

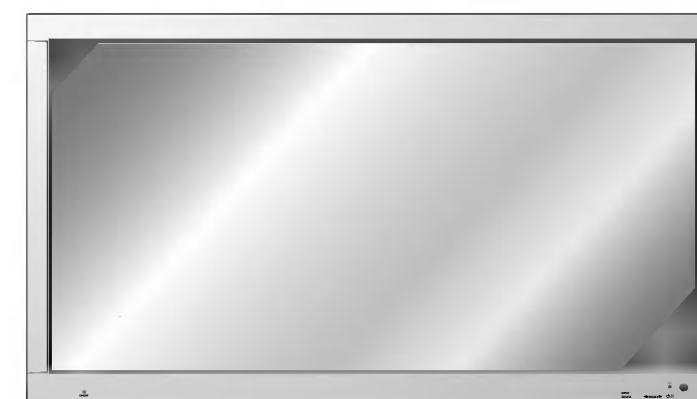


PLASMA MONITOR

Please read this owner's manual carefully before operating the Monitor.
Retain it for future reference.
Record model number and serial number of the Monitor.
See the label attached on the back of the Monitor and quote this information to your dealer when you require service.

Model number :
Serial number :

P/NO : 3828VA0277S
(NP00KB)



What is a Plasma Display ?

If voltage is inputted to gas in glass panels, ultraviolet rays is outputted and fused with a fluorescent substance. At this moment, light is emitted. A Plasma Display is a next generation flat Display using this phenomenon.

160° - Wide angle range of vision

A Plasma Display provides more than 160° angle range of vision so that you can get a picture without distortion from any direction.

Easy installation

A Plasma Display is much lighter and smaller than other same class products so that you can install the Plasma Display at the desired place.

Big screen

The screen of a Plasma Display is 60" so that you can get vivid experience as if you are in a theater.

Multimedia Plasma Display

A Plasma Display can be connected with a computer so that you can use it as a screen for conference, game, internet and so on.

The explanation about colored dots may be present on PDP screen

The PDP which is the display device of this product is composed of 0.9 to 2.2 million cells and a few cell defects can occur in the manufacture of the PDP. Several colored dots visible on the screen would be acceptable, in line with other PDP manufacturers and would not mean that the PDP is faulty. We hope you will understand that the product which corresponds to this standard is regarded as acceptable. It means that it could not be changed or refunded.

We promise that we'll do our best to develop our technology to minimize the cell defects.

The explanation about noise of 60" PDP

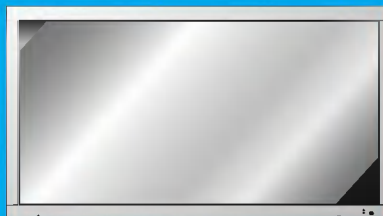
In the same way that a fan is used in a PC to keep the CPU cool, the PDP is equipped with cooling fans to improve the reliability of this product. Therefore, a certain level of noise could occur when the fan is operated. This noise doesn't have any negative effect on its efficiency and liability and it's also determined to have no difficulty while using this product. The noise from the fans is normal in the operation of this product. We hope you will understand that a certain level of noise is acceptable. It means that it is not changeable nor refundable.

WARNING

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

WARNING

TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.



Contents

First step

Safety Instructions	4
---------------------------	---

Monitor Overview

Controls of the Monitor	8
Controls of the remote control	12
Monitor Installation	14

Equipment Connections and Setup

Watching VCR	16
Watching Cable TV	17
Watching external AV source	18
Watching DVD	19
Watching DTV	20
Connecting PC	21
Function checking in PC mode	23
Adjusting in PC mode	24
PIP function	27
Twin picture function	30
Using the remote control	31

Basic Features Setup and Operation

Turning on the Monitor	32
Selecting the on screen language	33
Function checking	34

Sleep Timer

Setting Sleep Timer (Monitor turn-off time)	35
---	----

Picture & Sound

Auto picture control	36
Adjusting picture condition	37
DRP (Digital Reality Picture)	38
Using the screen option	39
Adjusting Sound: Bass, Treble, Balance	40
Auto sound control	41
AVL (Auto volume leveler)	42

Special Features

Using Still function	43
Adjusting OSD Transparency	44
Adjusting color temperature	45
Setting picture format	46
External control device setup	47

Others

Troubleshooting check list	58
Product specifications	59

After reading this manual, keep it in the place where the user can always contact easily.

Safety Instructions

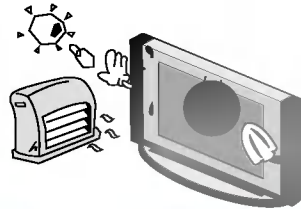
- It is recommended that this product only be used at an altitude of less than 3281 feet (1000m) to get the best quality picture and sound.

Indoor Installation

⚠ WARNING

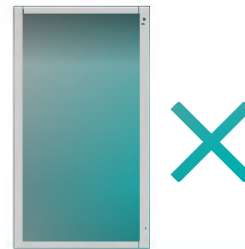
Do not place the Monitor in direct sunlight or near heat sources such as heat registers, stove and so on.

- This may cause a fire.



⚠ NOTES

This plasma display is designed to be mounted horizontally (wide viewing).

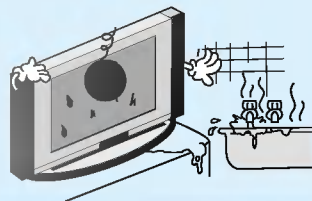


Outdoor Installation

⚠ WARNING

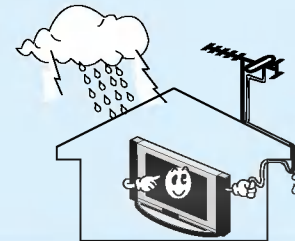
Do not use the Monitor in damp place such as a bathroom or any place where it is likely to get wet.

- This may cause a fire or could give an electric shock.



Bend antenna cable between inside and outside building to prevent rain from flowing in.

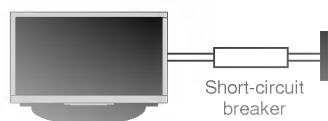
- This may cause water damaged inside the Monitor and could give an electric shock.



⚠ WARNING

Earth wire should be connected.

- If the earth wire is not connected, there is possible a danger of electric shock caused by the current leakage.
- If grounding methods are not possible, a separate circuit breaker should be employed and installed by a qualified electrician.
- Do not connect ground to telephone wires, lightning rods or gas pipe.



⚠ NOTES

Never touch the power plug with a wet hand

- This may cause an electric shock.



* Safety instructions have two kinds of information, and each meaning of it is as below.

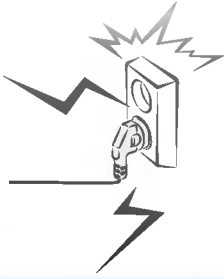
⚠ WARNING The violation of this instruction may cause serious injuries and even death.

⚠ NOTES The violation of this instruction may cause light injuries or damage of the product.

⚠ Take care of danger that may happen under specific condition.

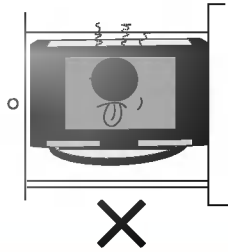
⚠ NOTES

Disconnect from the mains and remove all connections before moving.



Do not place the Monitor in a built-in installation such as a bookcase or rack.

- Ventilation required.



When installing the Monitor on a table, be careful not to place the edge of its stand.

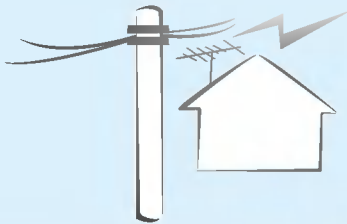
- This may cause the Monitor to fall, causing serious injury to a child or adult, and serious damage to the Monitor.



⚠ NOTES

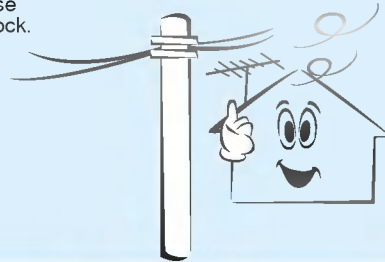
Do not place an outside antenna in the vicinity of overhead power lines or other electric light or power circuits.

- This may cause an electric shock.



There should be enough distance between an outside antenna and power lines to keep the former from touching the latter even when the antenna falls.

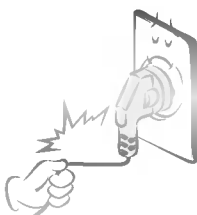
- This may cause an electric shock.



⚠ NOTES

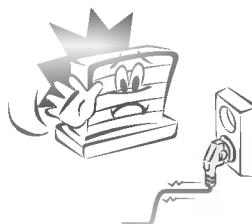
Do not pull the cord but the plug when unplugging.

- This may cause a fire.



Ensure the power cord doesn't trail across any hot objects like a heater.

- This may cause a fire or an electric shock.



Do not plug when the power cord or the plug is damaged or the connecting part of the power outlet is loose.

- This may cause a fire or an electric shock.



Safety Instructions

⚠ WARNING

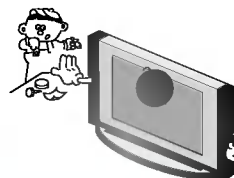
Do not place anything containing liquid on top of the Monitor.

- This may cause a fire or could give an electric shock.



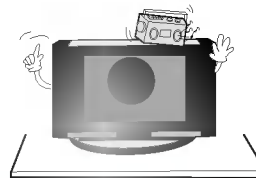
Do not insert any object into the exhaust vent.

- This may cause a fire or could give an electric shock.



Do not place heavy objects on the Monitor.

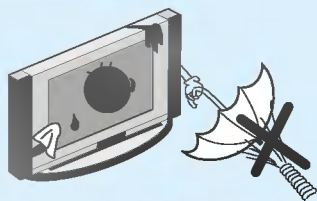
- This may cause serious injury to a child or adult.



⚠ WARNING

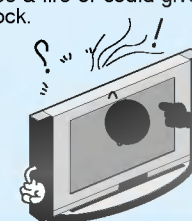
Do not use water the Monitor while cleaning.

- This may cause damaged the Monitor or could give an electric shock.



In case of smoke or strange smell from the Monitor, switch it off, unplug it from the wall outlet and contact your dealer or service center.

- This may cause a fire or could give an electric shock.



⚠ WARNING

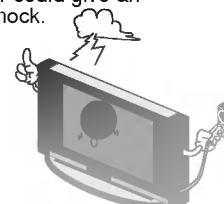
Do not attempt to service the Monitor yourself. Contact your dealer or service center.

- This may cause damaged the Monitor or could give an electric shock.



During a lightning thunder, unplug the Monitor from the wall outlet and don't touch an antenna cable.

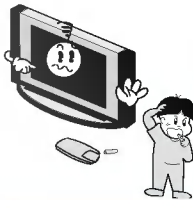
- This may cause damaged the Monitor or could give an electric shock.



⚠ WARNING

Dispose of used batteries carefully to protect a child from eating them.

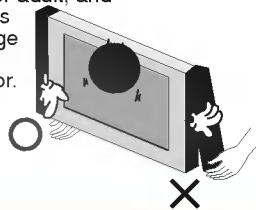
- In case that it eats them, take it to see a doctor immediately.



⚠ NOTES

When moving the Monitor assembled with speakers do not carry holding the speakers.

- This may cause the Monitor to fall, causing serious injury to a child or adult, and serious damage to the Monitor.

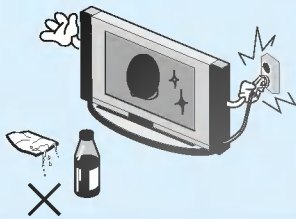


Avoid having a fixed image remain on the screen for a long period of time. Typically a frozen still picture from a VCR, 4:3 picture format or if a CH label is present; the fixed image may remain visible on the screen.

⚠ NOTES

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.

- This may cause damaged the Monitor or could give an electric shock.



Contact the service center once a year to clean the internal part of the Monitor.

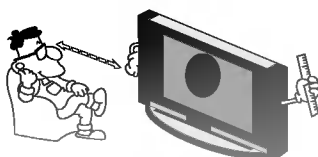
- Accumulated dust can cause mechanical failure.



⚠ NOTES

The distance between eyes and the screen should be about 5 ~ 7 times as long as diagonal length of the screen.

- If not, eyes will strain.



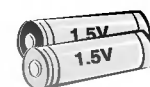
Unplug the Monitor from the wall outlet when it is left unattended and unused for long periods of time.

- Accumulated dust may cause a fire or an electric shock from deterioration or electric leakage.



