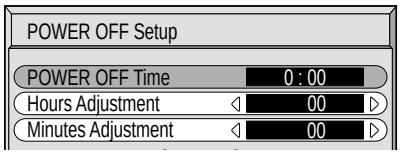


Press to select Hours Adjustment/
Minutes Adjustment.

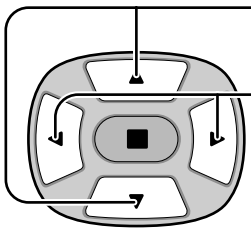
Press to adjust each time.

Press to complete POWER ON Time/
POWER OFF Time.



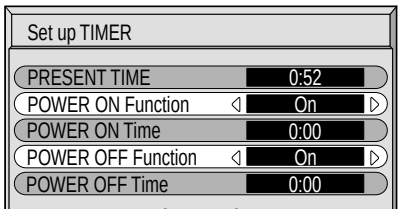


3

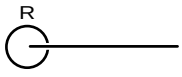


Press to select POWER ON Function/
POWER OFF Function.

Press to select On.



4



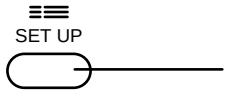
Press twice to exit from Setup.

Note:
Timer function will not work unless “PRESENT TIME” is set.

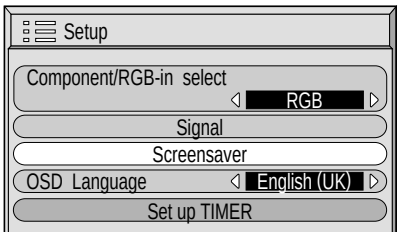
Screensaver (For preventing after-images)

Do not display a still picture, especially in 4:3 mode, for any length of time.
If the display must remain on, a Screensaver should be used.

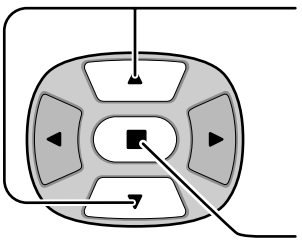
1



Press to display the Setup menu screen.



2

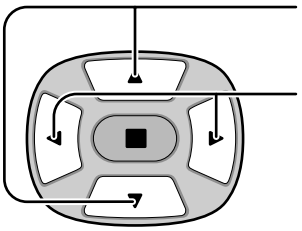


Press to select the Screensaver.

Press to select the Screensaver screen.

Reversal / Scroll selection

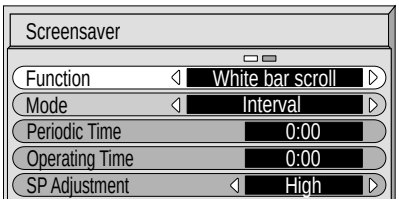
3



Press to select the Function.

Press to select the desired function.

White bar scroll ⟷ Image Reversal

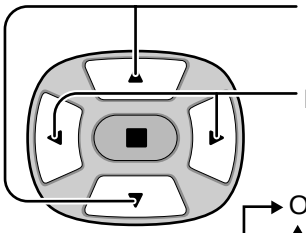


White bar scroll : The white bar will scroll from left to right.

Image Reversal : Negative image will be displayed on the screen.

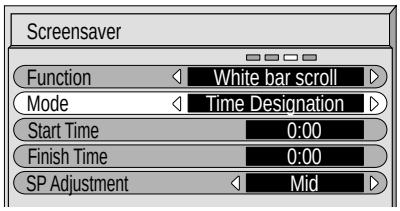
Mode selection

4



Press to select the Mode.

Press to select each mode items.



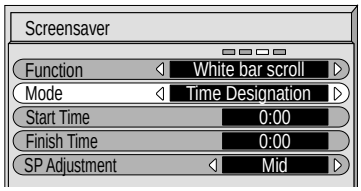
Off

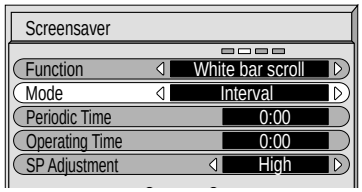
Interval : Operates when Periodic Time and Operating Time are setup and those times arrive.

