



PLASMA MONITOR

MODELS:50PM4M

OWNER'S MANUAL



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

P/NO: MFL36274107 (0708-REV00)
Printed in Korea

WARNING / CAUTION



WARNING / CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK). NO
USER SERVICEABLE PARTS INSIDE. REFER TO
QUALIFIED SERVICE PERSONNEL.



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



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

WARNING/CAUTION

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

NOTE TO CABLE/TV INSTALLER

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

WARNING / CAUTION

To prevent fire or shock hazards, do not expose this product to rain or moisture.

FCC NOTICE

Class B digital device

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

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

Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

CAUTION

Do not attempt to modify this product in any way without written authorization from LG Electronics. Unauthorized modification could void the user’s authority to operate this product

Safety Instructions



WARNING

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

- This may cause a fire.

Do not use the set 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 set and could give an electric shock.

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.

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

- 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 set.

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

Do not use water while cleaning the set.

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

In case of smoke or strange smell from the set, 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.

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

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

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

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

WARNING/CAUTION

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


* 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

Never touch the power plug with a wet hand.

- This may cause an electric shock.

Disconnect from the mains and remove all connections before moving.

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

- Ventilation required.

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

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

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.

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.

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.

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

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

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

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

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

- Accumulated dust can cause mechanical failure.

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

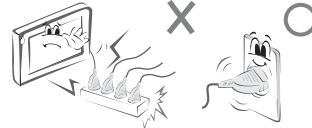
- Accumulated dust may cause a fire or an electric shock from deterioration or electric leakage.

Safety Instructions continued

CAUTION concerning the Power Cord :

- Most appliances recommend they be connected to a dedicated circuit; that is, a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits.

- This may cause a fire or an electric shock.



- Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in electric shock or fire. Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer.
- Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance.
- Use a dedicated power cord. Do not modify or extend the power cord.
- Do not install, remove, or reinstall the unit by yourself (customer).
For electrical work, contact the dealer, seller, a qualified electrician, or an Authorized Service Center. For installation, always contact the dealer or an Authorized Service Center.
- Do not use if the power cord or plug is damaged, or socket is loose. Use a dedicated outlet for this appliance.
- Do not over bend the power cord and do not place anything on the power cord. Do not install the monitor near any sharp edge to avoid wire damage.

Outdoor Use Marking :

- WARNING - To Reduce The Risk Of Fire Or Electric Shock, Do Not Expose This Appliance To Rain Or Moisture.

Wet Location Marking :

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

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After reading this manual, keep it handy for future reference.

Introduction

What is a Plasma Display Panel?

If voltage is applied to gas within glass panels, ultraviolet rays are produced and fused with a fluorescent substance. At that instant, light is emitted. A Plasma Display is a next generation flat Display using this phenomenon.

160° - Wide angle range of vision

Your flat panel plasma screen offers an exceptionally broad viewing angle -- over 160 degrees. This means that the display is clear and visible to viewers anywhere in the room.

Wide Screen

The screen of the Plasma Display is 42 or 50" so wide that your viewing experience is as if you are in a theater.

Versatile

The light weight and thin size makes it easy to install your plasma display in a variety of locations where conventional TVs would not fit.

The Plasma Monitor Manufacturing Process: Why minute colored dots may be present on the Plasma Monitor screen

The Plasma Display Panel which is the display device of this product is composed of 0.9 to 2.2 million cells. A few cell defects will normally occur in the Plasma Monitor manufacturing process. Several minute colored dots visible on the screen should be acceptable. This also occurs in other Plasma Monitor manufacturers' products and the tiny dots appearing does not mean that this Plasma Monitor is defective. Thus a few cell defects are not sufficient cause for the Plasma Monitor to be exchanged or returned. Our production technology is designed to minimize cell defects during the manufacture and operation of this product.

Cooling Fan Noise

In the same way that a fan is used in a PC computer to keep the CPU (Central Processing Unit) cool, the Plasma Monitor is equipped with cooling fans to cool the Monitor and improve its reliability. Therefore, a certain level of noise could occur while the fans are operating and cooling the Plasma Monitor.

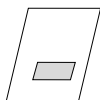
The fan noise doesn't have any negative effect on the Plasma Monitor's efficiency or reliability. The noise from these fans is normal during the operation of this product. We hope you understand that a certain level of noise from the cooling fans is acceptable and is not sufficient cause for the Plasma Monitor to be exchanged or returned.

WARNING

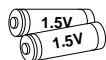
TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

Accessories

Ensure that the following accessories are included with your plasma display. If an accessory is missing, please contact the dealer where you purchased the product.



Owner's Manual



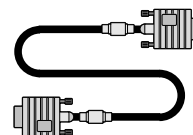
Batteries



Remote Control



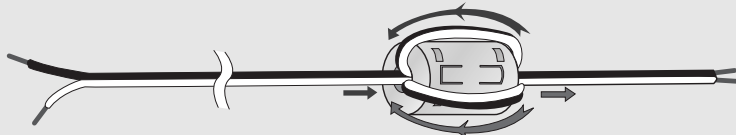
Power Cord



D-sub 15 pin Cable

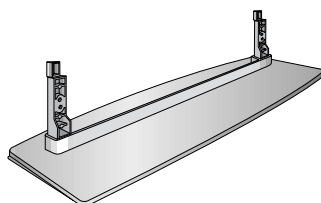
Use the ferrite core with the speaker cables

The ferrite core given as a bundled accessory can be used to reduce the electromagnetic waves in the connection to the speakers. Wind the speaker cable on the ferrite core twice, and then plug the cables into the monitor and the speakers as shown in the following picture:

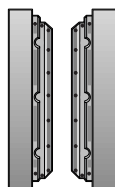


Option Extras

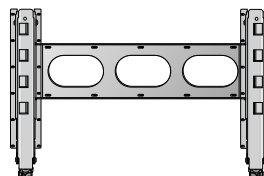
- Optional extras can be changed or modified for quality improvement without any notification new optional extras can be added.
- Contract your dealer for buying these items.



Desktop stand



speaker



Tilt wall mounting bracket



Video cables

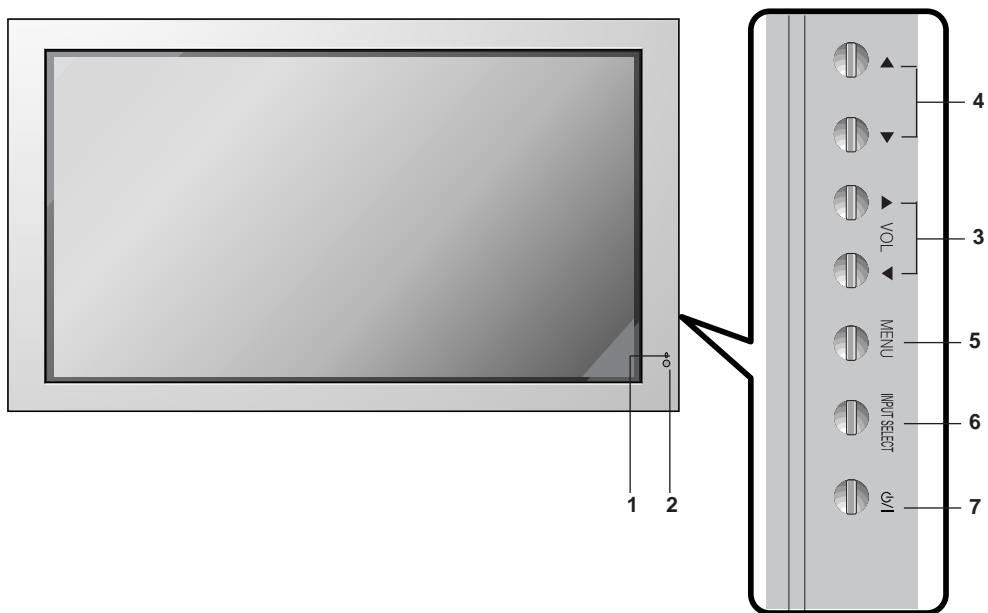


Audio cables

Controls

- Here shown may be somewhat different from your set.

Front Panel Controls



1. Power Standby Indicator

Illuminates red in standby mode, Illuminates green when the Set is turned on.

2. Remote Control Sensor

3. VOLUME (◀, ▶) Buttons

4. ▼, ▲ Buttons

5. MENU Button

6. INPUT SELECT Button

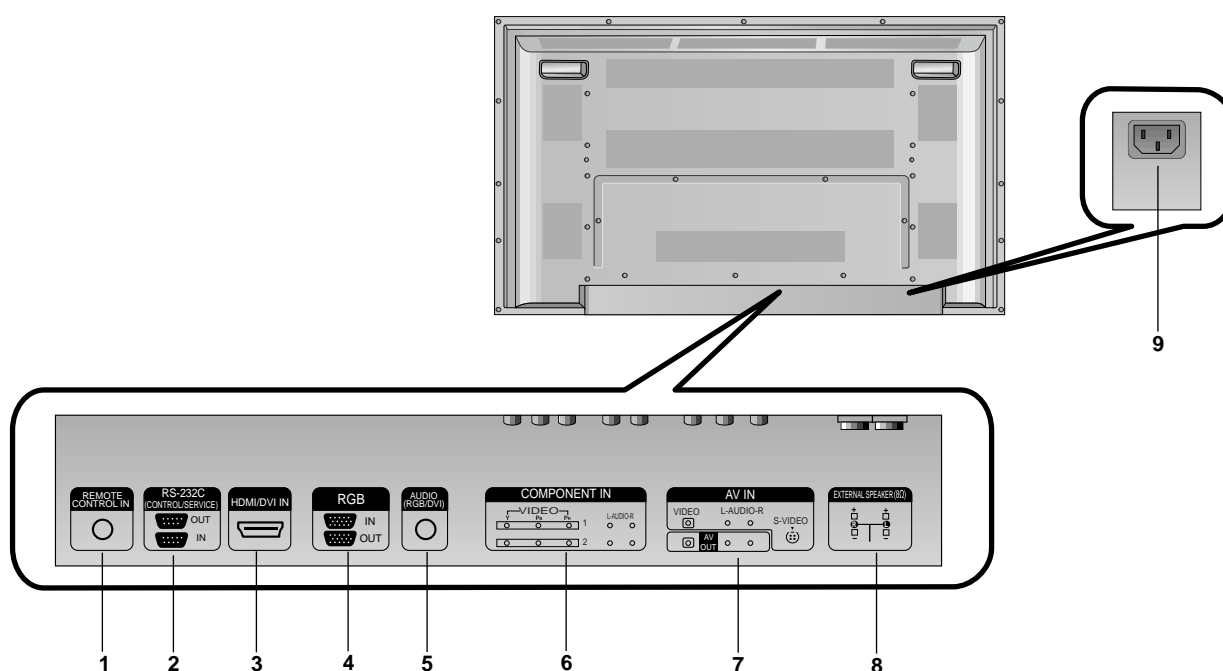
7. Main Power Button

Switches the set on from standby or off to standby.

Connection Options

- Here shown may be somewhat different from your set.

Back Connection Panel



1. REMOTE CONTROL IN

2. RS-232C INPUT(CONTROL/SERVICE) PORT

Connect to the RS-232C port on a PC.

3. HDMI/DVI IN

Connect a HDMI signal to this jack. Or connect a DVI(Video) signal.

4. RGB INPUT

Connect the set output connector from a PC to the appropriate input port.

RGB OUTPUT

You can watch the RGB signal on another set, connect RGB OUTPUT to another set's PC input port.

5. AUDIO (RGB/DVI)

Connect the monitor output from a PC to the appropriate input port.

6. COMPONENT INPUT 1-2

Connect a component video/audio device to these jacks.

7. AV IN

S-VIDEO/AUDIO IN SOCKETS

Connect the S-VIDEO out socket of a VCR to the **S-VIDEO** socket.

Connect the audio out sockets of the VCR to the audio sockets as in **AV**.

8. EXTERNAL SPEAKER (8 ohm output)

Connect to optional external speaker(s).

