PLASMA MONITOR
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.

Model number :
Serial number :

LG Plasma Monitor

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 42" (or 50") 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 coloured 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 coloured 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 42" (or 50") 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

MT/MZ-42/50PZ45/47 (or MT/MZ-42/50PZ91/93) series : This is Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

WARNING

MT/MZ-42/50PZ44/46 (or MT/MZ-42/50PZ90/92) series : 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.

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

Safety Instructions

- **Use the Monitor at the place lower than the altitude of 6562 feet (2000m) to get the best quality of picture and sound.**

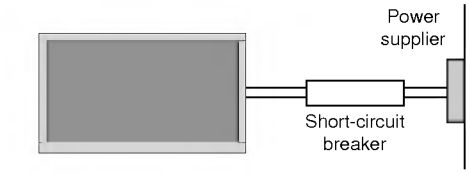
⚠ WARNING

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.

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.

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 placing 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.

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.

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.

* 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.**

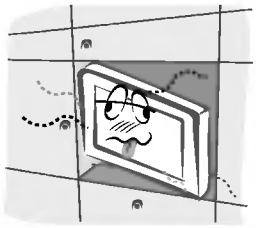
⚠ NOTES

MT/MZ-42/50PZ44/46 (or MTMZ-42/50PZ90/92) series is designed to be mounted horizontally (wide viewing).

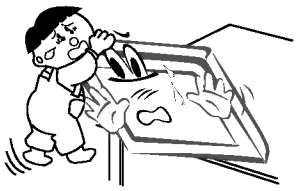
Never touch the power plug with a wet hand.
- This may cause an electric shock.

Disconnect from the mains and remove all connections before moving.

Do not place the 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.



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 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.

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.

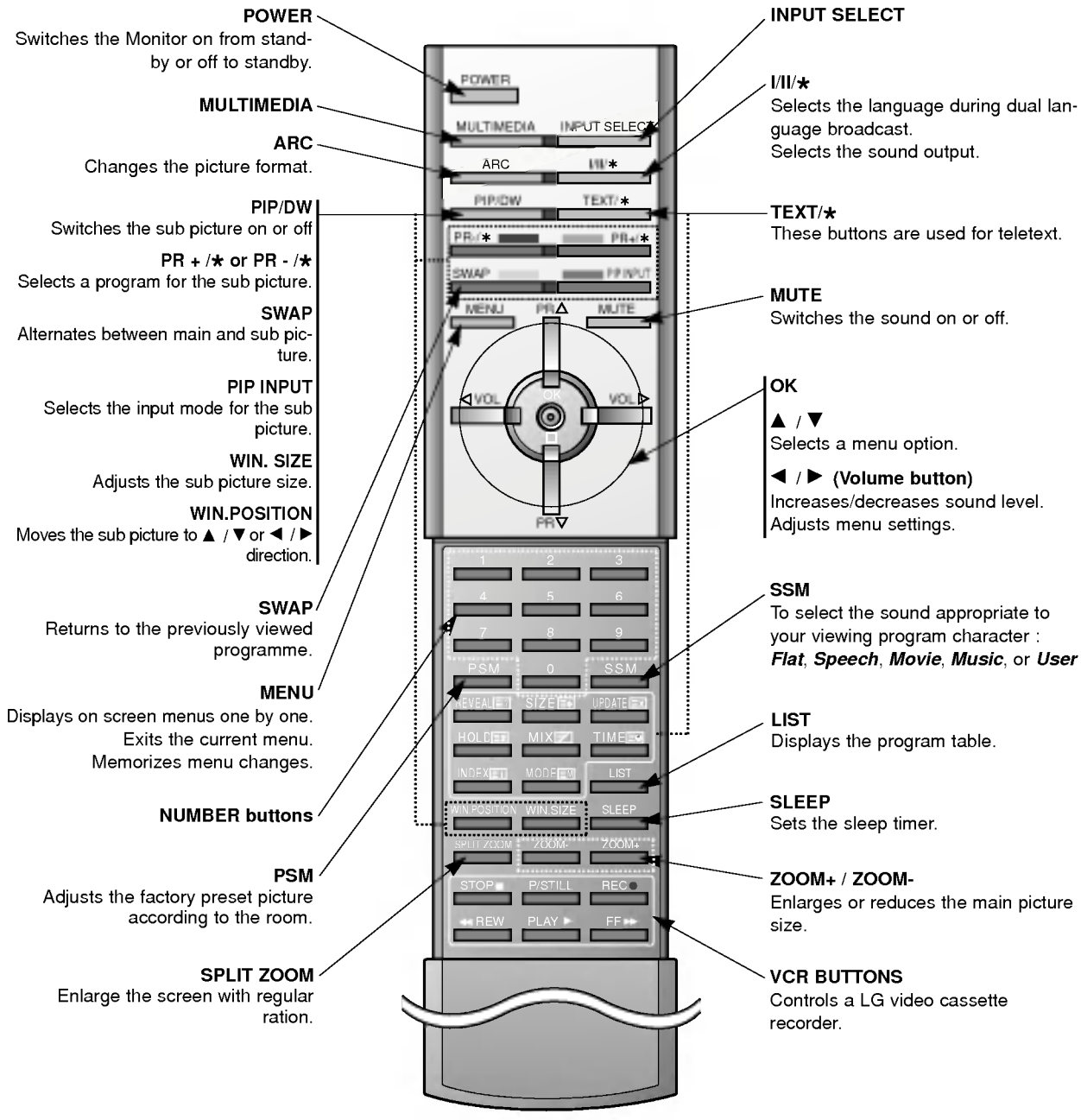
The distance between eyes and the screen should be about 5 ~ 7 times as long as diagonal length of the screen.
- If not, eyes will strain.