Time Designation : Operates when Start Time and Finish Time are setup and those times arrive.

On : Operates when the ⊙ (ACTION) is pressed.
If the Mode is at On, the menu screen will disappear and the Screensaver will be activated.
To stop the Screensaver under On, press the ⏻ button.

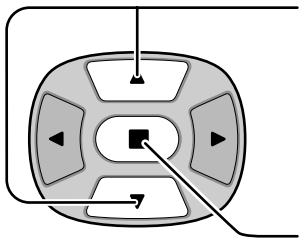
After selecting Time Designation or Interval, the relevant Time Setup will become available for selection and the Operating Time may be set. (Time cannot be set when “Mode” is “On” or “Off.”)





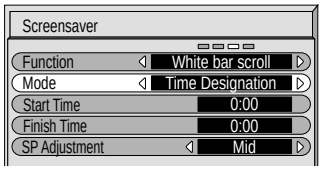
Setup of Screensaver Time

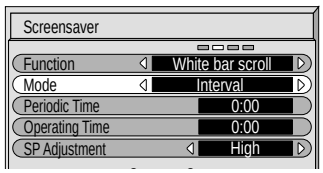
5

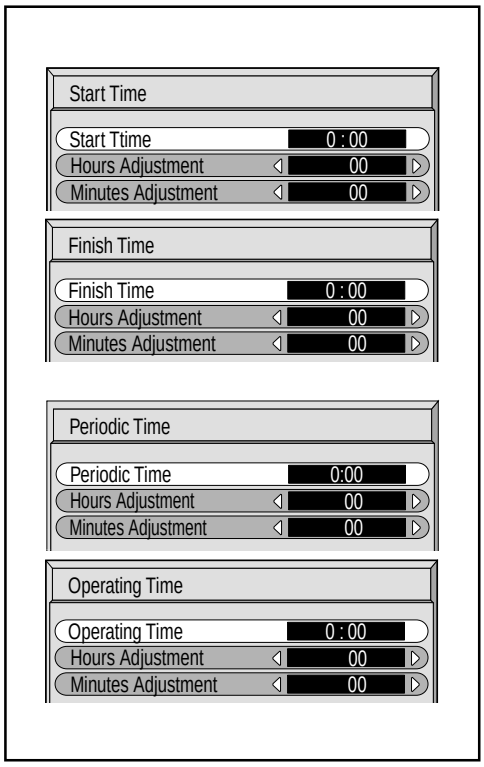


Press to select Start Time/ Finish Time (When Time Designation is selected).
Press to select Periodic Time/ Operating Time (When Interval is selected).

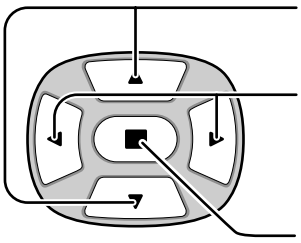
Press to select each Time Adjustment screen.







6



Press to select Hours Adjustment/ Minutes Adjustment.

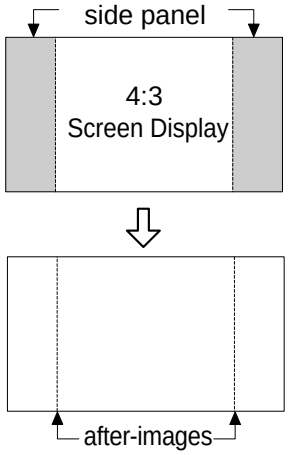
Press to Setup Hours or Minutes.
► button: Forward
◄ button: Back

Press to store settings.

Note:
Timer function will not work unless “PRESENT TIME” is set.

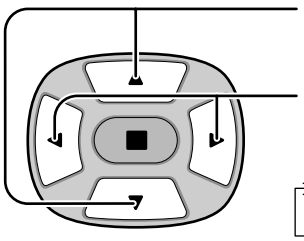
Side Panel Adjustment

Do not display a picture in 4:3 mode for an extended period, as this can cause an after-image to remain on the side panels either side of the display field.
To prevent the appearance of such an after-image, illuminate the side panels.