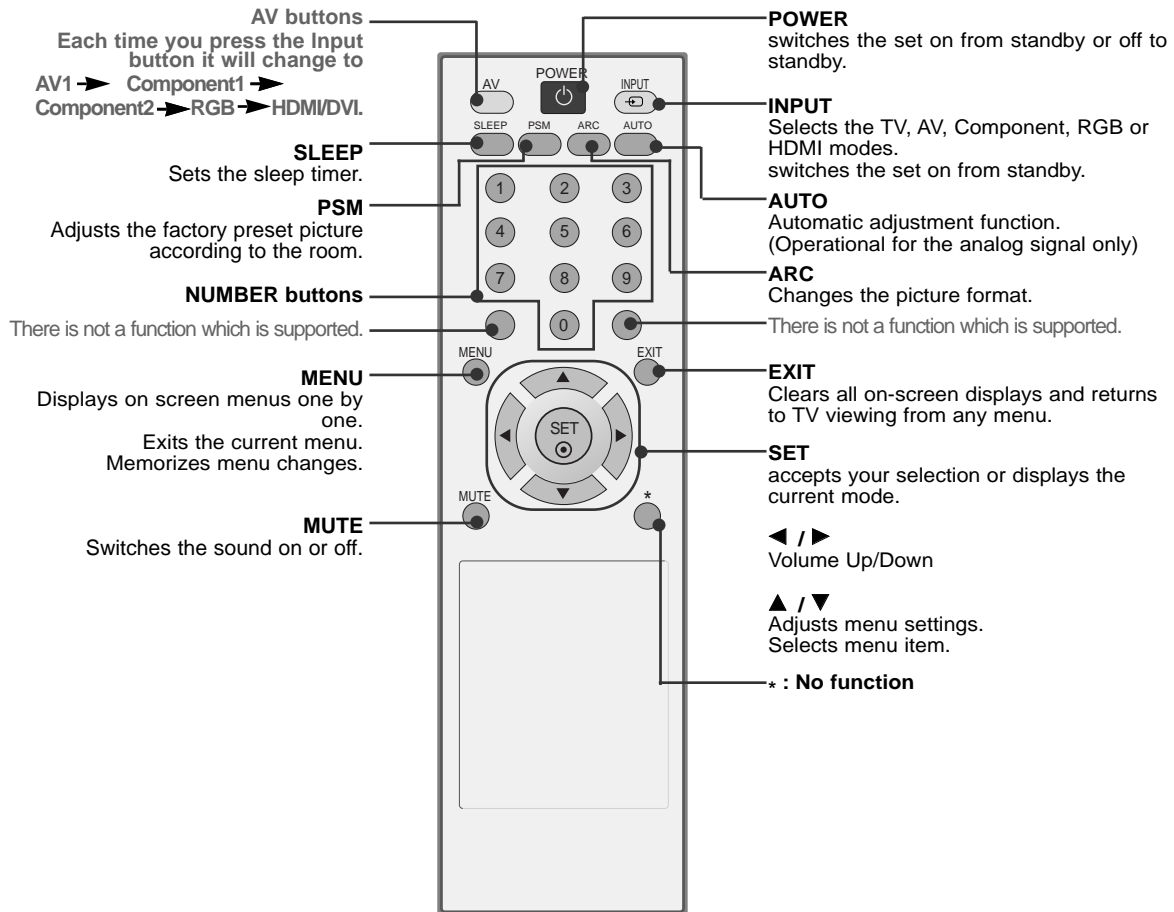
* For further information, refer to 'Speaker & Speaker Stand' manual.

9. POWER CORD SOCKET

This set operates on an AC power. The voltage is indicated on the Specifications page. Never attempt to operate the set on DC power.

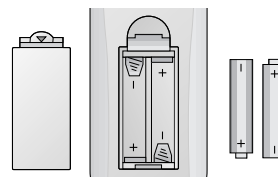
Remote Control Key Functions

- When using the remote control, aim it at the remote control sensor on the monitor.
- Under certain conditions such as if the remote IR signal is interrupted, the remote control may not function. Press the key again as necessary.



Installing Batteries

- Open the battery compartment cover on the back side and install the batteries matching correct polarity (+ with +, - with -).
- Install two 1.5V AAA batteries. Don't mix old or used batteries with new ones. Replace cover.



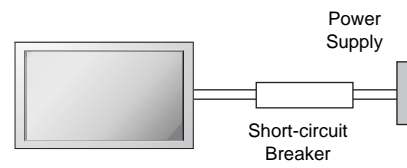
Installation

Installation Instructions

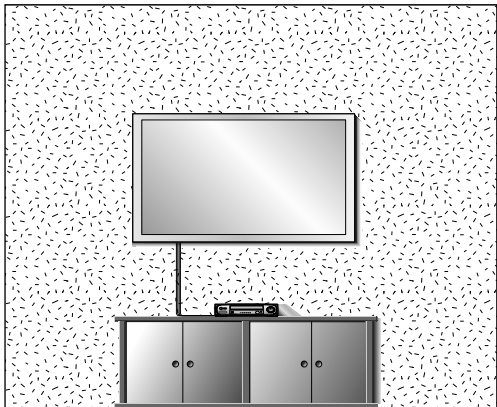
- Install this monitor only in a location where adequate ventilation is available.

GROUNDING

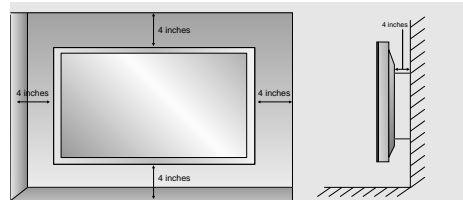
Ensure that you connect the grounding / earth wire to prevent possible electric shock. If grounding methods are not possible, have a qualified electrician install a separate circuit breaker. Do not try to ground the unit by connecting it to telephone wires, lightening rods, or gas pipes.



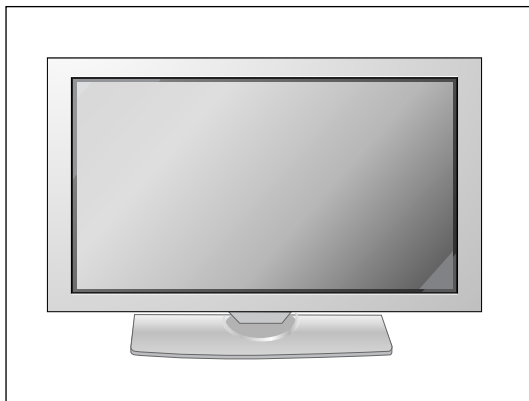
Wall Mount Installation



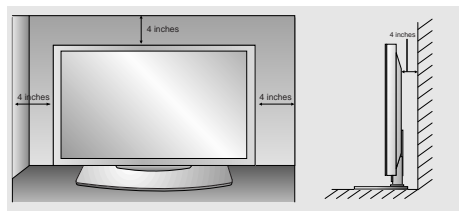
For proper ventilation, allow a clearance of 4" on each side and 4" from the wall. Detailed installation instructions are available from your dealer, see the optional Wall Mounting Bracket Installation and Setup Guide.



Desktop Pedestal Installation



For proper ventilation, allow a clearance of 4" on each side and the top and 4" from the wall. Detailed installation instructions are included in the optional Desktop Stand Installation and Setup Guide available from your dealer.



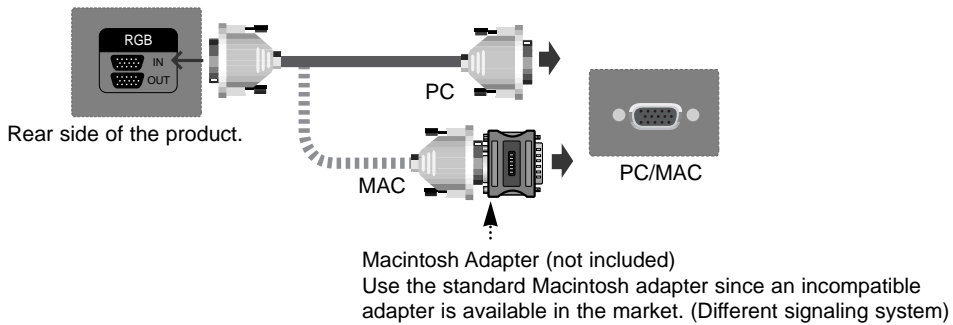
External Equipment Connections

NOTE: Not all cables shown are included with the plasma display.

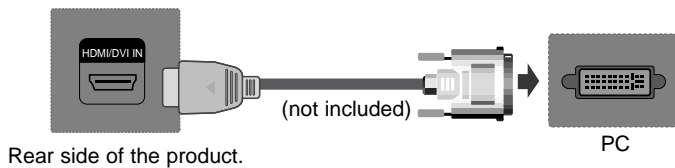
When Connecting to your PC

1. First of all, see if the computer, product and the peripherals are turned off.
Then, connect the signal input cable.

a. When connecting with the D-Sub signal input cable.



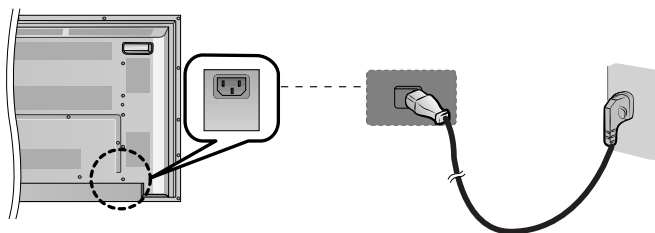
b. When connecting with the HDMI to DVI signal input cable (not included).



2. Connect the Audio cable.



3. Connect the power cord.



4. Turn on power by pressing the power button on the product.
Turn on the PC.

5. Select an input signal.

Press the INPUT button on the remote control to select the input signal.

INPUT → ▲ / ▼ → SET

Or, press the SOURCE button on the back of the product.

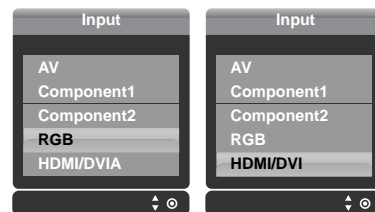
SOURCE → ▲ / ▼ → AUTO/SET

a. When connecting with a D-Sub signal input cable.

- Select RGB : 15-pin D-Sub analog signal.

b. When connecting with a HDMI to DVI signal input cable.

- Select HDMI/DVI : HDMI to DVI Digital signal.



NOTES: • **How to connect to two computers.**

Connect the signal cables (HDMI to DVI and D-Sub) to each computer.

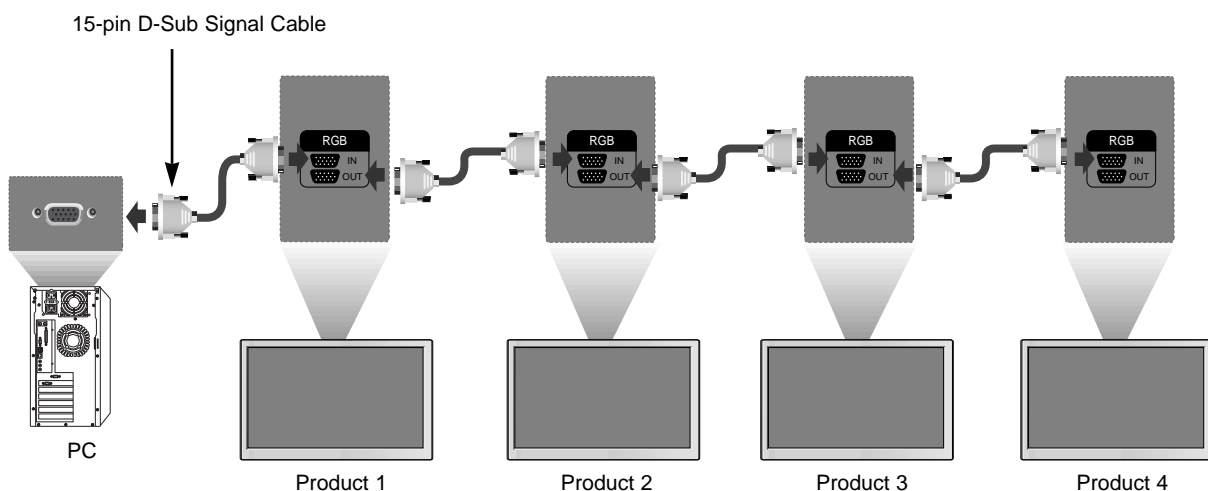
Press the INPUT button on the remote control to select the computer to use.

- Directly connect to a grounded power outlet on the wall or a power bar with a ground wire.

Watching RGB Outputs

Use this function when displaying ANALOG RGB inputs of a PC to the other product.

- To use different products connected to each other Connect one end of the signal input cable(15-pin D-Sub Signal Cable) to the RGB OUT connector of product 1 and connect the other end to the RGB IN connector of other products.



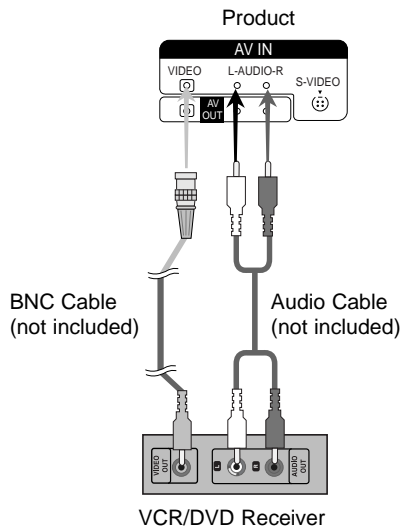
- NOTES:** • When multi-connecting in/out cascade format, cables to be less damaged are recommended.
We recommend that you should use cable distributor.

When watching VCR / DVD

1. Connect the video cable as shown in the below figure and then connect the power cord.

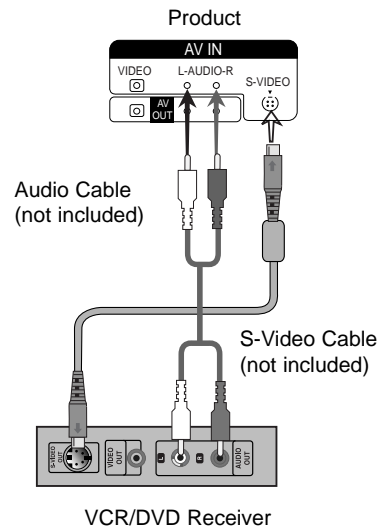
a. When connecting with a BNC cable.

- Connect the input terminal with a proper color match.



b. When connecting with a S-Video cable.

- Connect to the S-Video input terminal to watch high image quality movies.



2. Select an input signal.

Press the INPUT button on the remote control to select the input signal.

INPUT → ▲ / ▼ → SET

Or, press the SOURCE button on the back of the product.