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.

Remote Control Key Functions

- When using the remote control aim it at the remote control sensor of the Monitor.
- There's maybe a defect in consecutive operation of remote control in specified brightness according to this monitor feature.



Installing Batteries

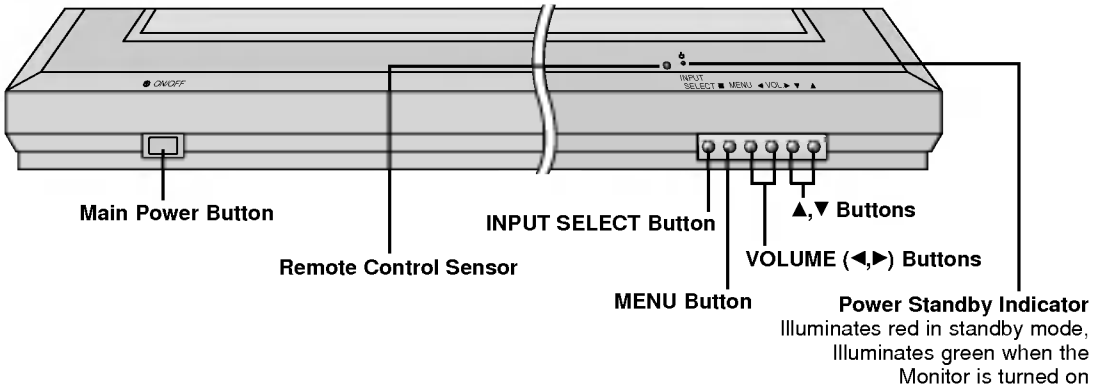


- Open the battery compartment cover on the back side and insert the batteries with correct polarity.
- Install two 1.5V alkaline batteries of AAA type. Don't mix used batteries with new batteries.