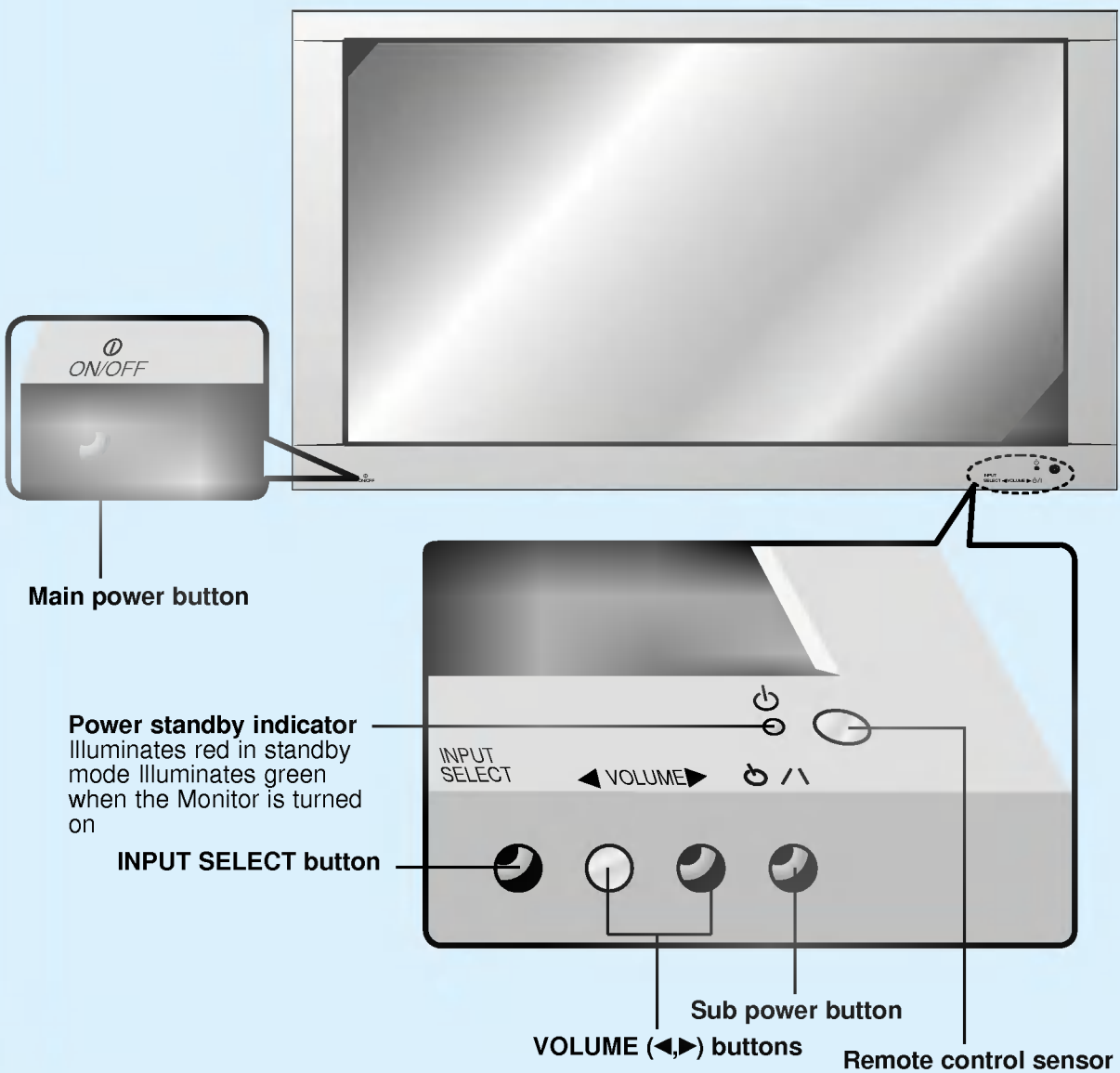
Only use the specified batteries.

- This make cause damaged the Monitor or could give an electric shock.

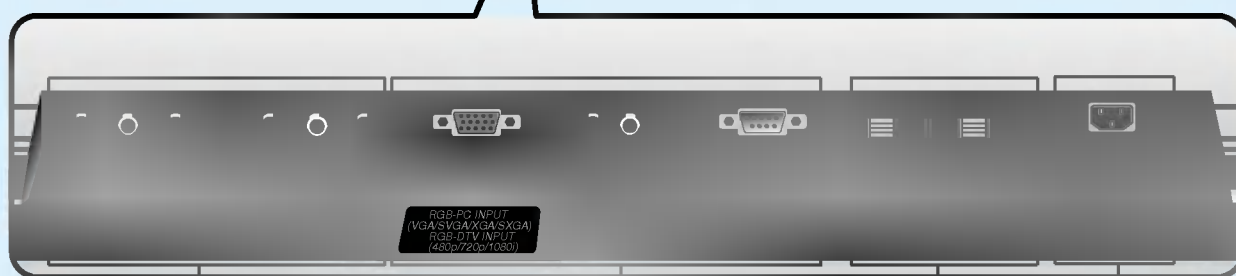
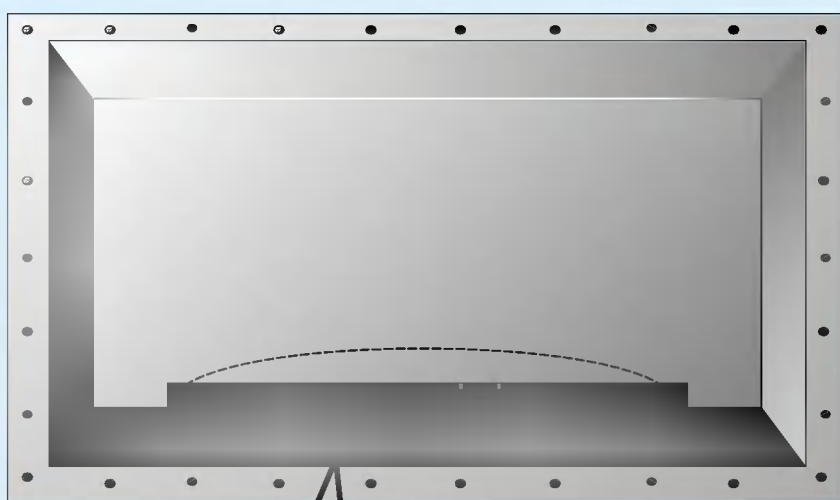


Controls of the Monitor

<Front Panel Controls>



<Back Panel>



**A/V INPUT /
COMPONENT (480i/480p/720p/1080i)
DVD/DTV INPUT jacks**

**RGB-PC INPUT (VGA/SVGA/XGA/SXGA)
RGB-DTV INPUT (480p/720p/1080i) /
AUDIO INPUT /
RS-232C jacks**

**EXTERNAL SPEAKER
(8 ohm output)**

**POWER INPUT
SOCKET**

This Monitor operates on an AC mains supply, the voltage is as indicated as inside back cover of this manual. Never apply DC power to the Monitor.

Accessories



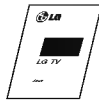
D-sub 15 pin cable



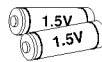
Power cord



Remote control handset



Owner's Manual



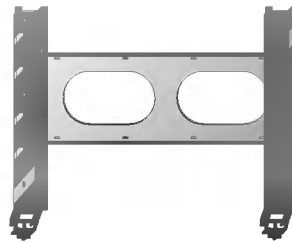
Alkaline batteries

Optional Extras

- Optional extras can be changed or modified for quality improvement without any notification new optional extras can be added.
- Contract your dealer for buying these items.



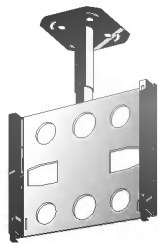
AP-60WA20M series
(Tilt wall mounting bracket)



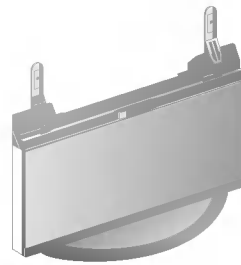
AP-60WA10 series
(Wall mounting bracket)

Optional Extras

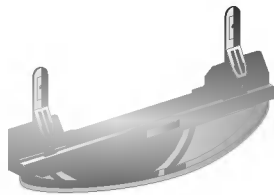
- Optional extras can be changed or modified for quality improvement without any notification new optional extras can be added.
- Contract your dealer for buying these items.



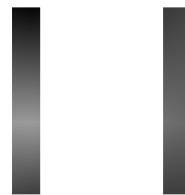
AP-60CA10 series
(Ceiling mounting bracket)



AP-60FA10 series
(Floor type stand)



AP-60DA10 series
(Desktop stand)



AP-60SA10 series
(Speakers)



AP-60SA10D series
(Speaker stand)



AP-60SA10F series
(Floor type speaker stand)



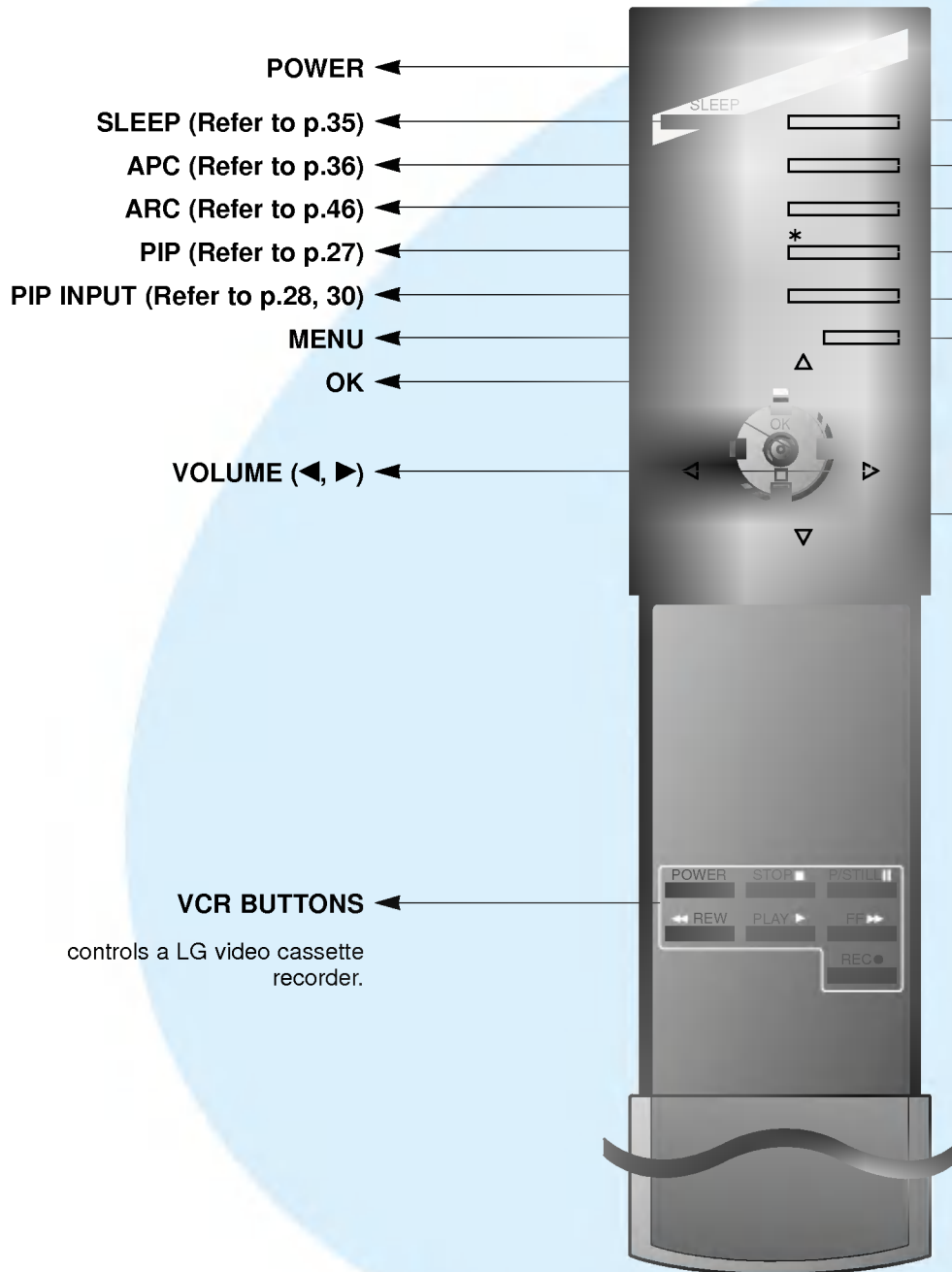
Video cables

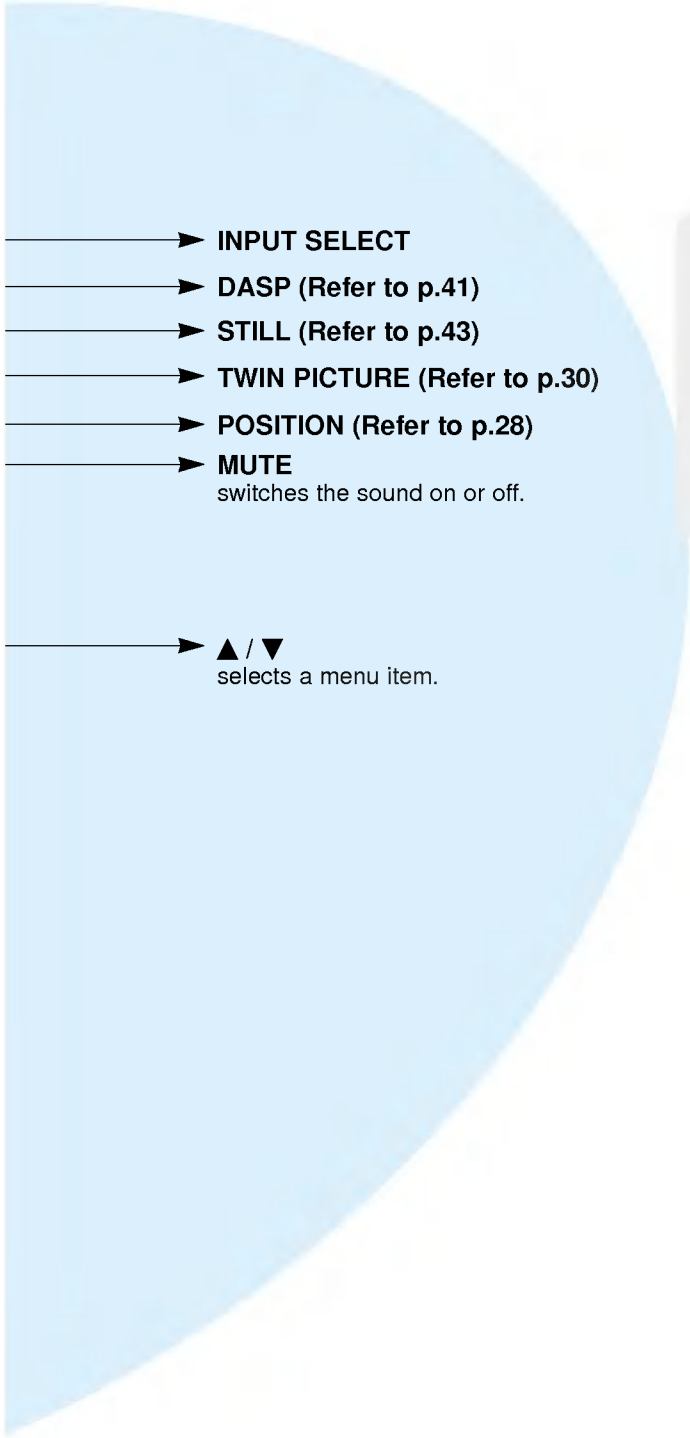


Audio cables

Controls of the remote control

- When using the remote control aim it at the remote control sensor of the Monitor.