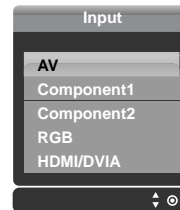
SOURCE → ▲ / ▼ → AUTO/SET

a. When connecting with an BNC cable.

- Select AV.

b. When connecting with an S-Video cable.

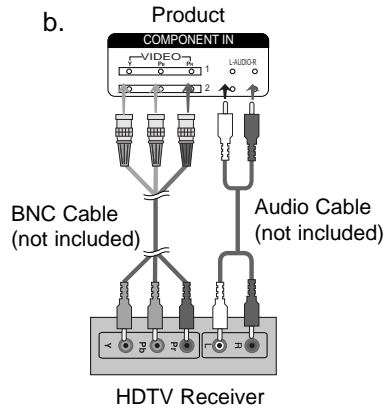
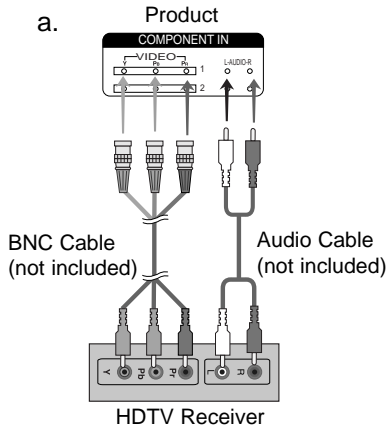
- Select AV.



NOTES: • When the BNC cable is connected simultaneously with S-Video cable, S-Video cable is first.

When watching HDTV/DVD(480p/576p/720p/1080i/480i/576i)

1. Connect the video/audio cable as shown in the below figure and then, connect the power cord.
 - Connect the input terminal with a proper color match.



2. Select an input signal.

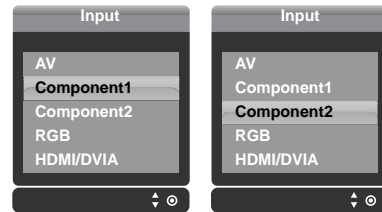
Press the INPUT button on the remote control to select the input signal.

INPUT → ▲ / ▼ → SET

Or, press the SOURCE button on the back of the product.

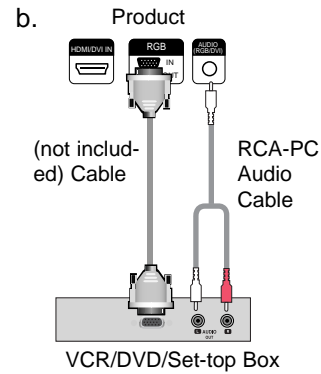
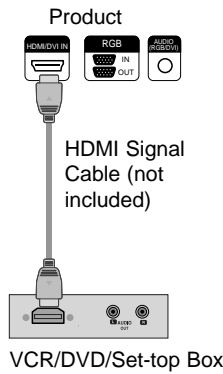
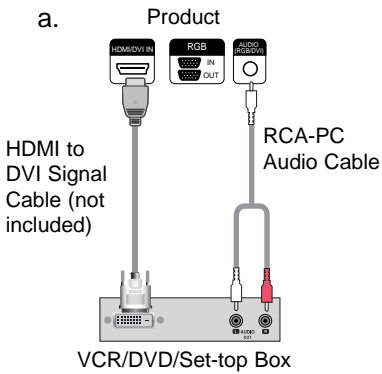
SOURCE → ▲ / ▼ → AUTO/SET

- Select Component 1
- Select Component 2



When watching HDMI/DVI/RGB from the VCR/DVD/Set-top Box (480p/576p/720p/1080i)

1. Connect the video/audio cable as shown in the below figure and then connect the power cord.



2. Select an input signal.

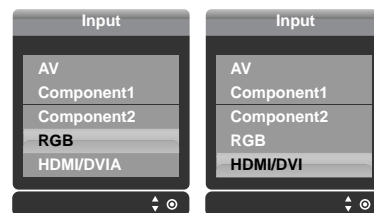
Press the INPUT button on the remote control to select the input signal.

INPUT → ▲ / ▼ → SET

Or, press the SOURCE button on the back of the product.

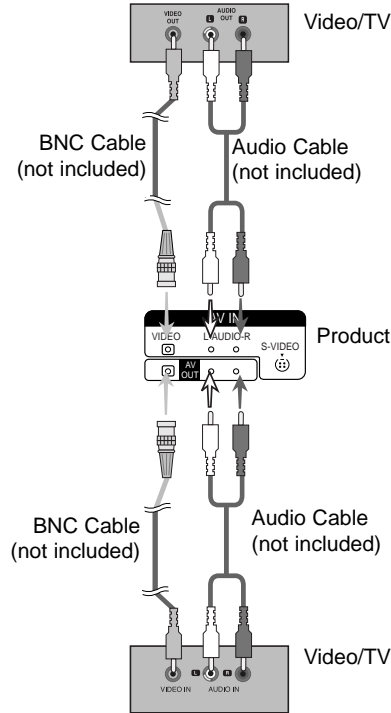
SOURCE → ▲ / ▼ → AUTO/SET

- When connecting with a HDMI to DVI signal input cable. When connecting with a HDMI signal input cable.
 - Select HDMI/DVI
- When connecting with a D-Sub signal input cable.
 - Select RGB



Watching AV Outputs

- When you set the input signal of the main screen as 'AV (CVBS)', you can transmit the signal that you're watching to the AV output terminal.



NOTES: • When multi-connecting in/out cascade format, cables to be less damaged are recommended. We recommend that you should use cable distributor.

PC Mode – Preset Mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
VGA 640 x 350	31.469	70
VGA 720 x 400	31.468	70
VGA 640 x 480	31.469	60
VESA 640 x 480	37.500	75
VESA 640 x 480	43.269	85
VESA 800 x 600	37.879	60
VESA 800 x 600	46.875	75
VESA 800 x 600	53.674	85
MAC 832 x 624	49.725	75
VESA1024 x 768	48.363	60
VESA1024 x 768	60.123	75
VESA1024 x 768	68.68	85
VESA1280 x 720	44.772	60
VESA1280 x 768	47	60
VESA1360 x 768	47.72	60
VESA1366 x 768	47	60
VESA1280 x 1024	63.981	60
VESA 1280 x 1024	79.98	75
VESA 1600 x 1200	75.00	60

RGB : Mode 1 ~ Mode 19
HDMI/DVI : Mode 1 ~ Mode 17


DTV Mode

Signal	Component 1/2	RGB	HDMI
480i	O	X	X
570i	O	X	X
480p	O	O	O
576p	O	O	O
720p	O	O	O
1080i	O	O	O

Operation

Turning on the Monitor

Turning on the Monitor just after installation

1. Connect power cord correctly. At this moment, the Monitor is switched to standby mode.
2. Press the **INPUT** or  button on the Monitor or press the **POWER, INPUT** button on the remote control and then the Monitor will switch on.

Menu Language Selection

- The menus can be shown on the screen in the selected language. First select your language.

1. Press the **MENU** button and then use **▲ / ▼** button to select the **SPECIAL** menu.
 2. Press the **▶** button and then use **▲ / ▼** button to select **Language**.
 3. Press the **▶** button and then use **▲ / ▼** button to select your desired language.
From this point on, the on-screen menus will be shown in the language of your choice.
 4. Press the **EXIT** button to save.
- Press the **MENU** button to return to the previous menu.

Picture Menu Options

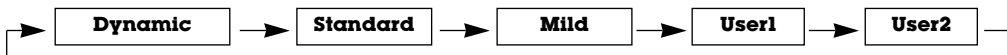
- Readjust Picture menu settings for each following input source as preferred.

PSM (Picture Status Memory)

- This function adjusts the set to the best picture appearance.
- When adjusting picture options (contrast, brightness, colour, sharpness and tint (NTSC input only)) manually, PSM is automatically changed to **User**.

1. Press the **PSM** button

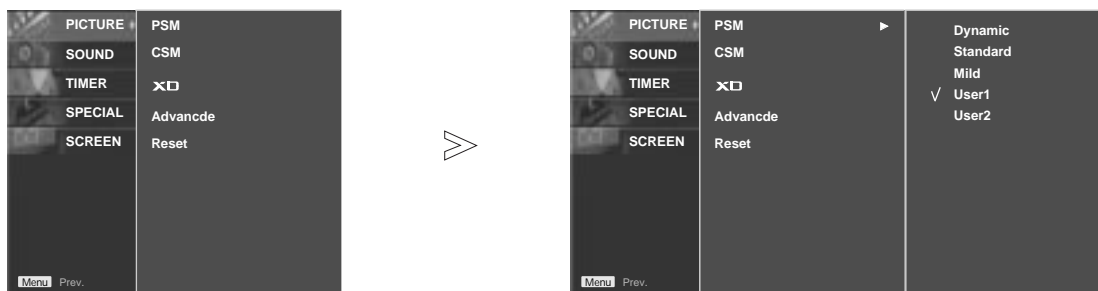
- Each press of the **PSM** button changes the screen display as shown below.



- You can also select **Dynamic, Standard, Mild** or **User1/2** in the PICTURE menu.
- Picture options **Dynamic, Standard** and **Mild** are preset and programmed for good picture quality at the factory and cannot be changed.
- When the Intelligent eye function is on, the most suitable picture is automatically adjusted according to the surrounding conditions.

Manual Picture Control (Off option)

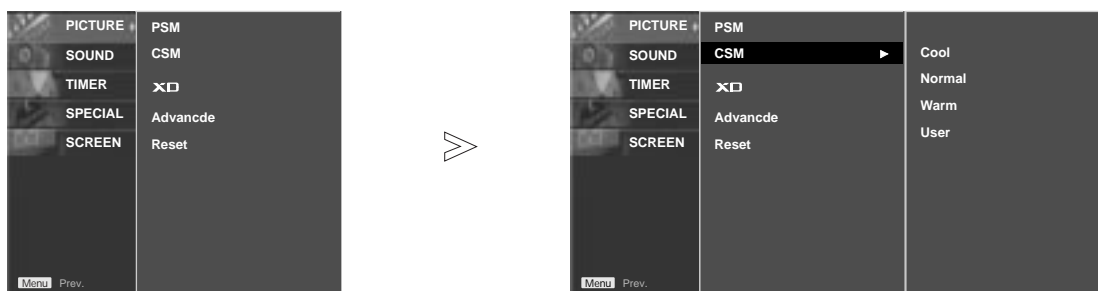
- You can adjust picture contrast, brightness, color, sharpness, and tint to the levels you prefer.



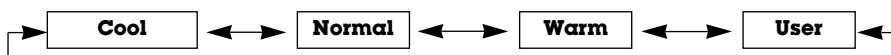
1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **PSM**.
2. Press the **▶** button and then use **▲ / ▼** button to select **User1**.
2. Press the **▶** button and then use **▲ / ▼** button to select the desired picture option (**Contrast, Brightness, Color, Sharpness** or **Tint**).
3. Press the **▶** button and then use **◀ / ▶** button to make appropriate adjustments.
4. Press the **EXIT** button to save the new settings.

CSM (Colour Status Memory)

- To initialize values (reset to default settings), select the **Normal** option.



1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
 2. Press the **▶** button and then use **▲ / ▼** button to select **CSM**.
 3. Press the **▶** button and then use **▲ / ▼** button to select the desired colour temperature.
 4. Press the **EXIT** button to return to normal TV viewing.
- Each press of **▲ / ▼** button changes the screen display as shown below.

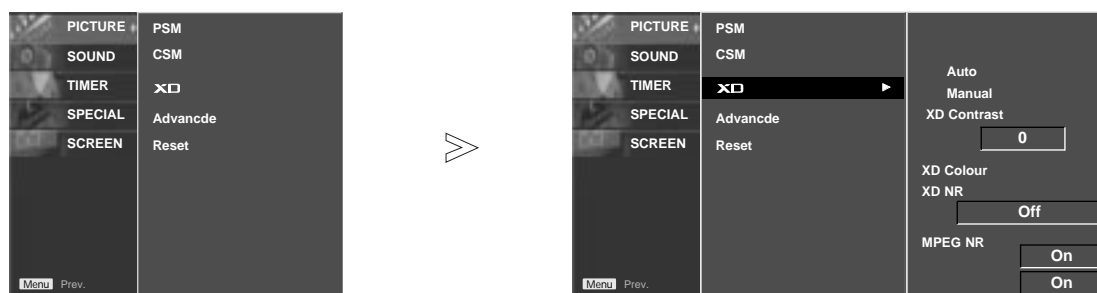


Manual Color Temperature Control (**ACC** set to **Off** option)

- You can adjust red, green, or blue to any color temperature you prefer.
- 1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
- 2. Press the **▶** button and then use **▲ / ▼** button to select **CSM**.
- 3. Press the **▶** button and then use **▲ / ▼** button to select **User**.
- 4. Press the **▶** button and then use **▲ / ▼** button to select **Red, Green** or **Blue**.
- 5. Use the **◀ / ▶** button to make appropriate adjustments.
 - The adjustment range of **Red, Green** and **Blue** is -10 ~ +10.
- 6. Press the **EXIT** button to save the new settings.

XD

- XD is LG electronic's unique picture improving technology to display a real HD source through an advanced digital signal processing algorithm.
- It's not available to use this function in PC[RGB/HDMI] mode.



1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **XD**.
3. Press the **▶** button and then use **▲ / ▼** button to select **Auto** or **Manual**.
4. Press the **EXIT** button to return to normal TV viewing.