1 To display the Screensaver screen.
(Refer to the previous page, operation guide steps 1 and 2)

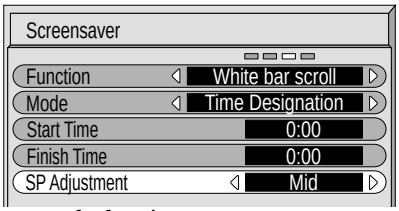
2



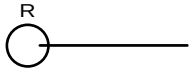
Press to select the SP Adjustment.

Press to select Off, Low, Mid, High.

Off ⟷ Low ⟷ Mid ⟷ High



3



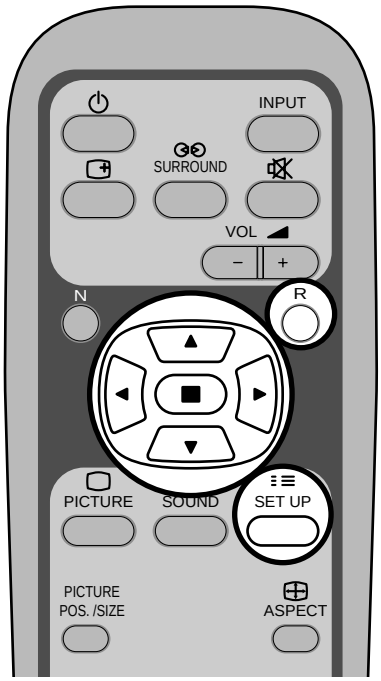
Press to exit from Screensaver.

Note:
- Setting the side panel to High mode for an extended period may result in occurrence of after-images.
- The side panels may flash (alternate black/white) depending on the picture being shown on the screen. In such an occurrence, use the Cinema mode.

Setup for Input Signals

Component/RGB-in select

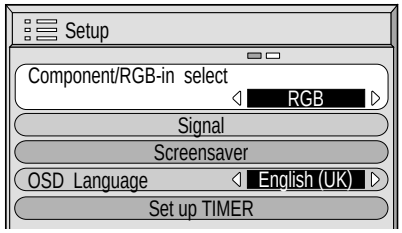
Select to match the signals from the source connected to the Componen/RGB input terminals.
Y, P_B, P_R signals ⇨ “Component”
R, G, B, HD, VD signals ⇨ “RGB”



1 SET UP — Press to display the Setup menu screen.

2 Press to select the “Component/RGB-in select”.

Press to select the desired mode.



Component ⟷ RGB

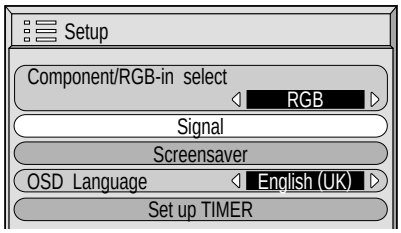
R — Press to exit from adjust mode.

3D Y/C Filter – For NTSC AV images

Select “Signal” from the “Setup” menu during AV(S Video) input signal mode.
(“Signal [AV]” menu is displayed.)

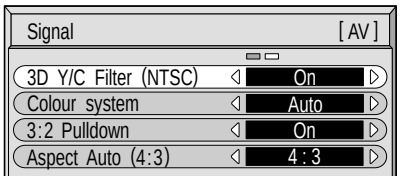
Press to select the “3D Y/C Filter (NTSC)”.

Press to set On/Off.



⇩ Press ● (ACTION) button

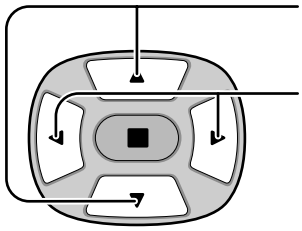
R — Press to exit from adjust mode.



Note:
When On, this setting only affects NTSC input signals.

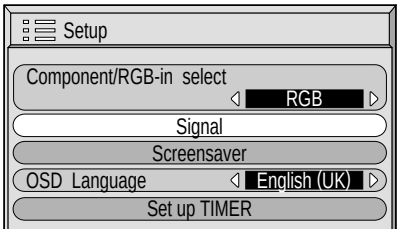
Colour system / Aspect Auto

Select Signal from the “Setup” menu during AV(S Video) input signal mode.
(“Signal [AV]” menu is displayed.)