- **INPUT SELECT**
- **DASP (Refer to p.41)**
- **STILL (Refer to p.43)**
- **TWIN PICTURE (Refer to p.30)**
- **POSITION (Refer to p.28)**
- **MUTE**
switches the sound on or off.

- **▲ / ▼**
selects a menu item.

INPUT SELECT button on the remote control

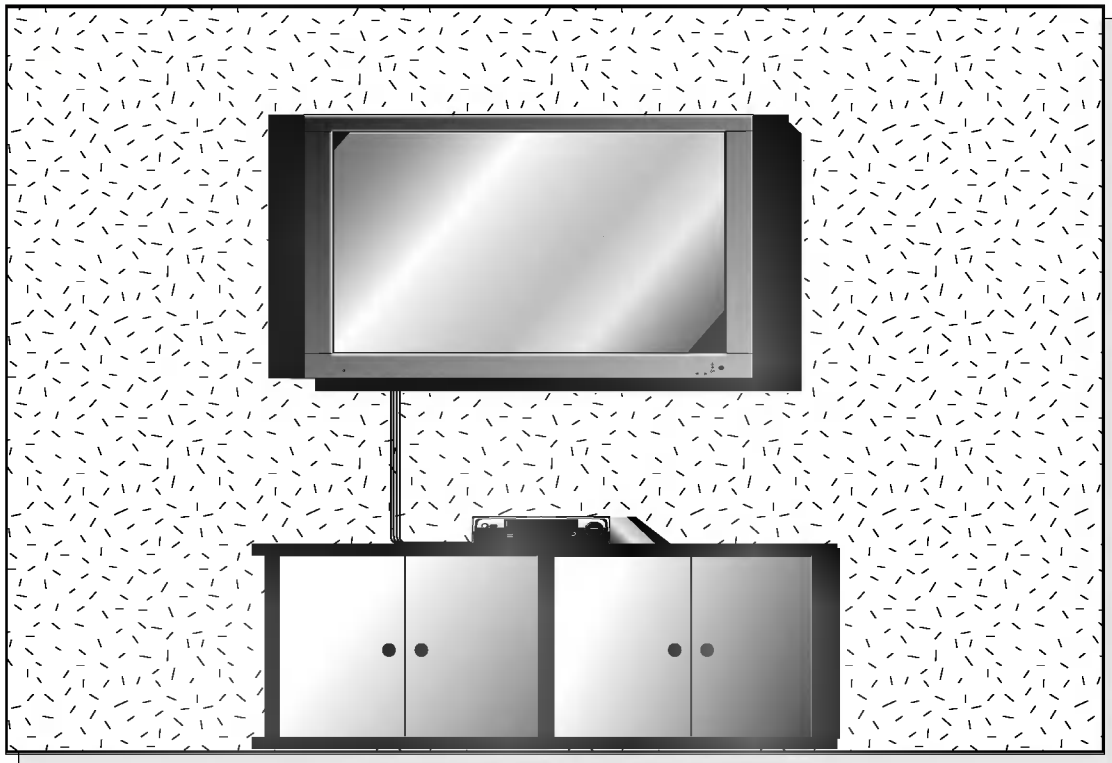
Each press of this button changes the mode as shown below.

First step
Monitor overview
Sleep timer
Picture & Sound
Special features
Others

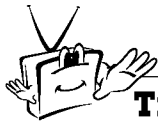
Monitor Installation

- The Monitor can be installed in various ways such as wall mounting type, desktop type, etc..

Wall Mount Installation




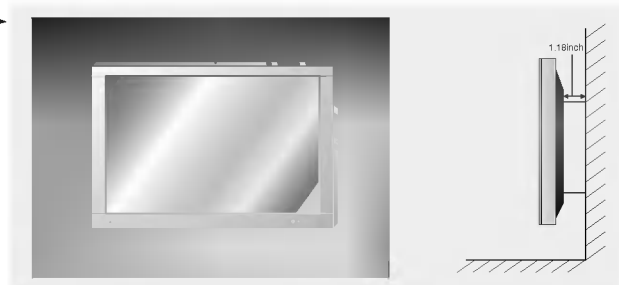
- The monitor can be installed on the wall as the picture above.
(For further information, refer to '(Tilt) wall mounting bracket Installation and Setup Guide'.)



Tips

- Install this monitor only in a location where adequate ventilation is available.


- a.  (Wall mount minimum allowable clearances for adequate ventilation)

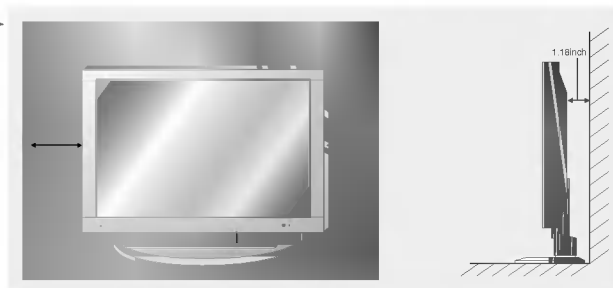


Desktop Pedestal Installation



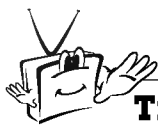
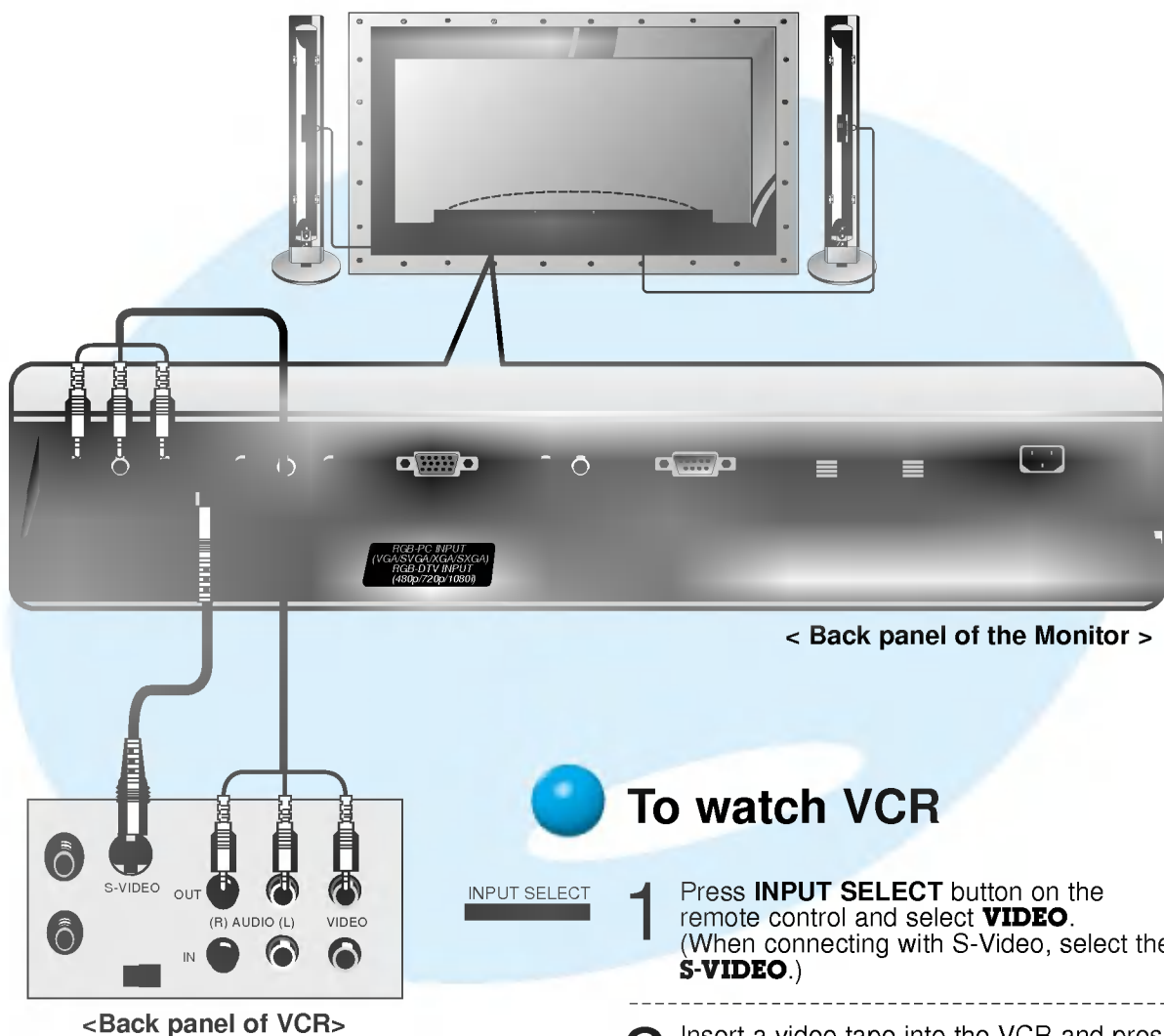
- The Monitor can be installed on a desk as shown above.
(For further information, refer to the optional 'Desktop Stand Installation and Setup Guide'.)

- b.  (Pedestal mount minimum allowable clearances for adequate ventilation)



Watching VCR

- When connecting the Plasma Monitor with external equipments, match the colors of connecting ports (Video - yellow, Audio(L) - white, Audio(R) -red).
- If you have a mono VCR, connect the audio cable from the VCR to the AUDIO(L/MONO) input of the Plasma Monitor.
- If you connect an S-VIDEO VCR to the S-VIDEO input, the picture quality is improved; compared to connecting a regular VCR to the Video input.
- Avoid having a fixed image remain on the screen for a long period of time. Typically a frozen still picture from a VCR, 4:3 picture format or if a CH label is present; the fixed image may remain visible on the screen.

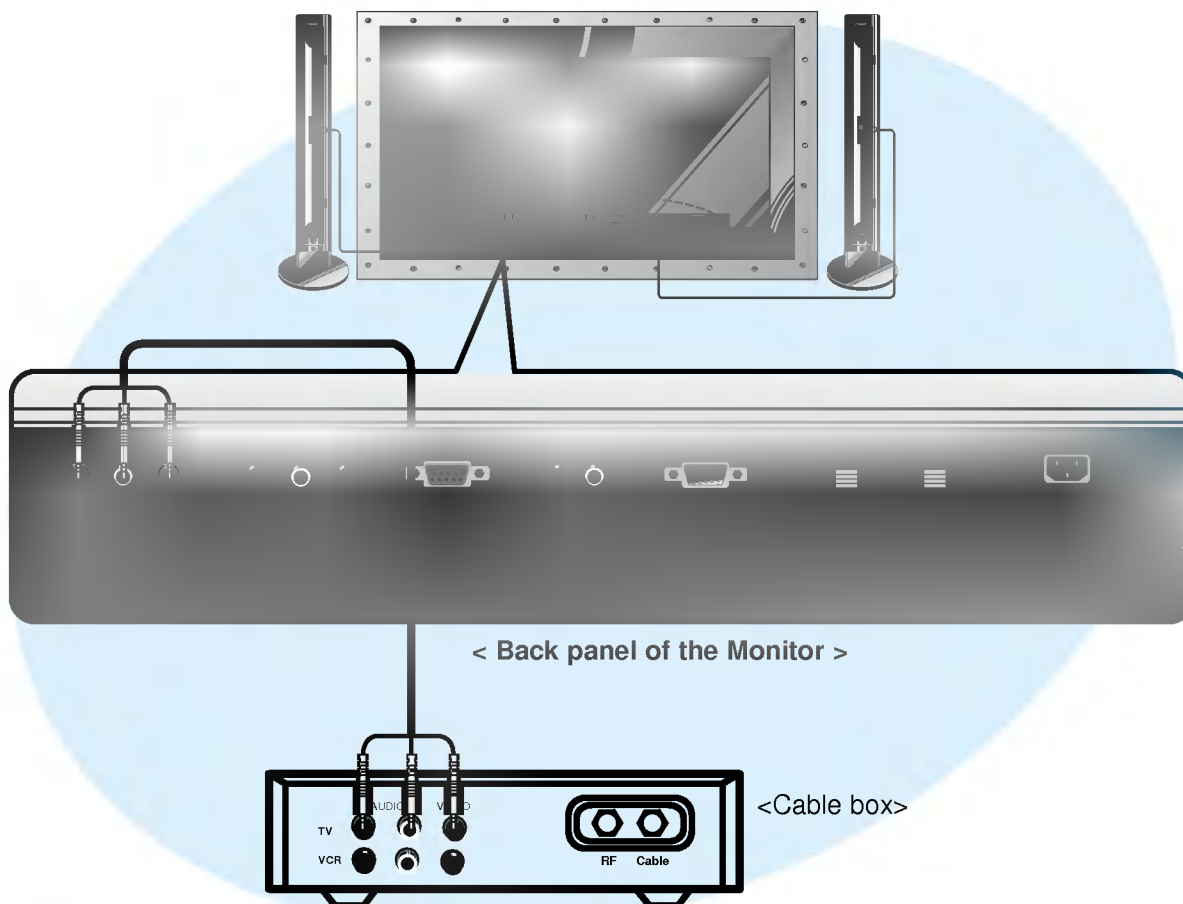


Tips

- To avoid picture noise (interference), leave an adequate distance between the VCR and monitor.