* Selecting the Manual

This menu is activated after selecting the **User1** or **User2** of **Picture Mode**.

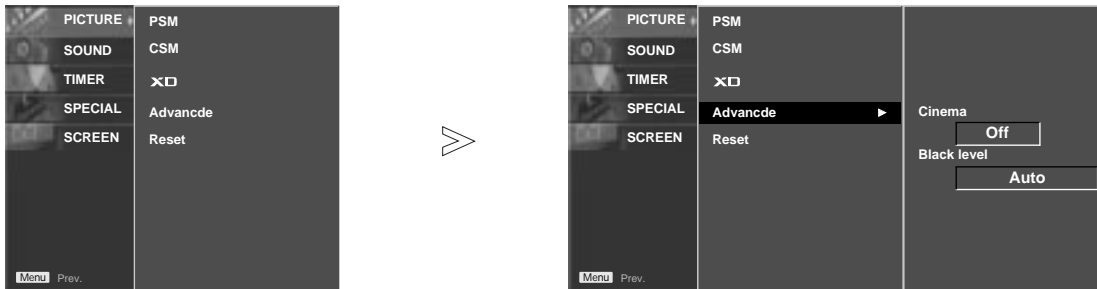
1. Press the **▶** button and then **▲ / ▼** button to select **XD Contrast**, **XD Colour**, **XD NR** or **MPEG NR**.
2. Press the **▶** button and then **▲ / ▼** button to select **On** or **Off**.
3. Press the **EXIT** button to return to normal TV viewing.

- **XD Contrast** : Optimizing the contrast automatically according to the brightness of the reflection.
- **XD Colour** : Adjusting the colors of the reflection automatically to reproduce as closely as possible to the natural colors.
- **XD NR** : Removing the noise up to the point where it does not damage the original picture.
- **MPEG NR** : To reduce the picture noise which may appear on the screen during watching the TV.

Picture Menu Options

Advanced - Cinema

- Set up the TV for the best picture appearance for viewing movies.
- This feature operates only in TV, AV, S-Video and Component 480i/576i, DTV mode.



1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Advanced**.
3. Press the **▶** button and then use **▲ / ▼** button to select **Cinema**.
4. Press the **▲ / ▼** button to select **On** or **Off**.
5. Press the **EXIT** button to return to normal TV viewing.

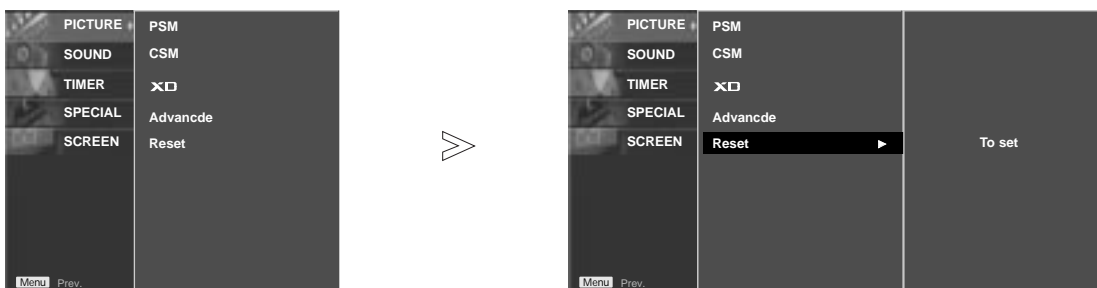
Advanced - Black level

- When you watch the movie, this function adjusts the set to the best picture appearance. Adjusting the contrast and the brightness of the screen using the black level of the screen.
- This function works in the following mode: AV (NTSC-M), S-Video (NTSC-M) or HDMI.

1. Press the **MENU** button and then use **▲ / ▼** button to select the **PICTURE** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Advanced**.
3. Press the **▶** button and then use **▲ / ▼** button to select **Black level**.
4. Press the **▲ / ▼** button to select **Low** or **High**.
 - **Low** : The reflection of the screen gets darker.
 - **High** : The reflection of the screen gets brighter.
5. Press the **EXIT** button to return to normal TV viewing.

Reset

This function operates in current mode.
To initialize the adjusted value



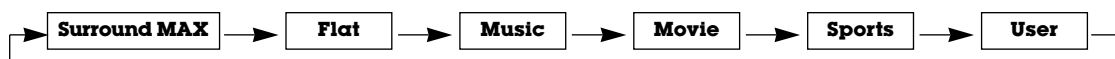
1. Press the **MENU** button and then **▲ / ▼** button to select the **PICTURE** menu.
2. Press the **▶** button and then **▲ / ▼** button to select **Reset**.
3. Press the **▶** button.


Sound Menu Options

SSM

- This function lets you enjoy the best sound without any special adjustment because the set automatically selects the appropriate sound option based on the program content.
- When adjusting sound options (treble and bass) manually, SSM is automatically changed to **User**.

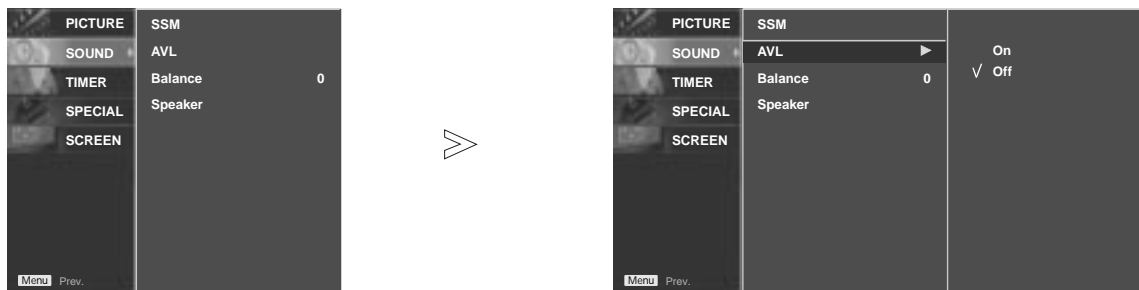
1. Press the **SSM** button.
2. Press the **SSM** button to select your desired sound.



- You can also select **Surround MAX**, **Flat**, **Music**, **Movie**, **Sports** or **User** in the SOUND menu.
 - The sound **Surround MAX**, **Flat**, **Music**, **Movie** and **Sports** are programmed for good sound reproduction at the factory and cannot be changed.
-  is a trademark of SRS Labs, Inc.
 - TruSurround XT technology is incorporated under license from SRS Labs, Inc.

AVL (Auto Volume Leveler)

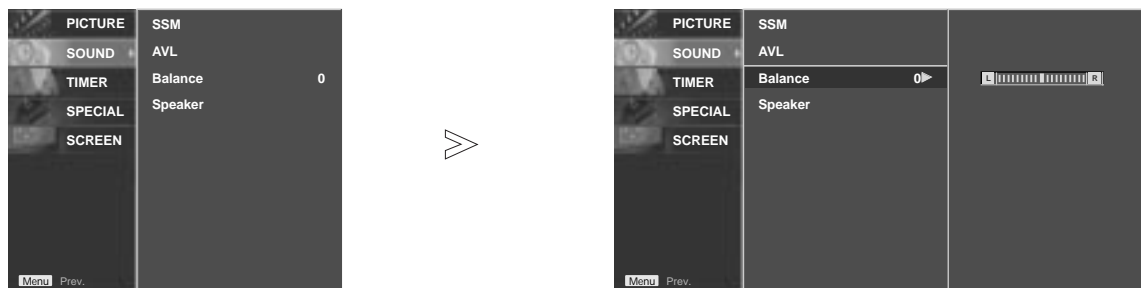
- This feature maintains an equal volume level; even if you change channels.



1. Press the **MENU** button and then use **▲ / ▼** button to select the **SOUND** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **AVL**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
4. Press the **EXIT** button to save the new settings.

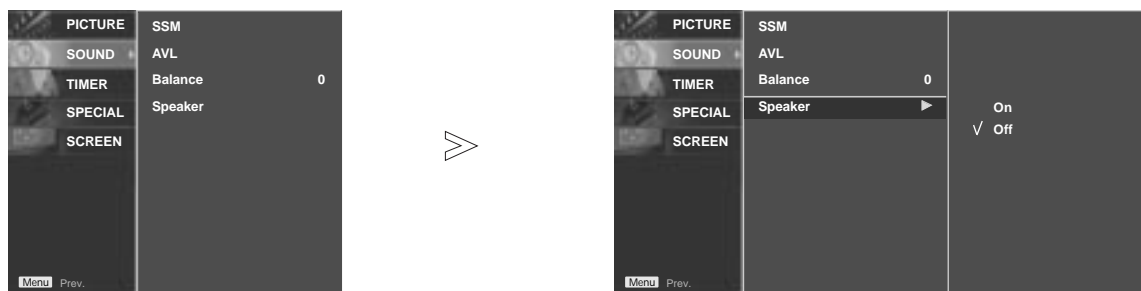
Sound Menu Options

Balanec



1. Press the **MENU** button and then use **▲ / ▼** button to select the **SOUND** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Balance**.
3. Press the **▶** button and then use **◀ / ▶** button to make appropriate adjustments.
4. Press the **EXIT** button to save the new settings.

Speacker

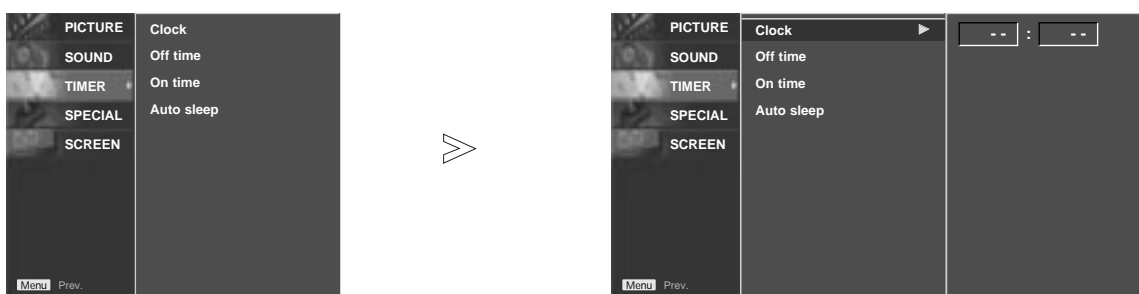


1. Press the **MENU** button and then use **▲ / ▼** button to select the **SOUND** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Speaker**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
4. Press the **EXIT** button to save the new settings.

Timer Menu Options

Clock Setup

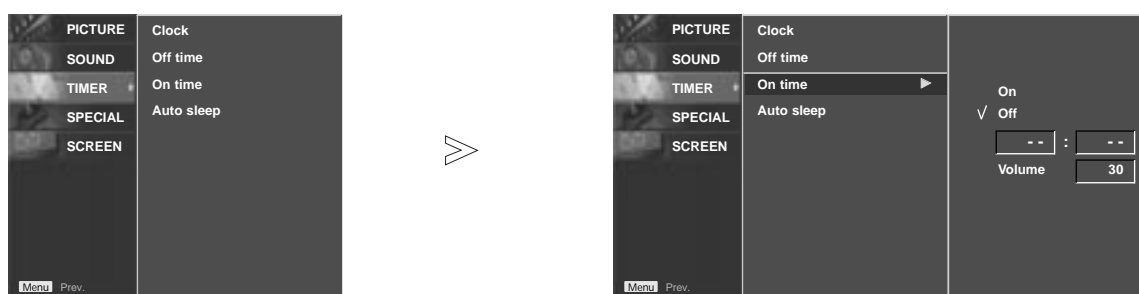
- If current time setting is wrong, correct the clock setting.



1. Press the **MENU** button and then use **▲ / ▼** button to select the **TIMER** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Clock**.
3. Press the **▶** button and then use **▲ / ▼** button to set the hour.
4. Press the **▶** button and then use **▲ / ▼** button to set the minutes.
5. Press the **EXIT** button to save the new settings.

On/Off Timer Setup

- Timer function operates only if current time has already been set.
- Off-Timer function overrides On-Timer function if they are set to the same time.
- If you do not press any button within 2 hours after the monitor turns on with the On Timer function, the monitor will automatically revert to standby mode.



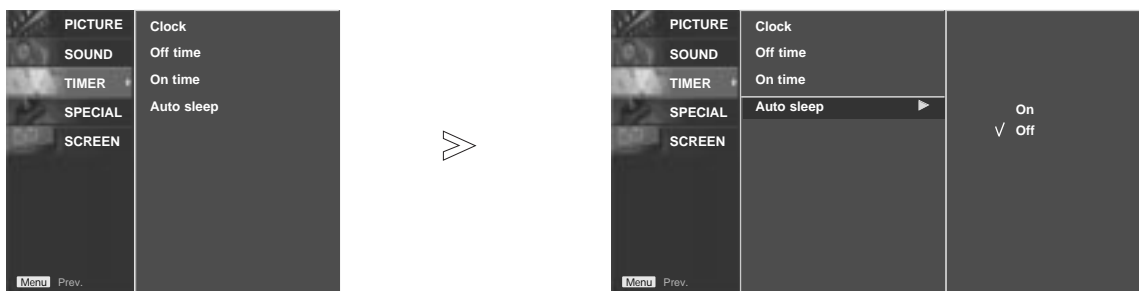
1. Press the **MENU** button and then use **▲ / ▼** button to select the **TIMER** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Off timer** or **On timer**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On**.
 - To cancel **On/Off timer** function, select **Off**.
4. Press the **▶** button and then use **▲ / ▼** button to set the hour.
5. Press the **▶** button and then use **▲ / ▼** button to set the minutes.