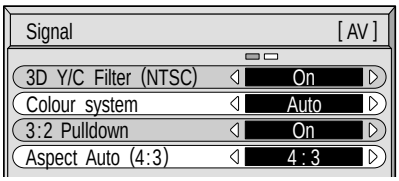


Press to select the “Colour system” or “Aspect Auto”.

Press to select each functions.



⇩ Press ⊙ (ACTION) button



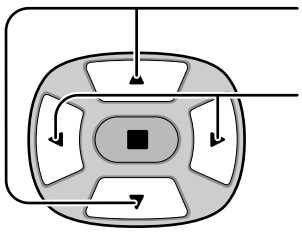
If the picture image becomes unstable:
With the system set on Auto, under conditions of low level or noisy input signals the image may in rare cases become unstable. Should this occur, set the system to match the format of the input signal.

Mode	Function
Colour system	Set the colour system to match the input signal. If set to “Auto”, the colour system is determined automatically. Auto ↔ PAL ↔ SECAM ↔ M.NTSC ↔ NTSC
Aspect Auto (4:3)	Set to “4 : 3” to view 4:3 images in an unchanged format when Aspect Auto is selected. If you would like to view 4:3 images in “Just” format, set to “Just”.

3:2 Pulldown

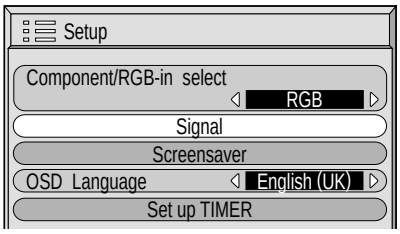
When on, the display attempts to reproduce a more natural interpretation of sources such as movie pictures, which are recorded at 24 frames per second.
If the picture is not stable, turn the setting to off.

Select “Signal” from the “Setup” menu during AV(S Video) or Component input signal mode. (“Signal [AV]” menu is displayed.)

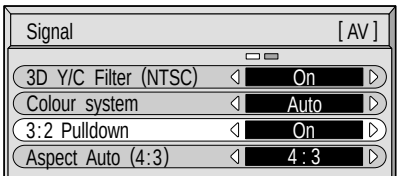


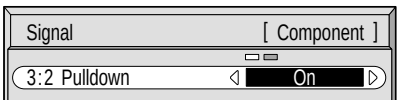
Press to select 3:2 Pulldown.

Press to set On/Off.



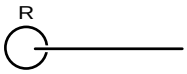
⇩ Press ⊙ (ACTION) button





Note:
When On, this setting only affects the following signal input.

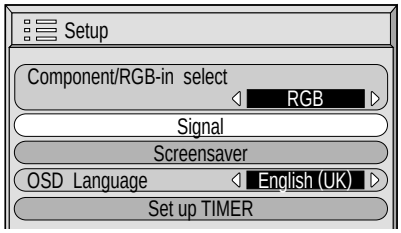
- NTSC signal input during “AV(S Video)” input signal mode.
- 525i(480i) signal input during “Component” input signal mode.

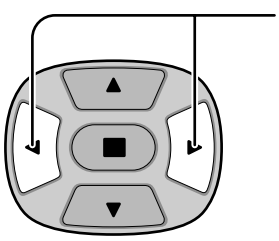


Press to exit from adjust mode.

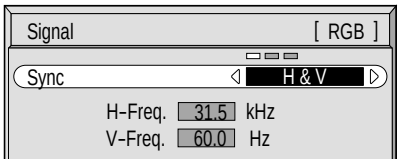
Sync

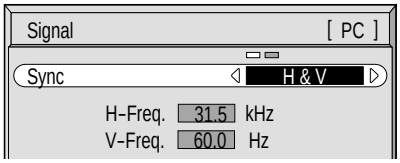
Select Signal from the “Setup” menu during RGB or PC input signal mode.





Press ⊙ (ACTION) button





R

Press to exit from adjust mode.