Watching Cable TV

- After subscribing to a cable TV service from a local provider and installing a converter, you can watch cable TV programming.



To watch cable TV

- 1 Press **INPUT SELECT** button on the remote control and select **VIDEO**.

INPUT SELECT

- 2 Tune to cable service provided channels using the cable box.

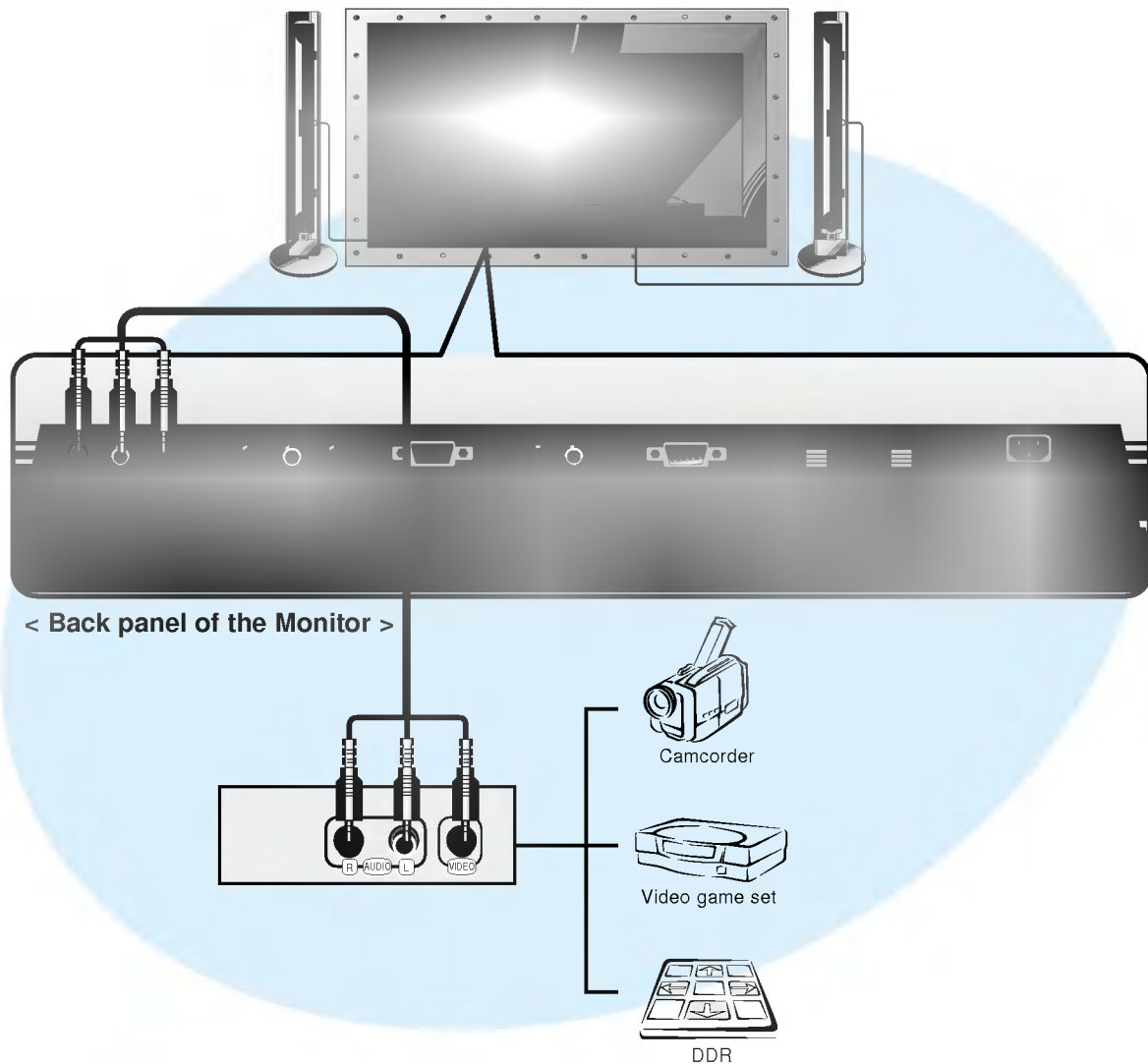


Tips

- For further information regarding cable TV service, contact your local cable TV service provider(s).

Watching external AV source

- When connecting the Plasma Monitor with external equipments, match the colors of connecting ports.



To watch external AV source

- 1 Press **INPUT SELECT** button on the remote control of the monitor to select **VIDEO**.

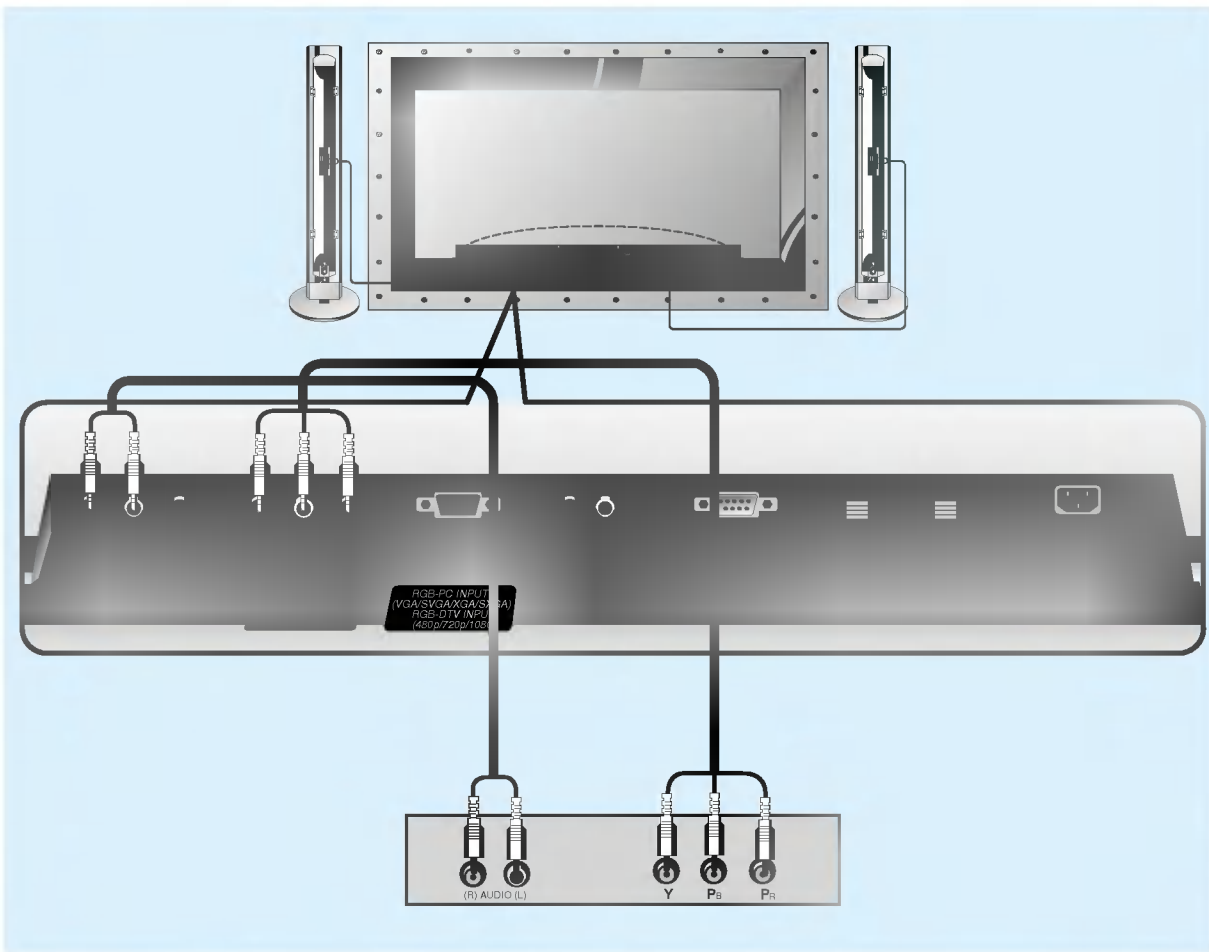
INPUT SELECT

- 2 Operate the corresponding external equipment.

Watching DVD

How to connect

- Connect DVD video inputs to Y, P_B, P_R of COMPONENT (480i/480p/720p/1080i) (DVD/DTV INPUT) and audio inputs to Audio sockets of AV INPUT.



How to use

- Press **INPUT SELECT** button on the remote control of the monitor to select **COMPONENT**.
- Try this after turning on the DVD player.

Component Input ports

You can get better picture quality if you connect DVD player with component input ports as below.

Component ports of the Monitor	Y	P _B	
--------------------------------	---	----------------	--

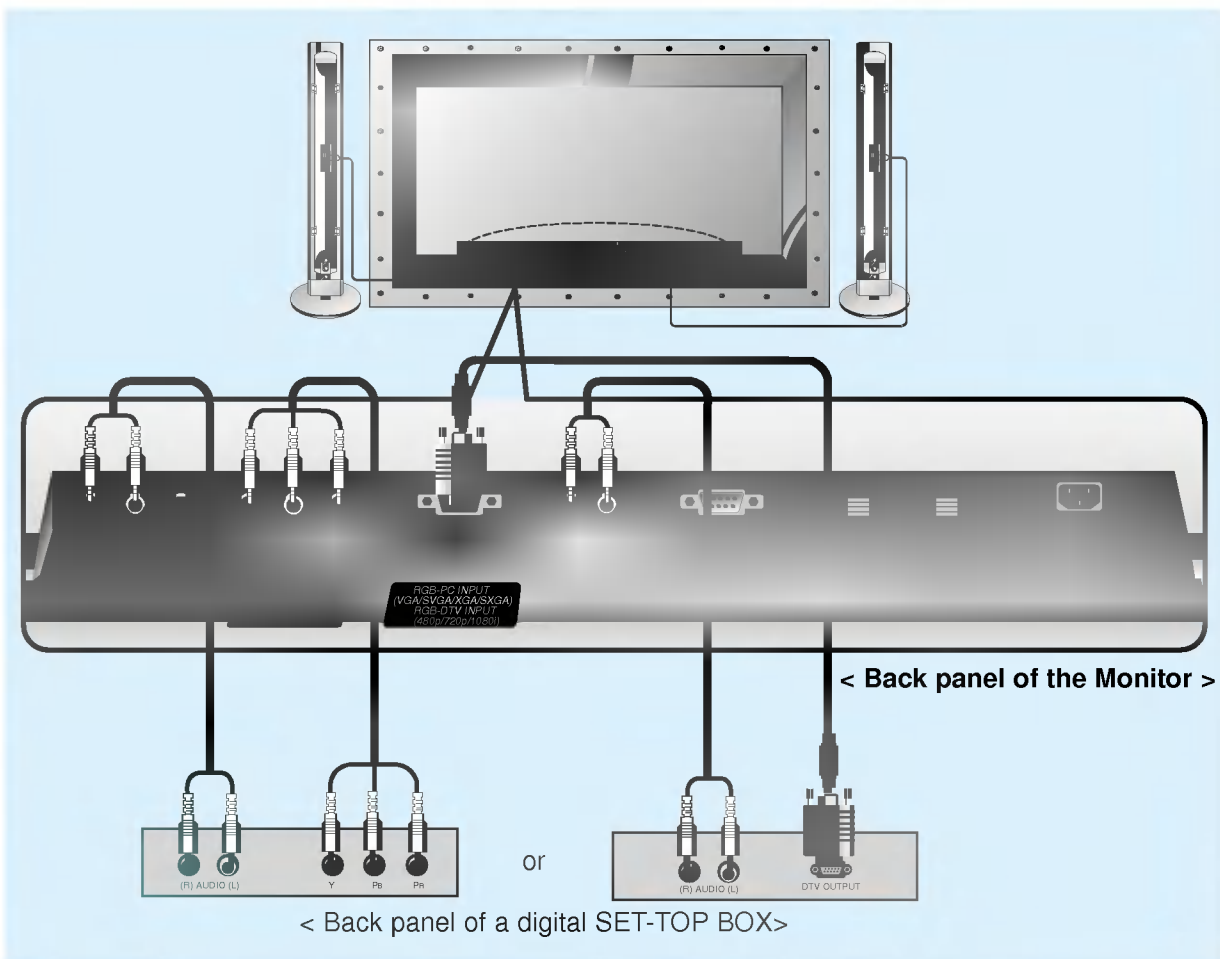
Video output ports of DVD player	Y	P _b	
	Y	B-Y	
	Y	Cb	
	Y	P _B	

Watching DTV

- If you want to watch digital broadcasting programs you should purchase a digital SET-TOP BOX.
- You can select only the 16:9 picture format in DTV 720p / 1080i mode.