For only On timer function; Press the **▶** button and then use **▲ / ▼** button to set volume level.
6. Press the **EXIT** button to save the new settings.

Timer Menu Options

Auto sleep

- If there is no input signal, the Monitor turns off automatically after 10 minutes.

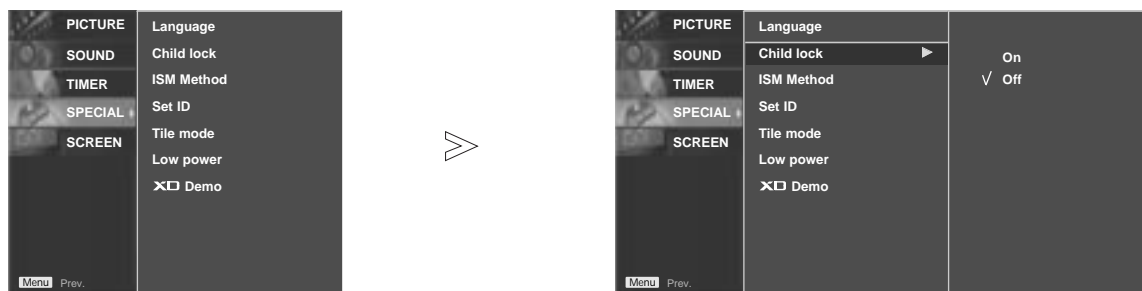


1. Press the **MENU** button and then use **▲ / ▼** button to select the **TIMER** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Auto sleep**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
4. Press the **EXIT** button to save the new settings.

Special Menu Options

Child Lock

- The monitor can be set up so that it can only be used with the remote control.
- This feature can be used to prevent unauthorized viewing by disabling the front panel controls.
- This Monitor is programmed to remember which option it was last set to even if you turn the monitor off.

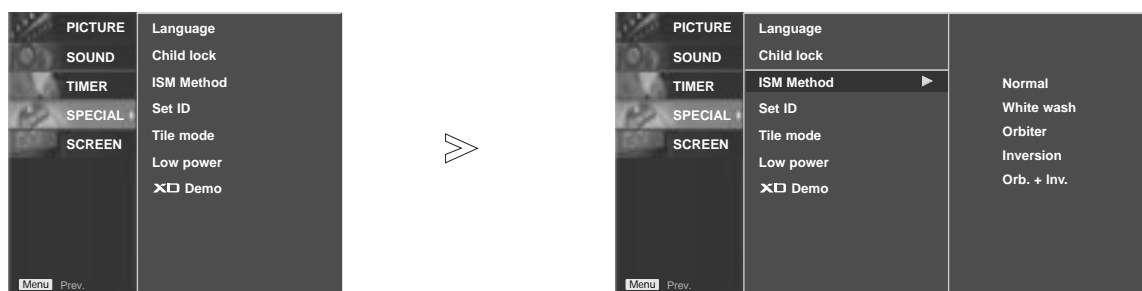


1. Press the **MENU** button and then use **▲ / ▼** button to select the **SPECIAL** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Child lock**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
 - When you select **On**, the display ' **▲ Child lock** ' appears on the screen if any button on the front panel is pressed.
4. Press the **EXIT** button to save the new settings.

-In setting **Child lock 'On'**, if the monitor is turned off with the remote control, press the **INPUT** on the monitor or **POWER, INPUT** on the remote control to turn the monitor on.

ISM (Image Sticking Minimization) Method

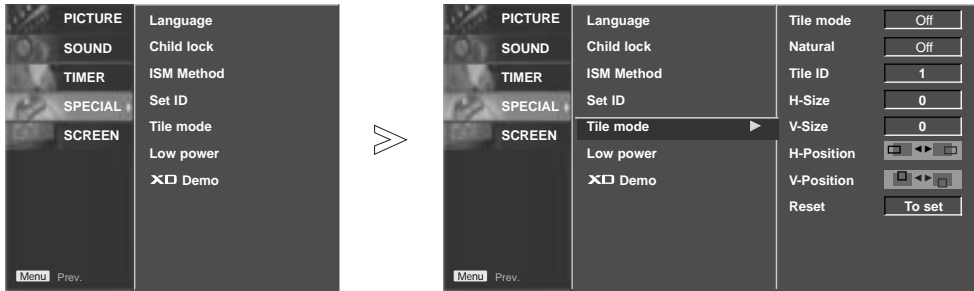
- A frozen still picture from a PC/video game displayed on the screen for prolonged periods will result in an ghost image remaining; even when you change the image. Avoid allowing a fixed or still image to remain on the Monitor's screen for a long period of time.



1. Press the **MENU** button and then use **▲ / ▼** button to select the **SPECIAL** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **ISM Method**.
3. Press the **▶** button and then use **▲ / ▼** button to select either **Normal**, **White wash**, **Orbiter**, **Inversion** or **Oeb.+Inv.**.
 - **Normal**
If image sticking is never a problem, ISM is not necessary - set this to Normal.
 - **White wash**
White Wash removes permanent images from the screen. Note: An excessive permanent image may be impossible to clear completely using White Wash. To return to normal viewing, press the any button.
 - **Orbiter**
Orbiter may help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a permanent image on the screen, the image will move every 2 minutes.
 - **Inversion**
Inversion will automatically invert the plasma display panel color every 30 minutes.
 - **Orbiter**
May help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a permanent image on the screen, the screen will move every 2 minutes.
4. Press the **EXIT** button to save the new settings.

Tile mode

- **Tile Mode** Tile mode and choose Tile alignment and set the ID of the current product to set location.

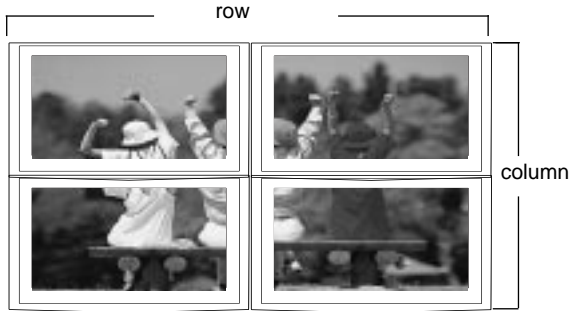


It is used to enlarge the screen and also used with several products to view screen.

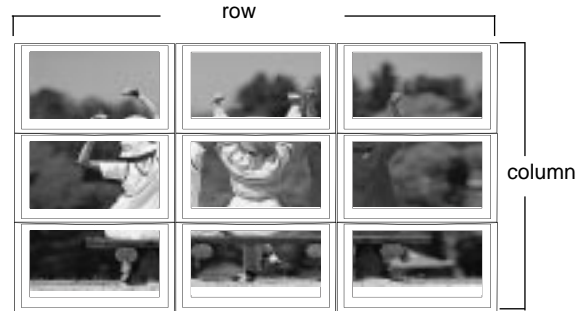
- * Only after pressing the SET button the adjustments made to the settings will be saved.
- Tile mode : row x column (r = 1, 2, 3, 4 c = 1, 2, 3, 4)
- 4 x 4 available.
- Configuration of an integration screen is also available as well as configuration of One by one Display.



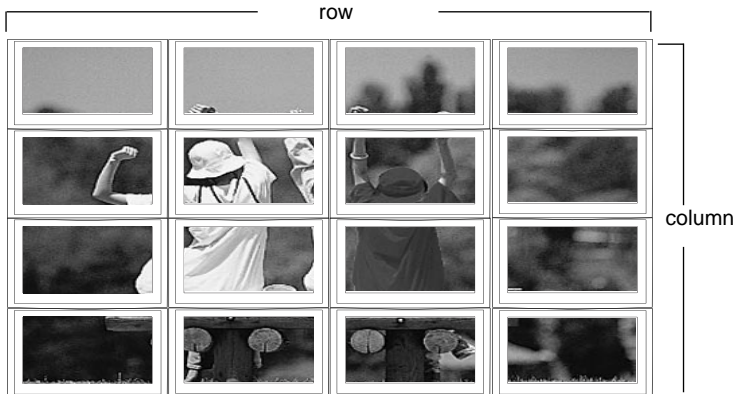
- Tile mode (product 1 ~ 4) : r(2) x c(2)



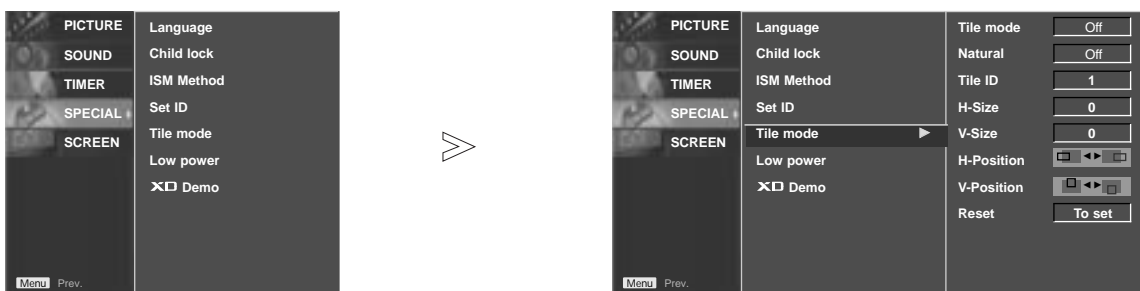
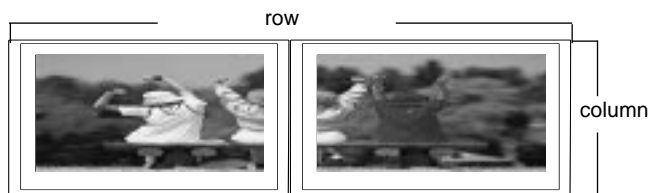
- Tile mode (product 1 ~ 9) : r(3) x c(3)



- Tile mode (product 1 ~16) : r(4) x c(4)



- Tile mode (product 1 ~ 2) : r(2) x c(1)

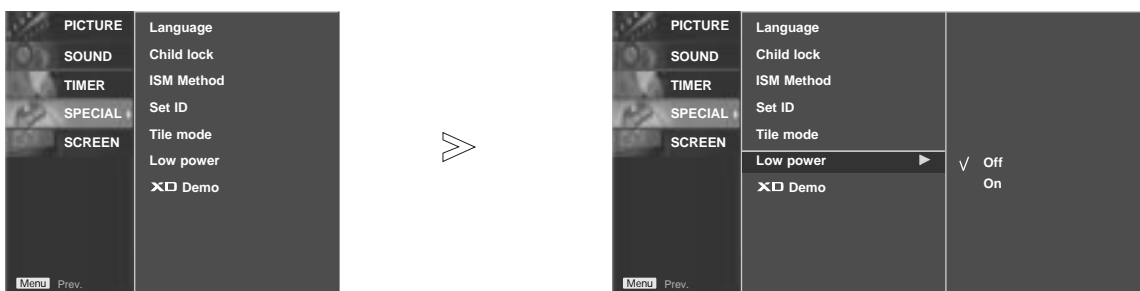


1. Press the **MENU** button and then use **▲ / ▼** button to select the **SPECIAL** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Tile mode**.
3. Press the **▶** button and then **▲ / ▼** or **◀ / ▶** button to adjust the position.
4. Press the **EXIT** button to save the new settings.
 - Tile ID Select the location of the Tile by setting an ID.
 - H Size Adjust the horizontal size of the screen taking into account the size of the bezel.
 - Natural The image is omitted by the distance between the screens to be naturally shown.
 - V Size Adjust the vertical size of the screen taking into account the size of the bezel.
 - H-Position Moving the screen position horizontally.
 - V-Position Moving the screen position vertically.
 - Reset Function to initialize and release Tile.

All Tile setting are released when selecting Tile recall and the screen returns to Full screen.

Low Power

- Low power reduces the plasma display's power consumption.

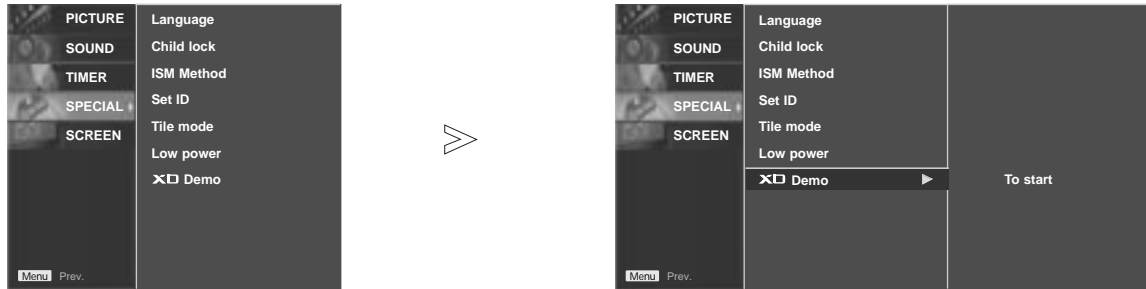


1. Press the **MENU** button and then use **▲ / ▼** button to select the **SPECIAL** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Low power**.
3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
 - When you select **On**, the screen darkens.
4. Press the **EXIT** button to save the new settings.

Special Menu Options

XD DEMO

- Use it to see the difference between XD Demo on and XD Demo off.
- It's not available to use this function in RGB[PC], HDMI[PC] mode.