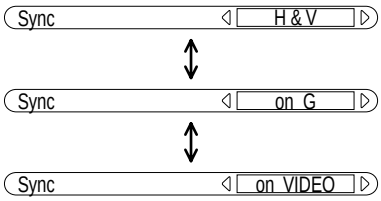
Setting RGB sync signal:

Confirm that the input is set to RGB input (this setting is valid only for RGB input).

H & V: The H and V sync signals are input from the HD/VD connector.

on G: Uses a synchronized signal on the Video G signal, which is input from the G connector.

on VIDEO: Compatible with the scart plug (Europe)
The composite video signal input from the VIDEO input terminal is used by dividing the sync signals.

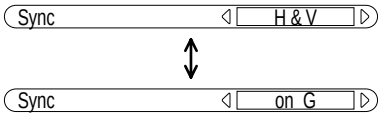


Setting PC sync signal:

Confirm that the input is set to PC input (this setting is valid only for PC input).

H & V: The H and V sync signals are input from the HD/VD connector.

on G: Uses a synchronized signal on the Video G signal, which is input from the G connector.



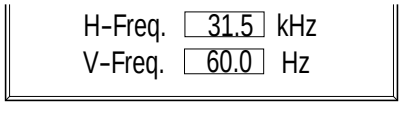
H-Freq. (kHz) / V-Freq. (Hz)

Displays the H (Horizontal)/V (Vertical) frequencies.

This display is valid only for RGB input and PC input.

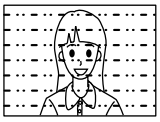
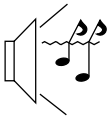
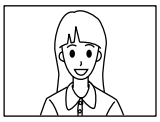
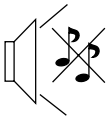
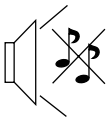
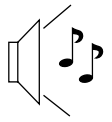
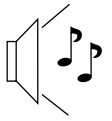
Display range:

Horizontal 15.6 - 110 kHz
Vertical 48 - 120 Hz



Troubleshooting

Before you call for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	**Sound**	
 Interference	 Noisy Sound	Electrical Appliances Cars/Motorcycles Fluorescent light
 Normal Picture	 No Sound	Volume (Check whether the mute function has been activated on the remote control.)
No Picture	 No Sound	Not plugged into AC outlet Not switched on Contrast and Brightness/Volume setting (Check by pressing the Power Switch or stand-by button on the Remote Control.)
No Picture	 Normal Sound	If a signal with a non-applicable colour system format, or frequency is input, only the input terminal indication is displayed.
No Colour	 Normal Sound	Colour controls set at minimum level. (see page 28, 29) Colour system (see page 35)

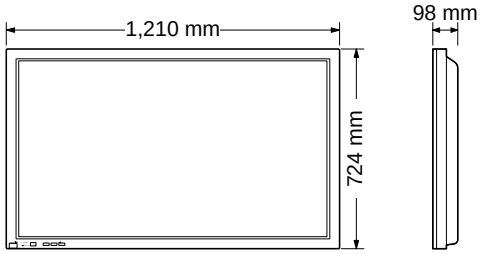
Symptoms	Checks
Game console picture or similar is distorted.	There are some game consoles or similar that output different video signals from those regularly used. Distortion due to lack of synchronization may occur when such equipment is connected. However, this is not a malfunction.
Picture is distorted during the function of play, rewind, fast-forward, or other operations of the VCR or similar.	When AUTO is selected under Colour System of SET UP for Input Signals, the picture may not be coloured or may be distorted due to lack of synchronization, depending on the quality of the recorded signal. However, this is not a malfunction. On such an occurrence, select the appropriate Colour System for the input signal in use.

Plasma display panel

Symptoms	Checks
Some parts of the screen do not light up.	The plasma display panel is manufactured using an extremely high level of precision technology, however, sometimes some parts of the screen may be missing picture elements or have luminous spots. This is not a malfunction.
 After-images appear	Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the plasma display. Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode. **Note:** The permanent after-image on the plasma display resulting from fixed image use is not an operating defect and as such is not covered by the Warranty. This product is not designed to display fixed images for extended periods of time.
Whirring sounds can be heard from the display unit.	The display unit is fitted with a cooling fan to dissipate heat generated during normal use.The whirring sound is caused by rotation of the fan and is not a malfunction.