How to connect

- Connect DTV video inputs to Y, P_B, P_R of COMPONENT (480i/480p/720p/1080i) (DVD/DTV INPUT) or RGB-PC INPUT(VGA/SVGA/XGA/SXGA) RGB-DTV INPUT(480p/720p/1080i) socket and connect DTV audio inputs to Audio sockets of AV INPUT.



How to use

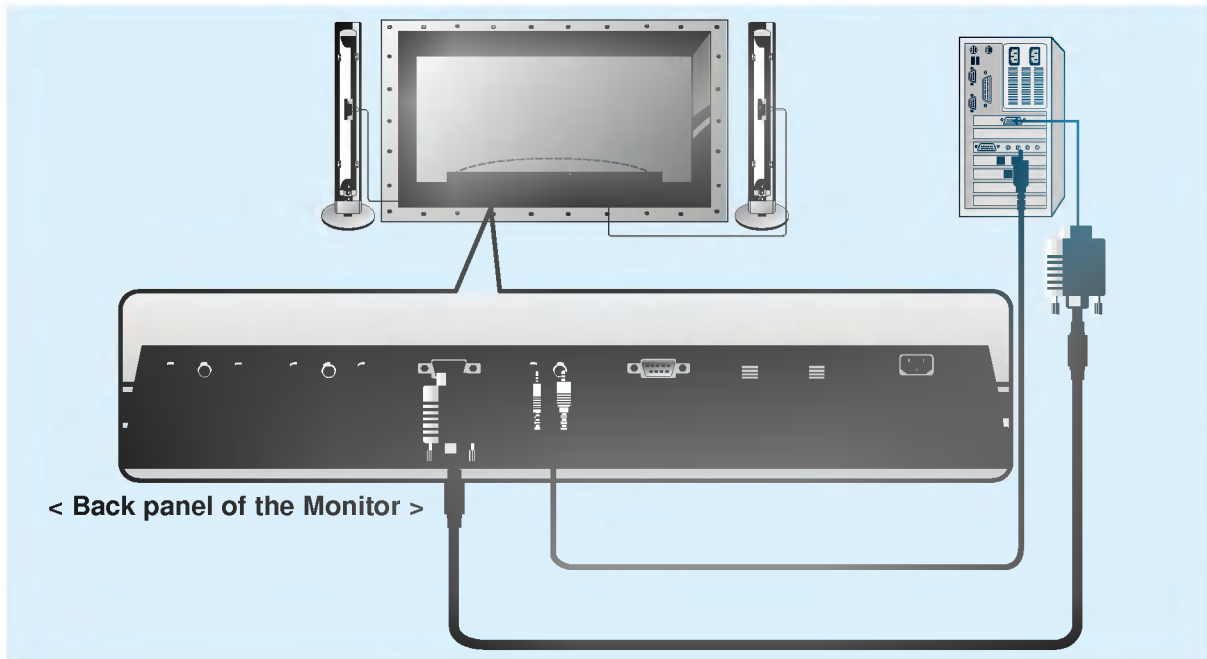
- Press **INPUT SELECT** button on the remote control to select **COMPONENT** or **RGB**.
- Try this after turning on the digital SET-TOP BOX.
(Refer to the owner's manual of the digital SET-TOP BOX.)

Connecting PC

- You can easily connect the Plasma Display to your PC for outstanding image and sound.
- Use the Monitor to display images and sound from a PC Computer source.

Setup Instructions to Connect a PC to your Monitor

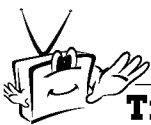
- If the image output of the PC is set higher than UXGA, no picture will appear on the Monitor. (UXGA is not supported.)
- Connect the signal cable from the monitor Output port on the PC to the RGB-PC INPUT (VGA/SVGA/XGA/SXGA) RGB-DTV INPUT(480p/720p/1080i)port on the Monitor.
- Connect the audio cable from the PC to the Audio ports of the Monitor. (Audio cables are not supplied with the Monitor.)
- To set up the Monitor to operate within a PC windows environment, select Normal, Standard or Default monitor.
- The Monitor can not be used for Plug and Play functionality.
- If your PC computer is equipped with a sound card, adjust the sound output on the PC.
- It is recommended that the resolution output of the PC should be set to 1280 x 720 to get the best quality picture. (Look for a video card that uses the nVIDIA GeForce 2 pro or similar chipset that supports this resolution)



INPUT SELECT



<On the remote control>



Tips

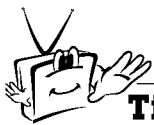
- Avoid keeping a fixed image on the Monitor's screen for a long period of time. The fixed image may become permanently imprinted on the screen; use a screen saver when possible.
- If the resolution output of the PC computer is over SVGA, connect the PC to the RGB-PC (VGA/SVGA/XGA/SXGA) input port on the Monitor. Change the PC computer resolution output accordingly.

PC Setup

- First, turn on the PC computer and press the **ON/OFF** button on the Monitor to apply power to it. Second, turn on the display by pressing the $\phi/|$ button on the Monitor or by pressing the **POWER** button on the Monitor's remote control.
- Use the **INPUT SELECT** button on the remote control to select the RGB input source.
- Set the resolution output of the PC to SXGA or under (1280 x 1024, 75Hz). (Refer to page 22.)

Displayable Monitor Specification

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)
640x350	31.468	70.09
	37.861	85.08
720x400	31.469	70.08
	37.927	85.03
640x480	31.469	59.94
	35.000	66.66
	37.861	72.80
	37.500	75.00
	43.269	85.00
	45.913	90.03
	53.011	100.04
800x600	64.062	120.00
	35.156	56.25
	37.879	60.31
	48.077	72.18
	46.875	75.00
	53.674	85.06
	56.000	90.00
832x624	64.016	100.00
	49.725	74.55
1024x768	48.363	60.00
	56.476	70.06
	60.023	75.02
	68.677	84.99
1152x864	54.348	60.05
	63.995	70.01
	67.500	75.00
	77.487	85.05
1152x870	68.681	75.06
1280x960	60.000	60.00
	75.000	75.00
1280x1024	63.981	60.02
	79.976	75.02



Tips

- Synchronization input form : separate

Function checking in PC mode

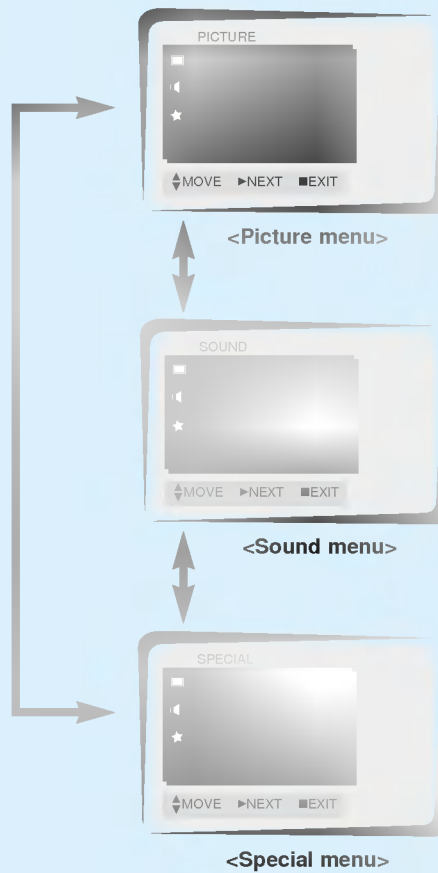
- Select **RGB** input source.

MENU

1 Press the **MENU** button.



2 Press the **▲ / ▼** button.
• Each time you press this button you can see menus as below.



- The PIP works in VGA, SVGA, XGA, 60Hz.
- The TWIN PICTURE works in VGA, 60Hz.




3 Press the **▶** button and then press the **▲ / ▼** or **◀ / ▶** button to select a function you want to use.
• Press the **OK** button to exit.

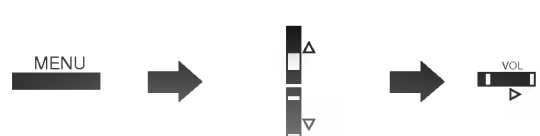
Adjusting in PC mode

● Auto adjustment

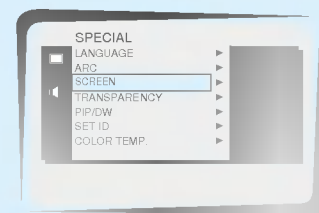

- Select **RGB** input source.
- Automatically adjusts picture position and eliminates any image shaking.
- When watching PIP/TWIN PICTURE, **SCREEN** option is not available in Special menu.





Press the **MENU** button and then press the ▲ / ▼ button to select **SPECIAL** menu. Press the ► button.



1 Press the ▲ / ▼ button to select **SCREEN** and then press the ► button.



2 Press the ▲ / ▼ button to select **AUTO.CONFIG.** and then press the ► button.



- When **AUTO.CONFIG.** has finished, "**OK**" will be shown on screen.
- If the position of the image is incorrect, try Auto adjustment again.

3 If picture needs to be adjusted more after Auto adjustment, adjust **H-POSITION**, **V-POSITION** and **PHASE**.





Tips

- If the image is still not correct, your Monitor is functioning properly but needs further adjustment.

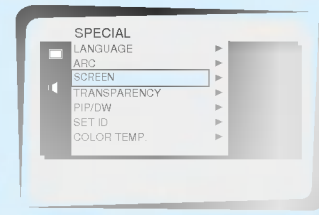

Adjusting horizontal / vertical position

- Only adjust **V-POSITION** and **H-POSITION** in DTV or COMPONENT 480p/720p/1080i.



 Press the **MENU** button and then press the **▲ / ▼** button to select **SPECIAL** menu. Press the **▶** button.



1 Press the **▲ / ▼** button to select **SCREEN** and then press the **▶** button.




2 Press the **▲ / ▼** button to select **V-POSITION** or **H-POSITION** and then press the **▶** button.



3 Press the **◀ / ▶** button to adjust until you get desired horizontal or vertical position and then press the **OK** button.


- The adjustment range of **V-POSITION** is -50 ~ +50.
- The adjustment range of **H-POSITION** is -100 ~ +100.
- Based on the input mode, the adjustment range of **V-POSITION/H-POSITION** may change.
- Based on the input signal, the position of the picture may not change even though you have adjusted the horizontal or vertical position with this function.




Adjusting in PC mode

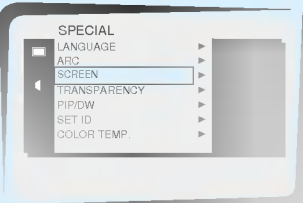

Adjusting phase

- If the picture isn't clear after auto adjustment and especially that characters are still trembling, then adjust the picture phase manually.
- When watching PIP/TWIN PICTURE, **SCREEN** option is not available in Special menu.



 Press the **MENU** button and then press the **▲ / ▼** button to select **SPECIAL** menu. Press the **▶** button.



1 Press the **▲ / ▼** button to select **SCREEN** and then press the **▶** button.




2 Press the **▲ / ▼** button to select **PHASE** and then press the **▶** button.



3 Press the **◀ / ▶** button to adjust phase and then press the **OK** button.

- The adjustment range of **PHASE** is 0 ~ 63.



Initializing

- To initialize the adjusted value, select **RESET** with the **▲ / ▼** button and then press the **▶** button.

PIP function

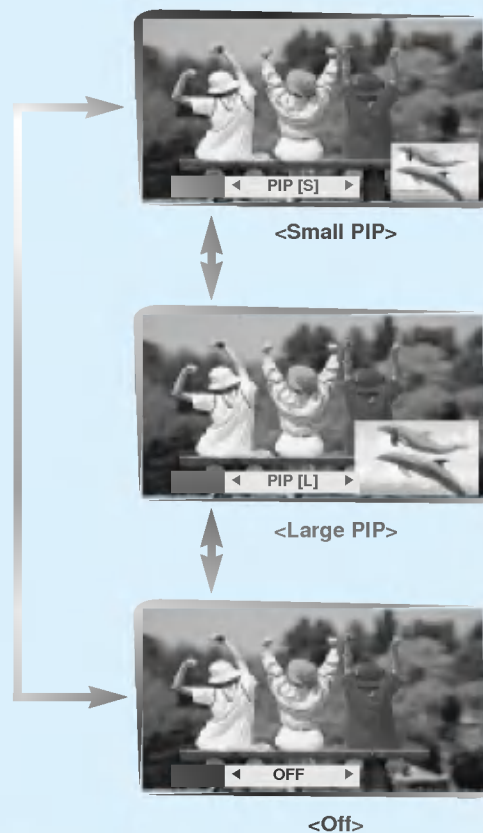
- Select **RGB** input source before pressing **PIP**.
- This function works only in the following resolutions; 640x480, 800x600, 1024x768 (only in Vertical frequency 60 Hz)
- When you select RGB or DTV for main picture in PIP/Twin picture, you can watch video, cable TV or DVD for sub picture.
- Color of main picture may be different from sub picture's in PIP/Twin picture mode.
- If input source for main picture is changed while in PIP/Twin picture mode, sub picture will disappear.
- When watching PIP/Twin picture, **SCREEN** option is not available in Special menu.
- With PIP active, not all picture formats can be used for the main/sub picture.