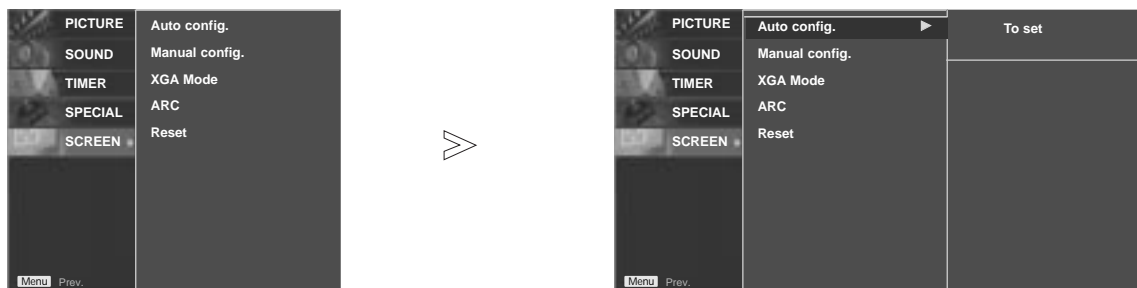


1. Press the MENU button and then ▲ / ▼ button to select the **PICTURE** menu.
2. Press the MENU button and then ▲ / ▼ button to select **XD Demo**.
3. Press the ► button to begin **XD Demo**.
4. To stop **XD Demo**, press the **MENU** or **EXIT** button.

Screen Menu Options

Auto Configure

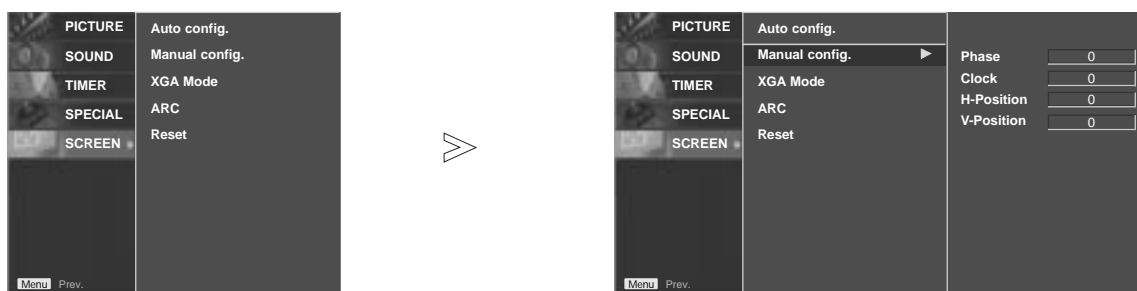
- Automatically adjusts picture position and minimizes image shaking.
- This function works in the following mode : RGB[PC].



1. Press the **MENU** button and then use **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Auto config.**.
3. Press the **▶** button to start **Auto config.**.
 - When **Auto config.** has finished, **OK** will be shown on screen.
 - If the position of the image is still not correct, try Auto adjustment again.
4. If picture needs to be adjusted more after Auto adjustment in RGB (PC), you can adjust the **Manual config.**.
5. Press the **EXIT** button to return to normal TV viewing.

Manual Configure (RGB-PC mode only)

- If the picture isn't clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.
- To correct the screen size, adjust **Clock**.
- This function works in the following mode:
RGB[PC], RGB[DTV], HDMI[DTV], COMPONENT[DTV] mode only
- It's not available to use Phase, Clock function in RGB[DTV], HDMI[DTV], COMPONENT[DTV] mode.

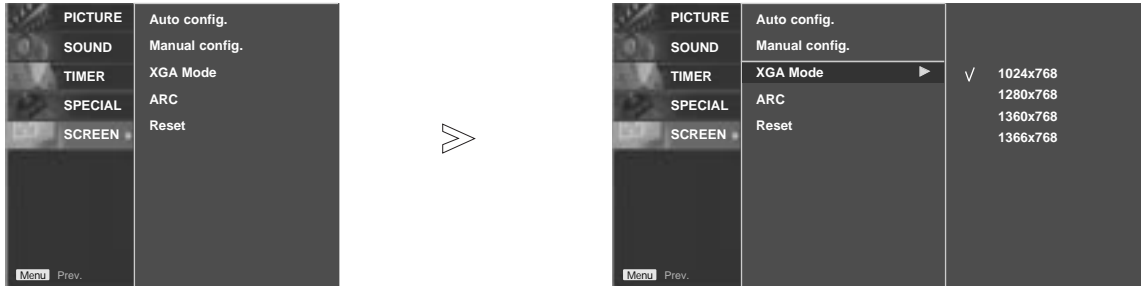


1. Press the **MENU** button and then **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then **▲ / ▼** button to select **Manual config.**.
3. Press the **▶** button and then **▲ / ▼** button to select **Phase**, **Clock**, **H-Position** or **V-Position**.
4. Press the **◀ / ▶** button to make appropriate adjustments.
5. Press the **EXIT** button to return to normal TV viewing.

Screen Menu Options

Selecting Wide XGA mode

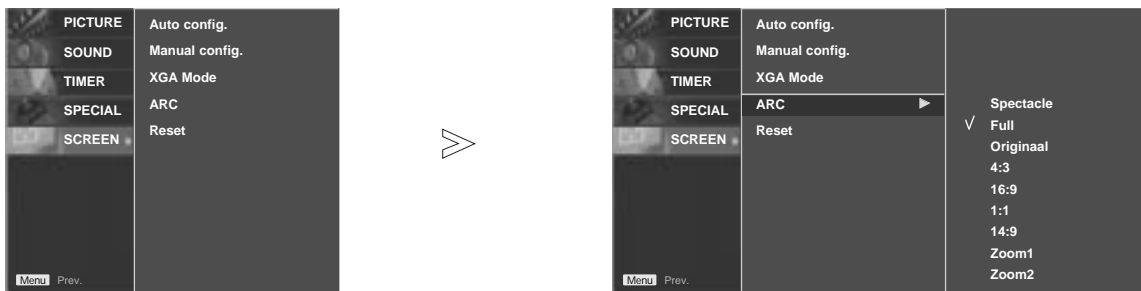
- To see a normal picture, match the resolution of RGB mode and selection of XGA mode.
- This function works in the following mode : RGB[PC]



1. Press the **MENU** button and then use **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **XGA Mode**.
3. Press the **▶** button and then use **▲ / ▼** button to select the desired XGA resolution.
4. Press the **EXIT** button to return to normal TV viewing.

Setting the Picture Format

- You can watch the screen in various picture formats; **4:3**, **16:9** (Wide), **14:9** and **Zoom1/2**.



1. Press the **MENU** button and then use **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **ARC**.
3. Press the **▶** button and then use **▲ / ▼** button to select **Spectacle**, **Full**, **4:3**, **16:9**, **1:1**, **14:9** or **Zoom 1/2**.

- **Spectacle**

When your AV receives the wide screen signal, it will lead you to adjust the picture horizontally, in a nonlinear proportion, to fill the entire screen.

- **Full**

When your AV receives the wide screen signal, it will lead you to adjust the picture horizontally or vertically, in a linear proportion, to fill the entire screen fully. (Europe an version only)

- **Original**

When your AV receives the wide screen signal, it will be automatically changed to picture format to be sent.

- **4:3**

This picture format is 4:3 of general AV.

- **16:9**

You can enjoy movies (the picture format of 16:9) or general TV programmes through 16:9 mode. Programmes with 16:9 format are viewed naturally but 4:3 programmes are magnified on the left and right so that the screen is 16:9 format.

- **1:1**

This picture format is 1:1 of general AV. (only RGB PC, HDMI/DVI PC)

- **14:9**

You can enjoy the picture format of 14:9 or general AV programmes through 14:9 mode.

Programmes with 14:9 are viewed naturally, but 4:3 programmes are magnified on the top/bottom and left/right sides.

- **Zoom1, 2**

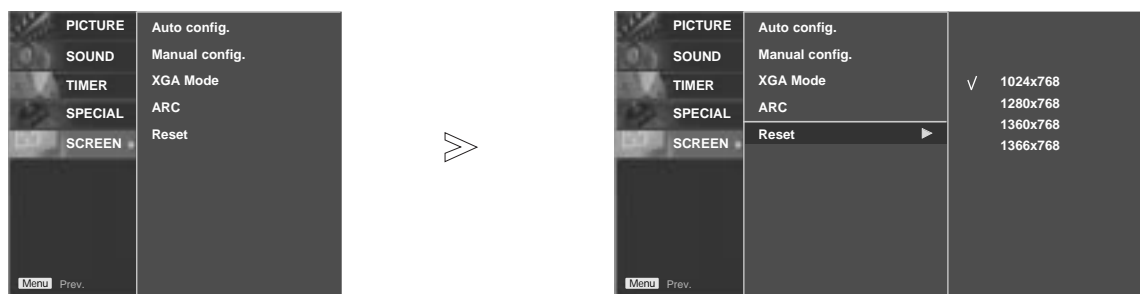
You can enjoy movies on a vast screen through Zoom mode. The 4:3 programmes are magnified on the top/bottom and left/right sides so that screen is 16:9 format. The bottom and top of the picture may be lost.

4. Press the **EXIT** button to return to normal TV viewing.

MODE ARC	AV	component	HDMI/DVI		RGB	
			DTV	PC	DTV	PC
Spectacle	O	X	X	X	X	X
Full	O	X	X	X	X	X
Original	O	X	X	X	X	X
4:3	O	O	O	X	O	X
16:9	O	O	O	O	O	O
14:9	O	X	X	X	X	X
Zoom1	O	O	O	X	O	X
Zoom2	O	O	O	X	O	X
1:1	X	X	X	O	X	O

Initializing (Reset to original factory settings)

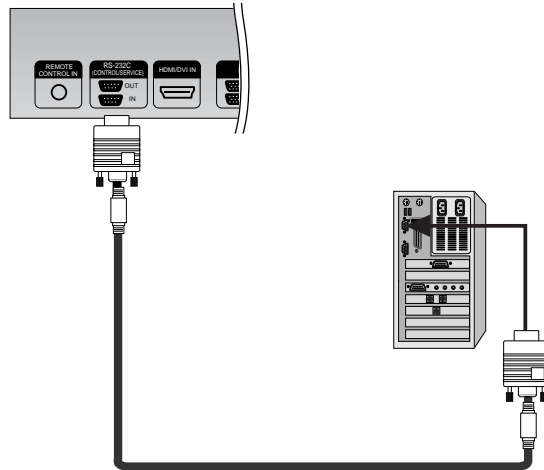
- This function operates in current mode.
- To initialize the adjusted value



1. Press the **MENU** button and then **▲ / ▼** button to select the **SCREEN** menu.
2. Press the **▶** button and then **▲ / ▼** button to select **Reset**.
3. Press the **▶** button.
 - You can initialize Phase, Clock, H-Position, V-Position, Position, Zoom +/-, PIP size, PIP position, PIP Transparency and sub picture size of twin picture.

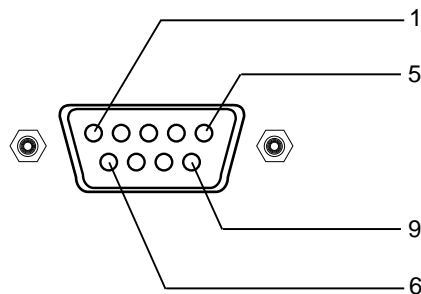
External Control Device Setup

- 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.
- 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.



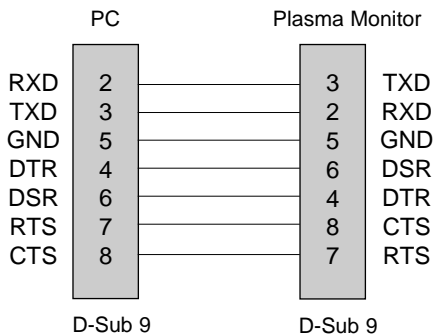
Type of Connector: D-Sub 9-pin Male

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

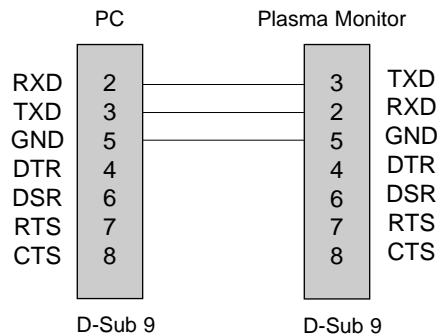


RS-232C Configurations

7-Wire Configuration (Standard RS-232C cable)

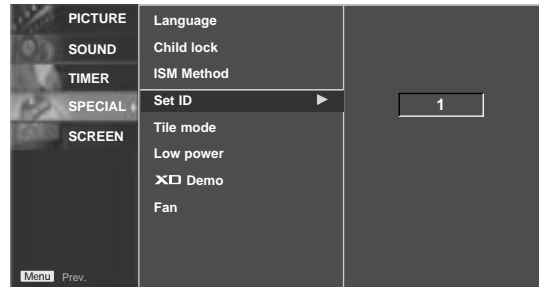
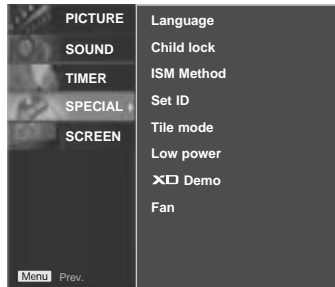


3-Wire Configuration (Not standard)



Set ID

- Use this function to specify a monitor ID number.
- Refer to 'Real Data Mapping 1'. See page 35.