Specifications

		PDM-1	
Power Source		220 - 240 V AC, 50/60 Hz	
Power Consumption			
Normal use		495 W	
Stand-by condition		3.0 W	
Power off condition		1.7 W	
plasma display panel		Drive method AC type 50-inch, 16:9 aspect ratio	
	Contrast Ratio	3000:1	
Screen size		1,106 mm (W) × 622 mm (H) × 1,269 mm (diagonal) No. of pixels 1,049,088 (1,366 (W) × 768 (H)) [4,098 × 768 dots]	
Operating condition			
Temperature		0 °C - 40 °C	
Humidity		20 % - 80 %	
Applicable signals			
	Colour System	NTSC, PAL, PAL60, SECAM, Modified NTSC	
	Scanning format	525i (480i), 625i (575i), 525p (480p), 625p (575p), 750p (720p), 1,125/60i, 50i, 24p, 24sF (1,080/60i, 50i, 24p, 24sF) ……SMPTE 274M	
	PC signals	XGA display VGA, SVGA, XGA SXGA, UXGA (compressed) Horizontal scanning frequency 15.6 - 110 kHz Vertical scanning frequency 48 - 120 Hz	
Connection terminals			
	AV	Video IN (RCA)	1.0 Vp-p (75-ohm)
		S Video IN (MINI DIN 4PIN)	Y: 1 Vp-p (75-ohm), C: 0.286 Vp-p (75-ohm)
		AUDIO IN (RCA PIN JACK × 2)	0.5 Vrms (high impedance)
	COMPONENT/RGB	Y/G (RCA)	1.0 Vp-p/composite (75-ohm) 0.7 Vp-p/non-composite (75-ohm)
		P_B/B (RCA)	0.7 Vp-p (75-ohm)
		P_R/R (RCA)	0.7 Vp-p (75-ohm)
		HD (RCA)	1.0 - 5.0 Vp-p (high impedance)
		VD (RCA)	1.0 - 5.0 Vp-p (high impedance)
		AUDIO IN (RCA PIN JACK × 2)	0.5 Vrms (high impedance)
	PC	(HIGH-DENSITY D-SUB 15PIN)	R,G,B/0.7 Vp-p (75-ohm) HD, VD/1.0 - 5.0 Vp-p (high impedance)
		AUDIO IN (M3 JACK)	0.5 Vrms (high impedance)
	SERIAL	EXTERNAL CONTROL TERMINAL (D-SUB 9PIN)	RS-232C COMPATIBLE
	SPEAKERS (6 Ω)	16 W [8 W + 8 W] (10 % THD) For SP-PDM1	

		PDM-1
Accessories Supplied		
	Remote Control Transmitter	EUR646528
	Batteries	2 × R6 Size
	Fixing bands	2 pcs
	Ferrite core	(small size) × 1, (large size) × 2
Optional Supplied		
	Speakers	SP-PDM1
	Pedestal	PDS-150
	Wall Mounting Unit	PWK-150
Dimensions (W × H × D)		1,210 mm × 724 mm × 98 mm 
Mass (Weight)		approx. 43.0 kg net (main unit only)

Notes:

(1) Design and specifications are subject to change without notice. Weight and dimensions shown are approximate.

(2) This equipment complies with the EMC standards listed below.
EN55022, EN61000-3-2, EN61000-3-3, EN61000-6-2.

YAMAHA ELECTRONICS CORPORATION, USA 6660 ORANGETHORPE AVE., BUENA PARK, CALIF. 90620, U.S.A.
YAMAHA CANADA MUSIC LTD. 135 MILNER AVE., SCARBOROUGH, ONTARIO M1S 3R1, CANADA
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YAMAHA MUSIC AUSTRALIA PTY, LTD. 17-33 MARKET ST., SOUTH MELBOURNE, 3205 VIC., AUSTRALIA

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