● Watching the PIP (Picture in Picture)



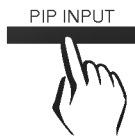
Press the **PIP** button.

- Each time you press **PIP** or **◀ / ▶** button, you can change the PIP size as below.



PIP function

● Selecting the source input signal



Press the **PIP INPUT** button in PIP mode.

- Each time you press **PIP INPUT** button, you toggle **VIDEO**, **S-VIDEO** and **COMPONENT**.



COMPONENT source only works in 480i mode.



● Moving the Sub picture




Press the **POSITION** button in PIP mode.

- Each press of the **POSITION** button will change the position of the sub picture on the screen as shown below.

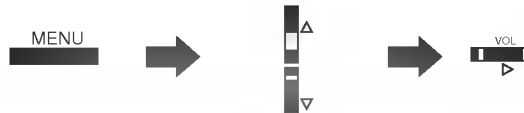


Selecting PIP sound options

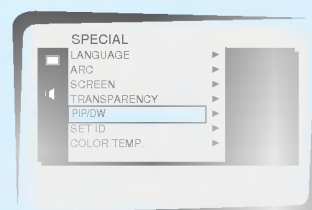
- This function only works with the following resolutions;
640x480, 800x600, 1024x768 (only in Vertical frequency 60 Hz)
- To use this function, connect PC/DTV video output to RGB-PC INPUT (VGA/SVGA/XGA/SXGA) RGB-DTV INPUT (480p/720p/1080i) socket and connect PC/DTV audio outputs to AUDIO INPUT.
- **SOUND SELECT** is always selected **SOUND[M]** regardless of prior sound choice.



Press the **MENU** button and then press the **▲ / ▼** button to select **SPECIAL** menu. Press the **▶** button.



- 1 Press the **▲ / ▼** button to select **PIP/DW** and then press the **▶** button.

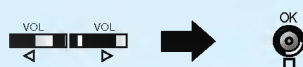


- 2 Press the **▲ / ▼** button to select **SOUND SELECT** and then press the **▶** button.



- 3 Press the **▲ / ▼** button to select **SOUND [M]** or **SOUND [S]** and then press the **▶** button.

- Each time you press **▲ / ▼** button, you toggle between **SOUND [M]** or **SOUND [S]**.



Twin picture mode

- Select **RGB** input source.
- This function works only in the following resolutions;
DTV 480i/720p/1080i, 640x480 (only in Vertical frequency 60 Hz)
- With TWIN PICTURE active, not all picture formats can be used for the main/sub picture.

* / TWIN PICTURE



Press the *** / TWIN PICTURE** button.

- Each time you press *** / TWIN PICTURE** or **< / >** button, you can select **ON** or **OFF**.



<ON>



<OFF>

Main picture

Sub picture

- To avoid showing a fixed image on the screen, sub picture moves every 2 hours.

:Center —————> Upside



Downside

Center



- Sub picture of TWIN PICTURE is always located in center position at first and movement of sub picture operate.
- It's not out of order even though a horizontal noise occur in blanking part of sub picture.

Selecting a source for the Twin picture

PIP INPUT



Press the **PIP INPUT** button in TWIN PICTURE mode.

- Each time you press **PIP INPUT** button, you toggle **VIDEO**, **S-VIDEO** and **COMPONENT**.



COMPONENT source only works in 480i mode.



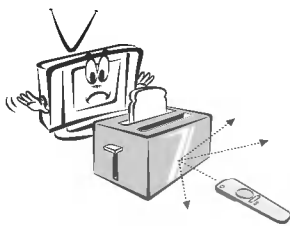
Using the remote control



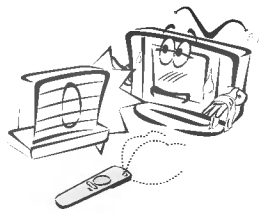
- Open the battery compartment cover on the back side and insert the batteries with correct polarity.
- Apply two 1.5V alkaline batteries of AAA type. Don't mix the used batteries with new batteries.

Notes for using the remote control

Make sure there are no objects between the remote control and its sensor.

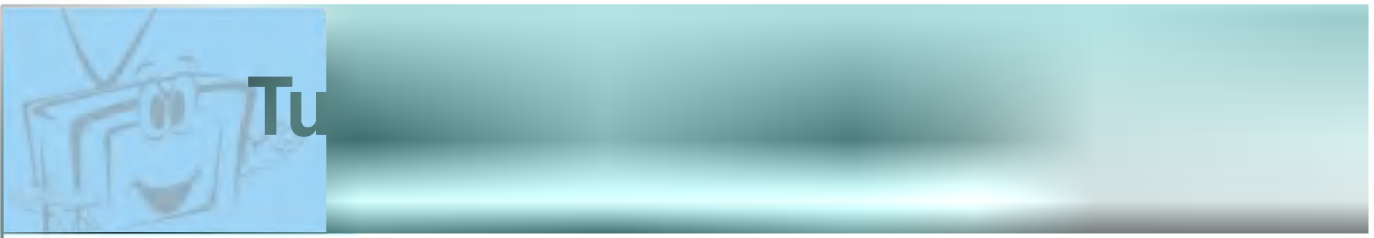


Don't place the remote control near a heater or damp place. Strong impact on the remote control may cause operation failure.



Signal from the remote control may be disturbed by sun light or other strong light. In this case, turn the set to other direction.





- When using the remote control, aim it at its sensor on the Monitor.



1 Connect power cord correctly.

2 Press the **ON/OFF** button on the Monitor. At this moment, the Monitor is switched to standby mode. Press the **⏻** or **INPUT SELECT** button on the Monitor or press the **POWER** or **INPUT SELECT** button on the remote control and then the Monitor will be switched on.



1 **If the Monitor is turned off with the **⏻** button on the Monitor**
Press the **⏻** or **INPUT SELECT** button on the Monitor or press the **POWER** or **INPUT SELECT** button on the remote control and then the Monitor will be switched on.

2 **If the Monitor is turned off with the ON/OFF button on the Monitor**
• Press the **ON/OFF** button on the Monitor to turn on the Monitor.

3 **If the Monitor is turned off with the remote control and also the ON/OFF button on the Monitor**
• Press the **ON/OFF** button on the Monitor and then press the **⏻** or **INPUT SELECT** button on the Monitor or press the **POWER** or **INPUT SELECT** button on the remote control and then the Monitor will be switched on.



Tips

- **Adjusting volume level**
Volume(▶) button increases the sound and volume(◀) button decreases the sound.

Selectin

First step

Monitor overview

Connections

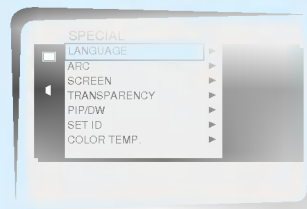


Press the **MENU** button and then press the **▲ / ▼** button to select **SPECIAL** menu.
Press the **▶** button.



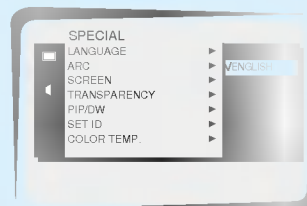
1

Press the **▲ / ▼** button to select **LANGUAGE** and then press the **▶** button.



2

Press the **▲ / ▼** button to select the desired language.



3

Press the **OK** button.



Picture & Sound

Special features

Others



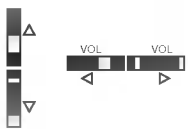
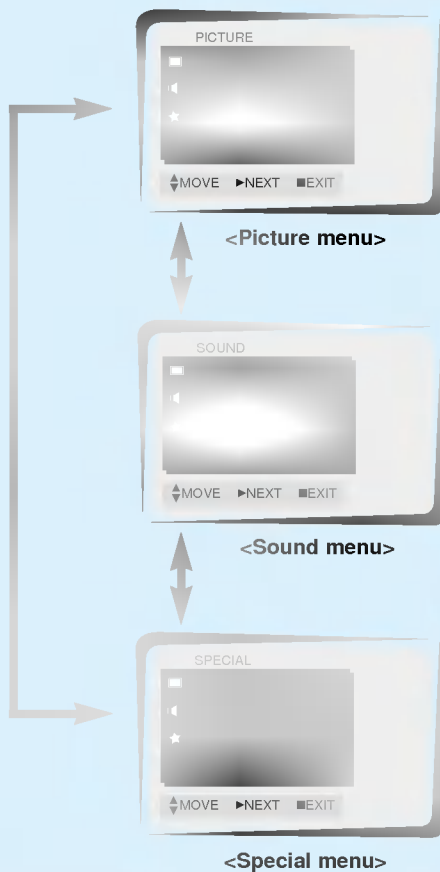
- Select **VIDEO** input source.

MENU

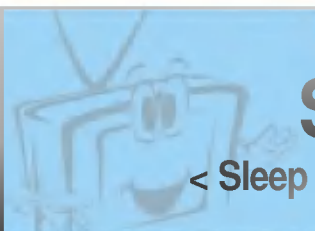
1 Press the **MENU** button.



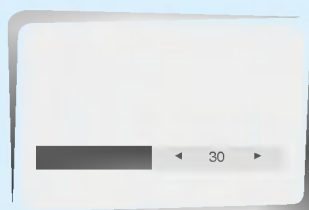
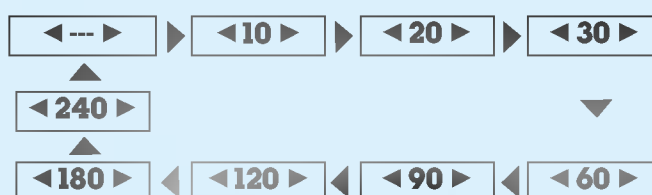
2 Press the **▲ / ▼** button.
• Each time you press this button you can see menus shown below.



3 Press the **▶** button and then press the **▲ / ▼** or **◀ / ▶** button to select a function you want to use.
• Press the **OK** button to exit.



Press the **SLEEP** button to set sleep time. Each time you press **SLEEP** button, the next preset setting time is changed as shown below.



- To release sleep time setting, press the **SLEEP** or **</>** button repeatedly to select **<--->**.
- '⚠ **SLEEP 1**' is displayed, one minute before the Monitor is due to switch off.



Tips

- When the sleep time you want is displayed on the screen, don't press the **SLEEP** button. After 20 seconds, the screen display disappears and sleep time is set.
- To check remaining sleep time after setting, press the **SLEEP** or **OK** button just once.
- If you turn the Monitor off after setting the sleep timer, the setting will be erased. The sleep timer will then have to be set again.

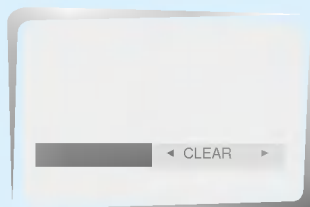
- APC is not available in RGB, PIP/TWIN PICTURE modes.

● APC (Auto Picture Control)



1 Press the **APC** button.

2 Press the **APC** or ◀ / ▶ button to select your desired picture condition.




- Each press of ◀ / ▶ button changes the screen display as shown below.




- You can also select **CLEAR**, **SOFT** or **USER** in the **PICTURE** menu.

Adjust

- PIP and Twin picture inset settings are not adjustable.



Press the **MENU** button and then press the **▲ / ▼** button to select **PICTURE** menu.
Press the **▶** button.



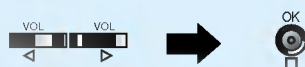
- 1 Press the **▲ / ▼** button to select **CONTRAST** and then press the **▶** button.
(to adjust contrast setting)



- Adjust **BRIGHTNESS, COLOR, TINT** and **SHARPNESS** in the same way.

- 2 Use the **◀ / ▶** button to make appropriate adjustments and then press the **OK** button.

- Press the **▲ / ▼** button to select other items.



DRP (Digital Picture)

< DRP allows you to select

- This function works in video, component 480i mode.



Press the **MENU** button and then press the **▲ / ▼** button to select **PICTURE** menu. Press the **▶** button.



1

Press the **▲ / ▼** button to select **DRP** and then press the **▶** button.



2

Press the **▲ / ▼** button to select **CLEAR** or **SOFT**.



3

Press the **OK** button.



Us

- This function work only in video mode.
- Use this option when viewing the video input.

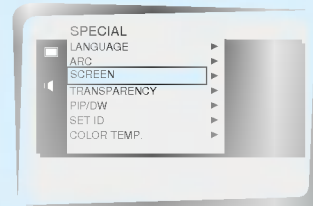


Press the **MENU** button and then press the **▲ / ▼** button to select **SPECIAL** menu.
Press the **▶** button.



1

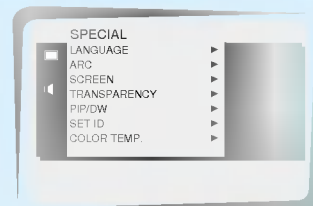
Use the **▲ / ▼** button to select **SCREEN** and then press the **▶** button.