1. Press the **MENU** button and then use the **▲ / ▼** button to select the **SPECIAL** menu.
2. Press the **▶** button and then use **▲ / ▼** button to select **Set ID**.
3. Press the **▶** button and then use **◀ / ▶** button to adjust **Set ID** to choose the desired monitor ID number.
 - The adjustment range of **Set ID** is 1 ~ 99.

Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1
02. Input Select	k	b	1 ~ 9
03. Aspect Ratio	k	c	0 ~ 3
04. Screen Mute	k	d	0 ~ 1
05. Volume Mute	k	e	0 ~ 1
06. Volume Control	k	f	0 ~ 64
07. Contrast	k	g	0 ~ 64
08. Brightness	k	h	0 ~ 64
09. Color	k	i	0 ~ 64
10. Tint	k	j	0 ~ 64
11. Sharpness	k	k	0 ~ 64
12. OSD Select	k	l	0 ~ 1
13. Remote Control Lock Mode	k	m	0 ~ 1
14. Balance	k	n	0 ~ 3
15. Color Temperature	k	q	0 ~ 3
16. Abnormal state	k	r	0 ~ 64
17. ISM mode	k	s	0 ~ 64
18. Auto configuration	k	t	0 ~ 64
19. Key	k	u	0 ~ 3
20. Tile Mode	k	v	0 ~ 14
21. Tile H Size	k	w	0 ~ 14
22. Tile V Size	k	\$	0 ~ 14
23. Tile ID Set	k	y	1 ~ 9
24. Elapsed time return	k	z	0 ~ a
25. Temperature value	j	p	0 ~ 3
26. Lamp fault check	j	q	0 ~ 1

Transmission / Receiving Protocol

Transmission

[Command1][Command2][][Set ID][][Data][Cr]

- * [Command 1]: k, j, m, d
- * [Command 2]: To control Plasma Monitor set.
- * [Set ID]: You can adjust the set ID to choose desired monitor ID number in Special menu. Adjustment range is 1 ~ 99. When selecting Set ID '0', every connected Plasma Monitor set is controlled. Set ID is indicated as decimal (1~99) on menu and as Hexa decimal (0x0~0x63) on transmission/receiving protocol.
- * [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

[Command2][][Set ID][][OK][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

[Command2][][Set ID][][NG][x]

- ** If there is error, it returns NG

01. Power (Command 2:a)

- To control Power On/Off of the Monitor.

Transmission

[k][a][][Set ID][][Data][Cr]

Data 0 : Power Off 1 : Power On

Acknowledgement

[a][][Set ID][][OK][Data][x]

- To show Power On/Off.

Transmission

[k][a][][Set ID][][FF][Cr]

Data 0 : Power Off 1 : Power On

Acknowledgement

[a][][Set ID][][OK][Data][x]

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

02. Input Select (Command 2:b) (Main Picture Input)

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

Transmission

[k][b][][Set ID][][Data][Cr]

Data 2 : AV	6 : RGB (DTV)
4 : Component1	7 : RGB (PC)
5 : Component2	8 : HDMI (DTV)
	9 : HDMI (PC)

Acknowledgement

[b][][Set ID][][OK][Data][x]

Data 2 : AV	6 : RGB (DTV)
4 : Component1	7 : RGB (PC)
5 : Component2	8 : HDMI (DTV)
	9 : HDMI (PC)

03. Aspect Ratio (Command 2:c) (Main picture format)

- 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 Screen menu.

Transmission

[k][c][][Set ID][][Data][Cr]

Data 1 : Normal screen (4:3)
2 : Wide screen (16:9)
3 : Wide screen (Horizon)
4 : Zoom1
5 : Zoom2
6 : Original
7 : 14 : 9
8 : Full (Europe version only)
9 : 1 : 1 (PC)

Acknowledgement

[c][][Set ID][][OK][Data][x]

04. Screen Mute (Command 2:d)

- To select screen mute on/off.

Transmission

[k][d][][Set ID][][Data][Cr]

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

Acknowledgement

[d][][Set ID][][OK][Data][x]

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

05. Volume Mute (Command 2:e)

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

Transmission

[k][e][][Set ID][][Data][Cr]

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

Acknowledgement

[e][][Set ID][][OK][Data][x]

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

06. Volume Control (Command 2:f)

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

Transmission

[k][f][][Set ID][][Data][Cr]

Data Min : 0 ~ Max : 64
• Refer to 'Real data mapping1'. See page 35.

Acknowledgement

[f][][Set ID][][OK][Data][x]

Data Min : 0 ~ Max : 64

07. Contrast (Command 2:g)

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

Transmission

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

Data Min : 0 ~ Max : 64

- Refer to 'Real data mapping 1' as shown below.

Acknowledgement

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

Data Min : 0 ~ Max : 64

* **Real data mapping 1**

0 : Step 0

A : Step 10 (SET ID 10)

F : Step 15 (SET ID 15)

10 : Step 16 (SET ID 16)

63 : Step 99 (SET ID 99)

64 : Step 100

08. Brightness (Command 2:h)

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

Transmission

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

Data Min : 0 ~ Max : 64

- Refer to 'Real data mapping 1'.

Acknowledgement

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

Data Min : 0 ~ Max : 64

09. Color (Command 2:i)

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

Transmission

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

Data Min : 0 ~ Max : 64

- Refer to 'Real data mapping 1'.

Acknowledgement

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

Data Min : 0 ~ Max : 64

10. Tint (Command 2:j) (Video only)

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

Transmission

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

Data Red : 0 ~ Green : 64

- Refer to 'Real data mapping 1'.

Acknowledgement

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

Data Red : 0 ~ Green : 64

11. Sharpness (Command 2:k)

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

Transmission

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

Data Min : 0 ~ Max : 64

- Refer to 'Real data mapping 1'.

Acknowledgement

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

Data Min : 0 ~ Max : 64

12. OSD Select (Command 2:l)

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

Transmission

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

Data 0: OSD off 1: OSD on

Acknowledgement

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

Data 0: OSD off 1: OSD on

13. Remote Lock /Key Lock (Command 2:m)

- ▶ To control Remote Lock on/off to the set.
This function, when controlling RS-232C, locks the remote control and the local keys.

Transmission

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

Data 0: off 1: on

Acknowledgement

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

Data 0: off 1: on

14. Balance (Command2:t)

► To adjust balance.

Transmission

[k][t][][Set ID][][Data][Cr]

Data Min: 0 ~ Max: 64

- Refer to 'Real data mapping 1'. See page 35.

Acknowledgement

[t][][Set ID][][OK][Data][x]

Data Min: 0 ~ Max: 64

* Balance : L50 ~ R50

15. Color Temperature (Command2:u)

► To adjust color temperature.
You can also adjust ACC in the Picture menu.

Transmission

[k][u][][Set ID][][Data][Cr]

Data 0: Normal 1: Cool 2: Warm 3: User

Acknowledgement

[u][][Set ID][][OK][Data][x]

Data 0: Cool 1: Normal 2: Warm 3: Off

16. Abnormal state (Command : z)

► Abnormal State : Used to Read the power off status when Stand-by mode.

Transmission

[k][z][][Set ID][][Data][Cr]

Data FF : Read

- 0 : Normal (Power on and signal exist)
- 1: No signal (Power on)
- 2 : Turn the monitor off by remote control
- 3 : Turn the monitor off by sleep time function
- 4 : Turn the monitor off by RS-232C function
- 6 : AC down
- 8 : Turn the monitor off by off time function
- 9 : Turn the monitor off by auto off function

Acknowledgement

[z][][Set ID][][OK][Data][x]

17. ISM mode(Command: j p)

► Used to select the afterimage preventing function.

Transmission

[j][p][][Set ID][][Data][Cr]

Data 1H : Inversion

- 2H : Orbiter
- 3H : Orb.+Inv.
- 4H : White Wash
- 8H : Normal

Acknowledgement

[p][][Set ID][][OK][Data][x]

18. Auto Configure (Command2:u)

► To adjust picture position and minimize image shaking automatically. Auto Configure only works in RGB-PC mode.

Transmission

[j][u][][Set ID][][Data][Cr]

Data 1: To set

Acknowledgement

[u][][Set ID][][OK][Data][x]

19. Key (Command2:c)

► To adjust Key code for IR remote control.

Transmission

[m][c][][Set ID][][Data][Cr]

Data Key code : Refer to See page 39.

Acknowledgement

[c][][Set ID][][OK][Data][x]

20. Tile Mode(Command : d d)

► Change a Tile Mode.

Transmission

[d][d][][Set ID][][Data][x]

Data	Description
00	Tile mode is off.
12	1 x 2 mode(column x row)
13	1 x 3 mode
14	1 x 4 mode
...	...
44	4 x 4 mode

* The data can not be set to 0X or X0 except 00.

Acknowledgement

[d][00][][OK/NG][Data][x]

21. Tile H Size(Command : d g)

▶ To set the Horizontal size.

Transmission

[d][g][Set ID][Data][x]

Data Min : 00H ~ Max : 64H

Acknowledgement

[g][Set ID][OK/NG][Data][x]

22. Tile V Size(Command : d h)

▶ To set the Vertical size.

Transmission

[d][h][Set ID][Data][x]

Data Min : 00H ~ Max : 64H

Acknowledgement

[h][Set ID][OK/NG][Data][x]

IR Code

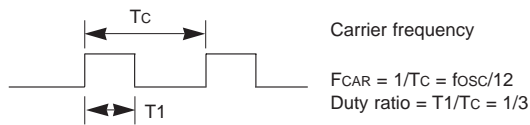
How to Connect

- ▶ Connect your wired remote control to the Remote Control port on the Monitor.

Remote Control IR Code

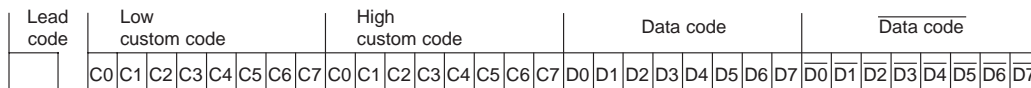
▶ Output waveform

Single pulse, modulated with 37.917KHz signal at 455KHz

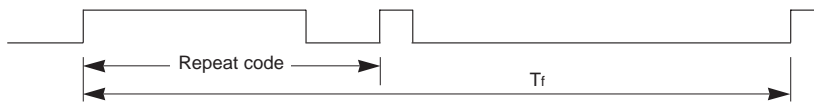


▶ Configuration of frame

- 1st frame



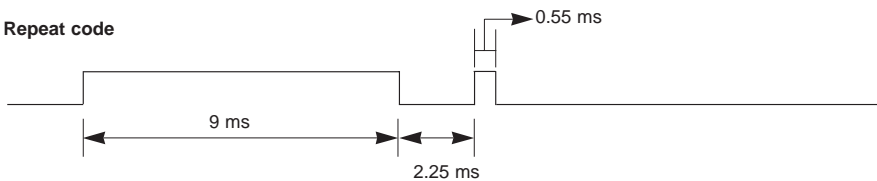
- Repeat frame



▶ Lead code

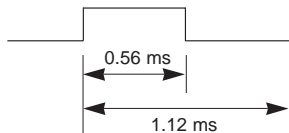


▶ Repeat code

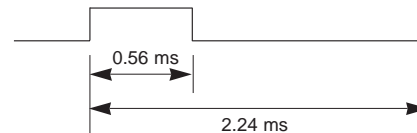


▶ Bit description

- Bit "0"

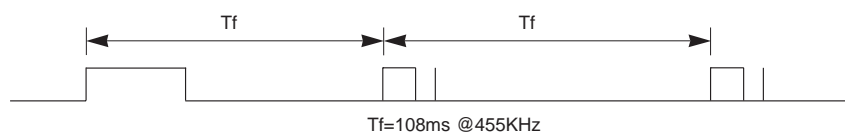


- Bit "1"



▶ Frame interval : Tf

The waveform is transmitted as long as a key is depressed.



Code (Hexa)	Function	Note
10	Number Key 0	R/C Button
11	Number Key 1	R/C Button
12	Number Key 2	R/C Button
13	Number Key 3	R/C Button
14	Number Key 4	R/C Button
15	Number Key 5	R/C Button
16	Number Key 6	R/C Button
17	Number Key 7	R/C Button
18	Number Key 8	R/C Button
19	Number Key 9	R/C Button
0E	SLEEP	R/C Button
09	MUTE	R/C Button
08	POWER	R/C Button (Power On/Off)
02	VOL+	R/C Button
03	VOL-	R/C Button
44	ENTER (■)	R/C Button
0B	All INPUT SELECT	R/C Button
43	MENU	R/C Button
79	ARC	R/C Button (Spectacle, Full, Original, 4:3, 16:9, 1:1, 14:9, Zoom1, 2 mode Selection)
07	◀	R/C Button
06	▶	R/C Button
40	▲	R/C Button
41	▼	R/C Button
5B	EXIT	R/C Button
99	Auto config.	Discrete IR Code (Only RGB mode)
5A	Input video1	Discrete IR Code (Input Video 1 Selection)
BF	Input Component 1	Discrete IR Code (Input Component 1 Selection)
D4	Input Component 2	Discrete IR Code (Input Component 2 Selection)
D5	Input RGB	Discrete IR Code (Input RGB Selection)
C6	Input HDMI/DVI	Discrete IR Code (Input HDMI/DVI Selection)

Programming the Remote

- ▶ The remote control is a multi-brand or universal remote control. It can be programmed to operate most remote-controllable devices of other manufacturers.
Note that the remote control may not control all models of other brands.