2

Use the **▲ / ▼** button to select **TV** or **VCR**.

- Select the **VCR** option if watching a VCR.
- Select the **TV** option for other equipment. (Except VCR)
- Each time you press the **▲ / ▼** button you toggle between **TV** and **VCR**.



3

Press the **OK** button.





Press the **MENU** button and then press the **▲ / ▼** button to select **SOUND** menu.
Press the **▶** button.



1

Use the **▲ / ▼** button to select **TREBLE** and then press the **▶** button.
(if adjusting treble)

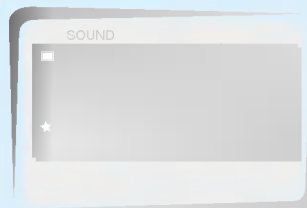
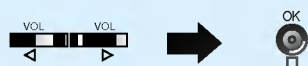


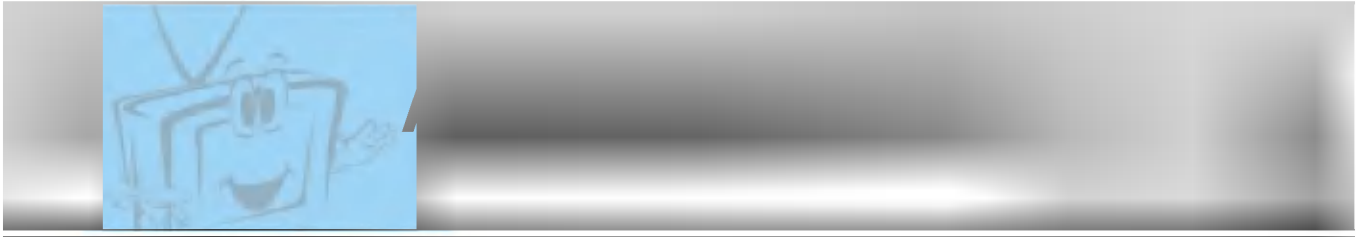
- Adjust **BASS** and **BALANCE** in the same way.

2

Use the **◀ / ▶** button to make appropriate adjustment and then press the **OK** button.

- Press the **▲ / ▼** button to select other options.





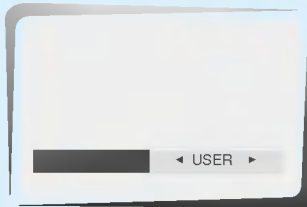
DASP

- This function lets you enjoy the best sound without any special adjustment because the Monitor automatically selects the appropriate sound option based on the program content.

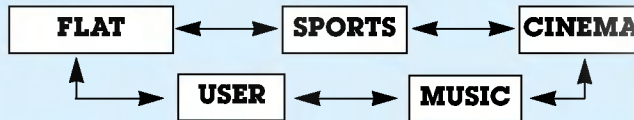


1 Press the **DASP** button.

2 Press the **DASP** or ◀ / ▶ button to select your desired sound.



- Each press of **DASP** or ◀ / ▶ button changes the screen display as shown below.



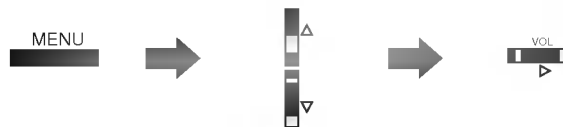
- You can also select **FLAT**, **SPORTS**, **CINEMA**, **MUSIC** or **USER** in the **SOUND** menu.

AVL (Auto Volume Leveler)

< This feature maintains an equal volume level; even if you change channels. >

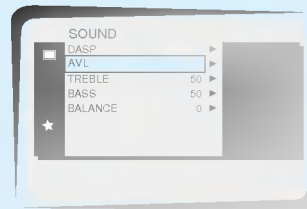


Press the **MENU** button and then press the **▲ / ▼** button to select **SOUND** menu.
Press the **▶** button.



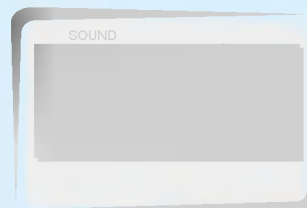
1

Press the **▲ / ▼** button to select **AVL** and then press the **▶** button.



2

Press the **▲ / ▼** button to select **ON** or **OFF**.



3

Press the **OK** button.



- This feature isn't available for RGB input source.



1

Press the **STILL** button.

- You can still the current picture.
- The sub picture is stilled in PIP or Twin picture mode.



<Moving image>



<Still image>

2

To return to normal viewing, press the **STILL** button again.



Tips

- If still picture is on the screen for more than 5 minutes, the image becomes dark.
If another function is activated, normal brightness of the screen is restored.

Adjust

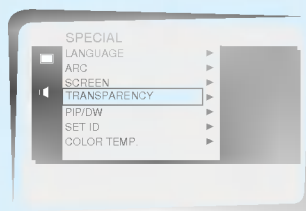


Press the **MENU** button and then press the **▲ / ▼** button to select **SPECIAL** menu.
Press the **▶** button.



1

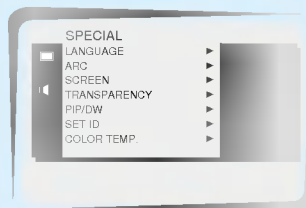
Press the **▲ / ▼** button to select **TRANSPARENCY** and then press the **▶** button.



2

Press the **◀ / ▶** button to adjust OSD transparency.

- The adjustment range of **TRANSPARENCY** is 0 ~ 5.



3

Press the **OK** button.

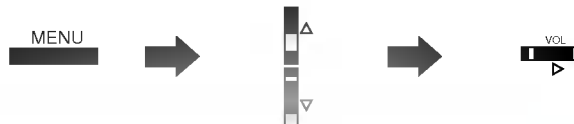


Adjust

- You should adjust color temperature in PC mode again although color temperature is adjusted in other input source.
- To initialize adjusted value, select '0' in **RED**, **GREEN** and **BLUE**.

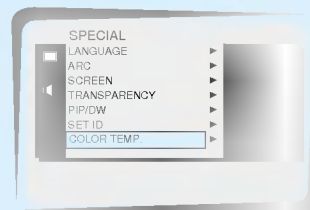


Press the **MENU** button and then press the **▲ / ▼** button to select **SPECIAL** menu.
Press the **▶** button.



1

Press the **▲ / ▼** button to select **COLOR TEMP.** and then press the **▶** button.



2

Press the **▲ / ▼** button to select **RED** and then press the **▶** button.
(to adjust RED setting)



- Adjust **GREEN** and **BLUE** in the same way.

3

Use the **◀ / ▶** button to make appropriate adjustments and then press the **OK** button.



- The adjustment range of **RED**, **GREEN** and **BLUE** is -5 ~ +5.



- You are available to 16:9 or 4:3 in RGB and 16:9 is only available in DTV 720p/1080i.
- If 4:3 is on the screen for a long time, that fixed image may remain visible.
- Don't display 4:3 picture format or TWIN PICTURE on screen above 10 hours continuously.



Press the **ARC** button to select a desired picture format.

- Each time you press **ARC** or ◀ / ▶ button, you can select **16:9**, **4:3** or **ZOOM** alternatively.



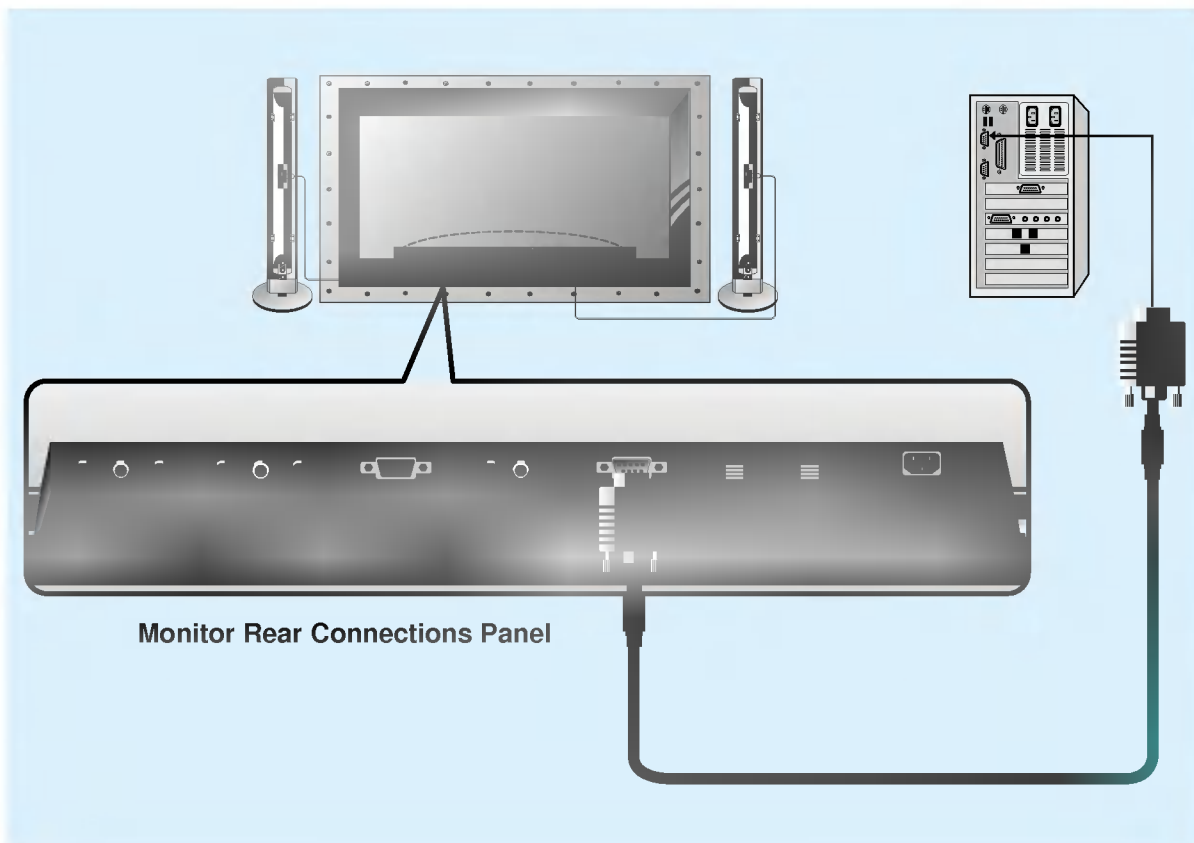
- You can also select **16:9**, **4:3** or **ZOOM** in the **SPECIAL** menu.

Extern

- Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the Monitor's functions externally.

● How to connect external control equipment

- Connect the serial port of the control device to the RS-232C jack on the Monitor back panel.
- RS-232C connection cables are not supplied with the Monitor.
- The Monitor remote control and front panel controls (except main power) will not be functional if the Monitor is controlled by a PC computer or other external device.



First step

Monitor overview

Connections

Basic operation

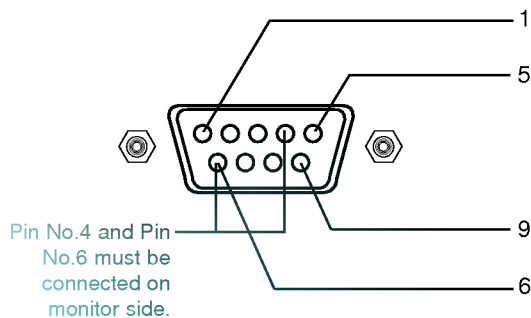
Sleep timer

Picture & Sound

Extern

Type of connector : D-Sub 9-pin male

No.	Pin name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection



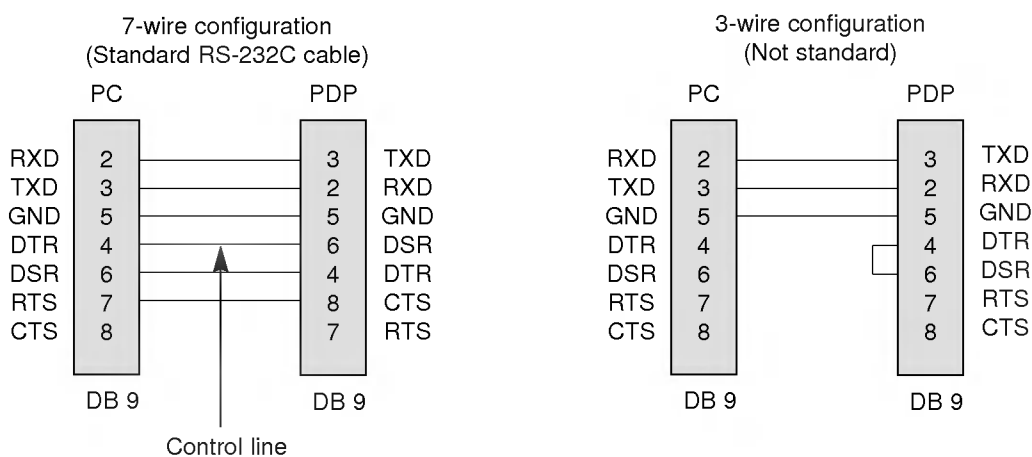
- * Use a null modem cable.

Wire the 7-Wire cable so that each pair of data lines cross between the two devices. These data line pairs are RXD (Receive data) and TXD (Transmit data), DTR (DTE side ready) and DSR (DCE side ready), and RTS (Ready to send) and CTS (Clear to send).

When using the 3-Wire cable connected to RXD, TXD and GND; Pin No. 4 (DTR) and Pin No. 6 (DSR) must be connected to the monitor. (The cable must be disconnected from the Monitor to be able to use the remote control and Monitor front panel controls.)

- * With the RS-232 input connected, the Monitor cannot be controlled by both an external control device and the remote control at the same time. The Monitor can only be controlled by either the remote control or the external control device.

RS-232C configurations



7-Wire Cable Configuration

- The Monitor is available to switch between external adjustment and remote control adjustment using a control line.

Note: If the control line is high, the monitor is controlled by the external control device. If the control line is low, the Monitor is controlled by the Monitor's remote control.

3-Wire Cable Configuration

- When using a 3-Wire cable configuration there is no control line. The external control device must put the Monitor into the "change into remote control adjustment mode" (see page 55). The Monitor will then be able to be controlled by the remote control. If the Monitor is turned back on, it will revert back to external device control.

Extern

● SET ID

- Use this function to specify a monitor ID number.

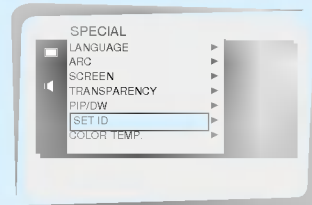


Press the **MENU** button and then press the **▲ / ▼** button to select the **SPECIAL** menu.
Press the **▶** button.



1

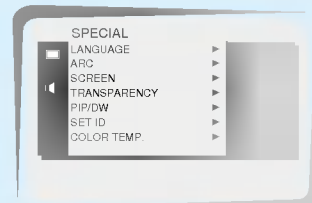
Use the **▲ / ▼** buttons to select **SET ID** and then press the **▶** button.



2

Use the **◀ / ▶** button to adjust **SET ID** to choose the desired monitor ID number.

- The adjustment range of **SET ID** is 1 ~ 99.



- The RS-232C input jack is used to control the Monitor's functions using an external control device.

Communication Parameters

- Baud rate : 2400 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code

* If the command interval is interrupted for more than 4 seconds, only Command 1 will be recognized. Be careful when using the power command.

Command Reference List

NAME	COMMAND	DATA RANGE
01. Power	p	0 ~ 1
02. Input Select	i	0 ~ 3
03. Aspect Ratio	r	0 ~ 2
04. Screen mute	m	0 ~ 1
05. Volume mute	w	0 ~ 1
06. Volume control	v	0 ~ 64
07. Contrast	k	0 ~ 64
08. Brightness	b	0 ~ 64
09. Color	c	0 ~ 64
10. Tint	t	0 ~ 64
11. Sharpness	s	0 ~ 64
12. OSD select	d	0 ~ 1
13. Abnormal state	a	0 ~ 1
14. PIP/DW	z	0 ~ 3
15. PIP input select	e	0 ~ 1
16. PIP sound select	u	0 ~ 1
17. PIP position	x	0 ~ 3
18. remote control adjustment mode	j	0 ~ 1

Transmission / Receiving Protocol

Transmission

[Command][][Set ID][][Data][Cr]

- * [Command] : To control PDP set.
- * [Set ID] : You can adjust the set ID to choose desired monitor ID number in special menu. See page 50. Adjustment range is 1 ~ 99.
When selecting Set ID '0', every connected PDP set is controlled.
- * [DATA] : To transmit command data.
Transmit 'FF' data to read status of command.
- * [Cr] : Carriage Return
ASCII code '0x0D'
- * [] : ASCII code 'space (0x20)'

OK Acknowledgement

[Set ID][:][OK][x][Data][x]

- * The Monitor transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

Error Acknowledgement

[Set ID][:][NG][x]

- * The Monitor transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

Extern

01. Power (Command:p)

- ▶ To control Power On/Off of the Monitor.

Transmission

```
[p][ ][Set ID][ ][Data][Cr]
```

Data 0 : Power Off
1 : Power On

* Example : Power on for set ID No.3.
Type : P 3 1 '0x0D'

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : Power Off
1 : Power On

* In example : Monitor Acknowledges power on for set ID No.3.

- ▶ To show Power On/Off.

Transmission

```
[p][ ][Set ID][ ][FF][Cr]
```

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : Power Off
1 : Power On (RGB)
2 : Power On (Video)
3 : Power On (Component)
4 : Power On (S-Video)

* In like manner, if other functions transmit 'FF' data based on this format, Acknowledgement data feed back presents status about each function.

02. Input select (Command:i)

- ▶ To select input source for the Monitor.
You can also select an input source using the INPUT SELECT button on the Monitor's remote control.

Transmission

```
[i][ ][Set ID][ ][Data][Cr]
```

Data 0 : RGB
1 : AV (Video)
2 : Component
3 : S-AV (S-Video)

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : RGB
1 : AV (Video)
2 : Component
3 : S-AV (S-Video)

03. Aspect Ratio (Command:r)

- ▶ To adjust the screen format.
You can also adjust the screen format using the ARC (Aspect Ratio Control) button on remote control or in the Special menu.

Transmission

```
[r][ ][Set ID][ ][Data][Cr]
```

Data 0 : Wide screen (16:9)
1 : Normal screen (4:3)
2 : Full screen (Zoom)

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : Wide screen (16:9)
1 : Normal screen (4:3)
2 : Full screen (Zoom)

* Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.

* Using the DTV 720p/1080i input, you can only select 16:9 screen aspect ratio.

04. Screen mute (Command:m)

- ▶ To select screen mute on/off.

Transmission

```
[m][ ][Set ID][ ][Data][Cr]
```

Data 0 : Screen mute on (Picture off)
1 : Screen mute off (Picture on)

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : Screen mute on (Picture off)
1 : Screen mute off (Picture on)

05. Volume mute (Command:w)

- ▶ To control volume mute on/off.
You can also adjust mute using the MUTE button on remote control.

Transmission

```
[w][ ][Set ID][ ][Data][Cr]
```

Data 0 : Volume mute on (Volume off)
1 : Volume mute off (Volume on)

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : Volume mute on (Volume off)
1 : Volume mute off (Volume on)

06. Volume control (Command:v)

- ▶ To adjust volume.
You can also adjust volume with the volume buttons on remote control.

Transmission

```
[v][ ][Set ID][ ][Data][Cr]
```

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping' as shown below.

Acknowledgement

```
[Set ID][:][OK][x][Data][x]
```

Data Min : 0 ~ Max : 64

07. Contrast (Command:k)

- ▶ To adjust screen contrast.
You can also adjust contrast in the Picture menu.

Transmission

```
[k][ ][Set ID][ ][Data][Cr]
```

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping' as shown below.

Acknowledgement

```
[Set ID][:][OK][x][Data][x]
```

Data Min : 0 ~ Max : 64

08. Brightness (Command:b)

- ▶ To adjust screen brightness.
You can also adjust brightness in the Picture menu.

Transmission

```
[b][ ][Set ID][ ][Data][Cr]
```

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping' as shown below.

Acknowledgement

```
[Set ID][:][OK][x][Data][x]
```

Data Min : 0 ~ Max : 64

09. Color (Command:c)

- ▶ To adjust the screen color.
You can also adjust color in the Picture menu.

Transmission

```
[c][ ][Set ID][ ][Data][Cr]
```

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping' as shown below.

Acknowledgement

```
[Set ID][:][OK][x][Data][x]
```

Data Min : 0 ~ Max : 64

10. Tint (Command:t)

- ▶ To adjust the screen tint.
You can also adjust tint in the Picture menu

Transmission

```
[t][ ][Set ID][ ][Data][Cr]
```

Data Red : 0 ~ Green : 64
* Refer to 'Real data mapping' as shown below.

Acknowledgement

```
[Set ID][:][OK][x][Data][x]
```

Data Red : 0 ~ Green : 64

11. Sharpness (Command:s)

- ▶ To adjust the screen sharpness.
You can also adjust sharpness in the Picture menu

Transmission

```
[s][ ][Set ID][ ][Data][Cr]
```

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping' as shown below.

Acknowledgement

```
[Set ID][:][OK][x][Data][x]
```

Data Min : 0 ~ Max : 64

* Real data mapping

```
0 : Step 0
...
A : Step 10
...
F : Step 15
10 : Step 16
...
64 : Step 100
```

Extern

12. OSD select (Command:d)

- ▶ To select OSD (On Screen Display) on/off.

Transmission

```
[d][ ][Set ID][ ][Data][Cr]
```

Data 0 : OSD off
1 : OSD on

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : OSD off
1 : OSD on

- * The remote control and Monitor front panel controls (except main power) are not operable when the Monitor is set up to be controlled by the PC computer.

13. Abnormal state (Command:a)

- ▶ To recognize an abnormal state.

Transmission

```
[a][ ][Set ID][ ][FF][Cr]
```

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : OK
1 : Fan alarm
2 : 5V down
3 : AC down

- * This function is "read only".

14. PIP / DW (Command:z)

- ▶ To control PIP (Picture-in-Picture) or twin picture (DW). You can also control PIP/DW using the pip/twin picture button on remote control or in the Special menu.

Transmission

```
[z][ ][Set ID][ ][Data][Cr]
```

Data 0 : PIP/ DW off
1 : PIP (small)
2 : PIP (large)
3 : Twin picture (DW)

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : PIP/ DW off
1 : PIP (small)
2 : PIP (large)
3 : Twin picture (DW)

- * PIP only works in the following resolutions:
RGB PC 640x480 (VGA) / 800x600 (SVGA) / 1024x768 (XGA) (only in vertical frequency 60Hz),
Component 480p / 720p / 1080i.
- * Twin picture works only in the following resolutions:
RGB PC 640x480 (VGA) (only in vertical frequency 60Hz),
RGB DTV, Component 480p/720p/1080i.

15. PIP input select (Command:e)

- ▶ To select input source for sub picture in PIP mode. You can also select source using PIP input button on the remote control or in the Special menu.

Transmission

```
[e][ ][Set ID][ ][Data][Cr]
```

Data 0 : AV (VIDEO)
1 : COMPONENT
2 : S-AV (S-VIDEO)

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : AV (VIDEO)
1 : COMPONENT
2 : S-AV (S-VIDEO)

- * COMPONENT source only works with 480i input signal.

16. PIP sound select (Command:u)

- ▶ To select main or sub (inset) sound for PIP/Twin picture. You can also select sound select in PIP/DW on the special menu.

Transmission

```
[u][ ][Set ID][ ][Data][Cr]
```

Data 0 : Main picture sound
1 : Sub picture sound

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : Main picture sound
1 : Sub picture sound

- * COMPONENT source only works in 480i input signal.

18. Change into Remote control adjustment mode (Command:j)

- ▶ To control the Monitor with the remote control while the cable is still connected.

Transmission

```
[j][ ][Set ID][ ][Data][Cr]
```

Data 1 : Remote control adjustment mode

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : PC adjustment mode
1 : Remote control adjustment mode

- * If external equipment commands the Monitor to "change into remote control adjustment mode", the Monitor can only be adjusted by the remote control. To revert the Monitor control to external control device adjustment, turn the Monitor off and then on again.

17. PIP position (Command:x)

- ▶ To select sub picture position for PIP. You can also adjust the sub picture position using the position button on the remote control or in PIP/DW on the Special menu.

Transmission

```
[x][ ][Set ID][ ][Data][Cr]
```

Data 0 : Right down on screen
1 : Left down on screen
2 : Left up on screen
3 : Right up on screen

Acknowledgement

```
[Set ID]::[OK][x][Data][x]
```

Data 0 : Right down on screen
1 : Left down on screen
2 : Left up on screen
3 : Right up on screen





First step
Monitor overview
Connections
Basic operation
Sleep timer
Picture & Sound



Troubleshooting check list

No picture & No sound

- Check whether the Monitor is turned on.
- Power cord inserted into wall outlet?
- Plug another product's power cord into the wall outlet where the Monitor's power cord was plugged in.

Picture OK & No sound

- Press the **VOLUME** (▶) button.
- Sound muted? Press **MUTE** button.

The remote control doesn't work

- Check to see if there is any object between the Plasma Display and the remote control causing obstruction.
- Check to see if the batteries are installed with the correct polarities. (Refer to p.31)
- Install new batteries. (Refer to p.31)

No or Poor color or Poor picture

- Select **COLOR** in the **PICTURE** menu and press the **VOLUME** (▶) button. (Refer to p.37)
- Increase the distance between the Monitor and the VCR.
- Activate any function to restore the brightness of the picture. (If still picture is on the screen for more than 5 minutes, the screen gets dark.)

No output from one of the speakers

- Adjust **BALANCE** in the **SOUND** menu. (Refer to p.40)

Strange sound from the Monitor

- Typical sound due to normal Monitor operation, Monitor is not faulty.



Pr

First step

Monitor overview

Connections

Basic operation

Sleep timer

Picture & Sound

Special features

Width (inches / mm)	57.3 / 1455
Height (inches / mm)	34.8 / 883
Depth (inches / mm)	3.9 / 99
Weight (pounds / kg)	154.3 / 70
Power requirement	AC110-240V ~ 50/60Hz
Resolution	1280 x 720 (Dot)
Color	16,770,000 (256 steps of each R, G and B)
Temperature (In operation)	0 ~ 40 °C
Humidity (In operation)	under 80%

- The specifications shown above may be changed without notice for quality improvement.