Programming a code into a remote mode

1. Test your remote control.
To find out whether your remote control can operate the component without programming, turn on the component such as a VCR and press the corresponding **MODE** button (VCR) on the remote control, while pointing at the component.
2. Turn on the component to be programmed, then press the corresponding **MODE** button on the remote control.
3. Press the **MENU** and **MUTE** buttons simultaneously, the remote control is ready to be programmed for the code.
4. Enter a code number using the number buttons on the remote. Programming code numbers for the corresponding component can be found on the following pages. Again, if the code is correct, the device will turn off.
5. Press the **MENU** button to store the code.
6. Test the remote control functions to see if the component responds properly. If not, repeat from step 1.

Programming Codes

VCRs

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
AIWA	034	KENWOOD	014 034 039 043	PORTLAND	108	TATUNG	039 043
AKAI	016 043 046 124		047 048	PULSAR	072	TEAC	034 039 043
	125 146	LG (GOLDSTAR)	001 012 013 020	QUARTZ	011 014	TECHNICS	031 033 070
AMPRO	072		101 106 114 123	QUASAR	033 066 075 145	TEKNIKA	019 031 033 034
ANAM	031 033 103	LLOYD	034	RCA	013 020 033 034		101
AUDIO DYNAMICS	012 023 039 043	LXI	003 009 013 014		040 041 062 063	THOMAS	034
BROKSONIC	035 037 129		017 034 101 106		107 109 140 144	TMK	006
CANON	028 031 033	MAGIN	040		145 147	TOSHIBA	008 013 042 047
CAPEHART	108	MAGNAVOX	031 033 034 041	REALISTIC	003 008 010 014		059 082 112 131
CRAIG	003 040 135		067 068		031 033 034 040	TOTEVISION	040 101
CURTIS MATHES	031 033 041	MARANTZ	012 031 033 067		053 054 101	UNITECH	040
DAEWOO	005 007 010 064		069	RICO	058	VECTOR RESEARCH	012
	065 108 110 111	MARTA	101	RUNCO	148	VICTOR	048
	112 116 117 119	MATSUI	027 030	SALORA	014	VIDEO CONCEPTS	012 034 046
DAYTRON	108	MEI	031 033	SAMSUNG	032 040 102 104	VIDEOSONIC	040
DBX	012 023 039 043	MEMOREX	003 010 014 031		105 107 109 112	WARDS	003 013 017 024
DYNATECH	034 053		033 034 053 072		113 115 120 122		031 033 034 040
ELECTROHOME	059		101 102 134 139		125		053 054 131
EMERSON	006 017 025 027	MGA	045 046 059	SANSUI	022 043 048 135	YAMAHA	012 034 039 043
	029 031 034 035	MINOLTA	013 020	SANYO	003 007 010 014	ZENITH	034 048 056
	036 037 046 101	MITSUBISHI	013 020 045 046		102 134		058 072 080 101
	129 131 138 153		049 051 059 061	SCOTT	017 037 112 129		
FISHER	003 008 009 010		151		131		
FUNAI	034	MTC	034 040	SEARS	003 008 009 010		
GE	031 033 063 072	MULTITECH	024 034		013 014 017 020		
	107 109 144 147	NEC	012 023 039 043		031 042 073 081		
GO VIDEO	132 136		048		101		
HARMAN KARDON	012 045	NORDMENDE	043	SHARP	031 054 149		
HITACHI	004 018 026 034	OPTONICA	053 054	SHINTOM	024		
	043 063 137 150	PANASONIC	066 070 074 083	SONY	003 009 031 052		
INSTANTREPLAY	031 033		133 140 145		056 057 058 076		
JCL	031 033	PENTAX	013 020 031 033		077 078 149		
JCPENNY	012 013 015 033		063	SOUNDESIGN	034		
	040 066 101	PHILCO	031 034 067	STS	013		
JENSEN	043	PHILIPS	031 033 034 054	SYLVANIA	031 033 034 059		
JVC	012 031 033 043		067 071 101		067		
	048 050 055 060	PILOT	101	SYMPHONIC	034		
	130 150 152	PIONEER	013 021 048	TANDY	010 034		

CATV

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
ABC	003 004 039 042	GOLDEN CHANNEL	030		065 085 090	SL MARX	030
	046 052 053	HAMLIN	049 050 055	PIONEER	034 051 052 063	SPRUCER	047 078
AJIN	112	HITACHI	052 055		076	STARCOM	002 004 008 009
ANTRONIK	014	HOSPITALITY	070 077	POST NEWS WEEK	016	STARGATE	008 030
ARCHER	005 007 014 024	JERROLD	002 003 004 008	PRUCER	059	SYLVANIA	067
CABLE STAR	026		009 010 052 069	PTS	011 048 071 072	TADIRAN	030
CENTURION	092		074		073 074	TAEKWANG	110
CENTURY	007	LG (GOLDSTAR)	001 106 101 005	PULSAR	100	TAIHAN	105
CITIZEN	007	M-NET	037	RCA	047	TANDY	017
COLOUR VOICE	065 090	MACOM	033	REGAL	049 050	TEXSCAN	029 067
COMBANO	080 081	MAGNAVOX	010 012 064 079	REGENCY	057	TOCOM	039 040 056
COMTRONICS	019 030	MEMOREX	100	REMBRANT	025	TOSHIBA	100
DIAMOND	023	MOVIE TIME	028 032	RK	091	UNIKA	007 014 024
EAGLE	020 030 040	NSC	015 028 038 071	SAMSUNG	102 107 030 068	UNITED CABLE	004 053
EASTERN	057 062 066		073	SCIENTIFIC ATLANTA	003 011 041 042	UNIVERSAL	005 007 014 024
ELECTRICORD	032	OAK	016 031 037 053		043 045 046		026 027 032 035
GE	072	PANASONIC	044 047	SHERITECH	022	VIEWSTAR	012 015 018 086
GEMINI	008 022 025 054	PARAGON	100	SIGNAL	030		087 088 089
GI	052 074	PHILIPS	006 012 013 020	SIGNATURE	052	ZENITH	100 114 060 093

HDSTB

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
ALPHASTAR DSR	123	EUROPLUS	114	MEMOREX	057	STARCAST	041
AMPLICA	050	FUJITSU	017 021 022 027	NEXTWAVE	028 124 125	SUPER GUIDE	020 124 125
BIRDVIEW	051 126 129		133 134	NORSAT	069 070	TEECOM	023 026 075 087
BSR	053	GENERAL INSTRUMENT	003 004 016 029	PACE SKY SATELLITE	143		088 090 107 130
CAPETRONICS	053		031 059 101	PANASONIC	060 142		137
CHANNEL MASTER	013 014 015 018	HITACHI	139 140	PANSAT	121	TOSHIBA	002 127
	036 055	HOUSTON TRACKER	033 037 039 051	PERSONAL CABLE	117	UNIDEN	016 025 042 043
CHAPARRAL	008 009 012 077		057 104	PHILIPS	071		044 045 048 049
CITOH	054	HUGHES	068	PICO	105		078 079 080 086
CURTIS MATHES	050 145	HYTEK	053	PRESIDENT	019 102		101 135 136
DRAKE	005 006 007 010	JANIEL	060 147	PRIMESTAR	030 110 111	VIEWSTAR	115
	011 052 112 116	JERROLD	061	PROSAT	072	WINEGARD	128 146
	141	KATHREIN	108	RCA	066 106	ZENITH	081 082 083 084
DX ANTENNA	024 046 056 076	LEGEND	057	REALISTIC	043 074		091 120
ECHOSTAR	038 040 057 058	LG	001	SAMSUNG	123		
	093 094 095 096	LUTRON	132	SATELLITE SERVICE CO	028 035 047 057		
	097 098 099 100	LUXOR	062 144		085		
	122	MACOM	010 059 063 064	SCIENTIFIC ATLANTA	032 138		
ELECTRO HOME	089		065	SONY	103		

Audio

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
AIWA	014 028 070 096	JVC	004 013 141	PHILIPS	026 112 143 253		147 218
	125 129 139 229	KEC	185 186 187	PIONEER	039 042 043 063	TOSHIBA	137
	230	KENWOOD	038 050 067 089		065 091 093 094	THE	061
AKAI	163		170 171 197 206	QUASAR	113	VICTOR	088 131
ANAM	003 014 017 023		215 222	RCA	080	WARDS	089
	059 106 189 216	KOHEL	030	RCX	092	YAMAHA	054 055 066 092
	217 235 236	NAD	045 046	REALISTIC	103 106		199
BURMECTER	252	LOTTE	014 016 036 098	SAMSUNG	124 145 146 182		
CARVER	086		100 172 173 174		193 194 195 203		
CLARION	199		175 176 177 178		204 244 245 246		
DAEWOO	027 053 060 184		179 180 181 183	SANSUI	011 135 138 144		
	102 148 198 221		201 202 208 213	SANYO	019 083 234		
DENON	015 075 130 143		214 219 223 232	SCOTT	106 186		
FANTASIA	071		238 240	SHARP	031 032 051		
FINEARTS	022	LXI	103		072 082 117 119		
FISHER	089 099	MAGNAVOX	111		156 184 199 200		
LG(GOLDSTAR)	001 021 024 029	MARANTZ	002 018 020 025		206 209		
	087 107 108 110		034 041 081 090	SHERWOOD	005 006 158		
	190 191 192 210		097 112	SONY	044 045 109 114		
	211 212 239	MCINTOSH	049		118 126 248 249		
HAITAI	034 035 188 222	MCS	104	TAEKWANG	012 020 073 074		
HARMAN/KARDON	068	MEMOREX	107		076 077 105 161		
INKEL	037 058 062 069	NAD	046		162 163 164 165		
	078 079 095 121	ONKYO	013 040 041 047		166 167 168 169		
	122 149 150 151		048 056 057 132		205 231 233 242		
	152 153 154 155		133 140	TEAC	010 085 106 136		
	157 158 159 160	OPTIMUS	158		185 187 237		
	189 207 222 224	PANASONIC	007 033 064 113	TECHNICS	101 113 128 134		
	225 226 227 243		142 220 241 251				
	247	PENNEY	104				

DVD

Brand	Codes	Brand	Codes	Brand	Codes	Brand	Codes
APEX DIGITAL	022	MAGNAVOX	013	PHILIPS	013	SONY	007
DENON	020 014	MARANTZ	024	PIONEER	004 026	THOMPSON	005 006
GE	005 006	MITSUBISHI	002	PROCEED	021	TOSHIBA	019 008
HARMAN KARDON	027	NAD	023	PROSCAN	005 006	YAMAHA	009 018
JVC	012	ONKYO	008 017	RCA	005 006	ZENITH	010 016 025
LG	001 010 016 025	PANASONIC	003 009	SAMSUNG	011 015		

Troubleshooting Checklist

<p>No picture & No sound</p>	<ul style="list-style-type: none"> • Check whether the Monitor is turned on. • Power cord inserted into wall outlet? • Test the wall power outlet, plug other product's power cord into the wall outlet where the Monitor's power cord was plugged in.
<p>Picture OK & No sound</p>	<ul style="list-style-type: none"> • Press the VOLUME (+) button. • Sound muted? Press MUTE button.
<p>The remote control doesn't work</p>	<ul style="list-style-type: none"> • Check to see if there is any object between the Plasma Display and the remote control causing obstruction. • Are batteries installed with correct polarity (+ to +, - to -)? • Install new batteries.
<p>Picture appears slowly after switching on</p>	<ul style="list-style-type: none"> • This is normal, the image is muted during the plasma display startup process. Please contact your service center, if the picture has not appeared after five minutes.
<p>No or Poor color or Poor picture</p>	<ul style="list-style-type: none"> • Select Color in the Picture menu and press the ► button. • Keep a sufficient 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.)
<p>Horizontal/vertical bars or picture shaking</p>	<ul style="list-style-type: none"> • Check for local interference such as an electrical appliance or power tool.
<p>No output from one of the speakers</p>	<ul style="list-style-type: none"> • Adjust Balance in the Sound menu.
<p>Unusual sound from inside the monitor</p>	<ul style="list-style-type: none"> • A change in ambient humidity or temperature may result in an unusual noise when the plasma display is turned on or off and does not indicate a fault with the monitor.

Product Specifications

MODELS		42PM4M (42PM4M-WA)	50PM4M (50PM4M-WA)
Width (inches / mm)		42 / 1066	49.3 / 1253
Height (inches / mm)		25.6 / 650	29.3 / 745
Depth (inches / mm)		3.9 / 97.5	4 / 99.5
Weight (pounds / kg)		66 / 30	90.4 / 41
Power requirement		AC100-240V, 50/60Hz	AC100-240V, 50/60Hz
Resolution		1920 x 1080 (Dot)	1920 x 1080 (Dot)
Viewing Size (mm)		1512.26	1512.26
Environmental condition	Operating Temperature	32 ~ 104°F (0 ~ 40°C)	
	Operating Humidity	Less than 80%	
	Storage Temperature	-4 ~ 140°F (-20 ~ 60°C)	
	Storage Humidity	Less than 85%	

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