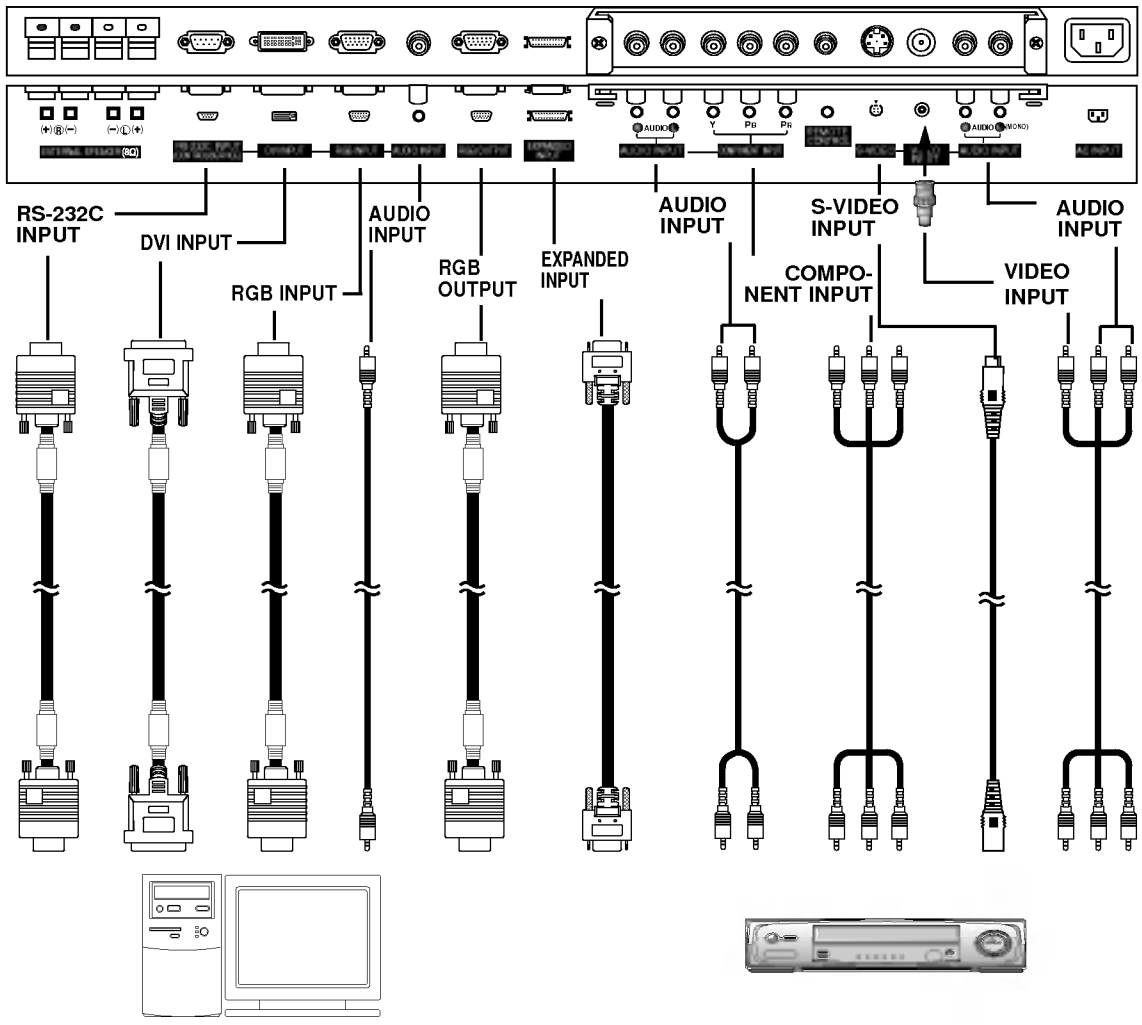
Controls of the Monitor

- Shown is a simplified representation of the Monitor.
- Here shown may be somewhat different from your set.

<Front Panel Controls>



<Back Panel>



Connection to PC

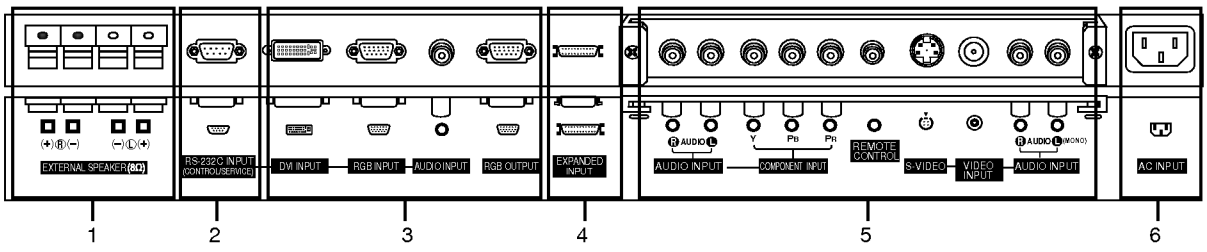
Connection to AV equipment

***Note**: The connection cables shown above to the right are not included with the Monitor.*
A D-sub 15-pin cable and a DVI cable are provided to connect the Monitor to a PC.

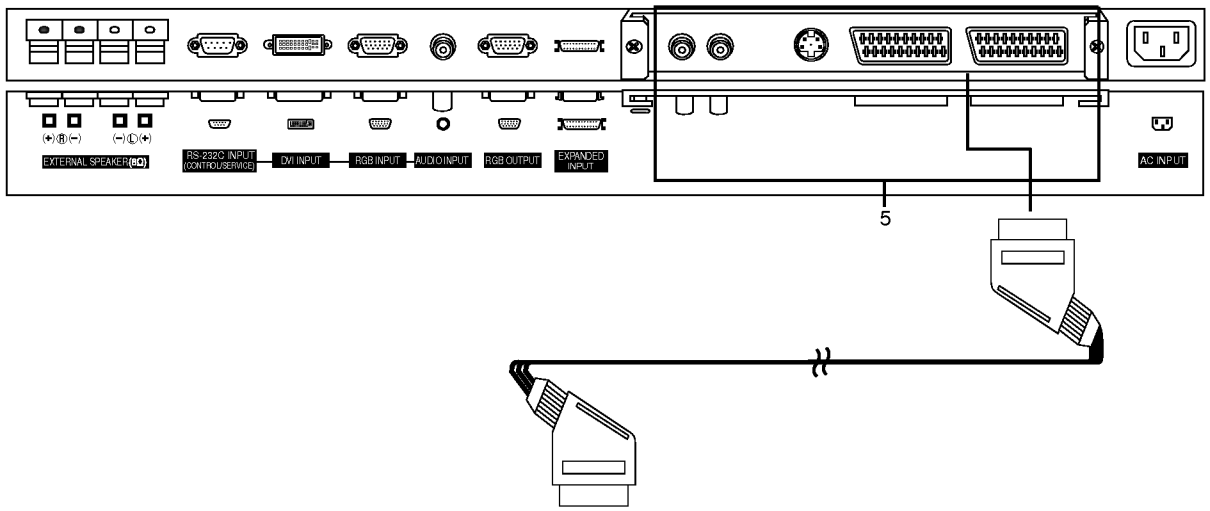
Connection Options

<Back Panel>

RCA Type



Scart Type



1. **EXTERNAL SPEAKER (8 ohm output)**
   Connect to optional external speaker(s).
   * For further information, refer to 'Speaker & Speaker Stand' manual.

2. **RS-232C INPUT(CONTROL/SERVICE) PORT**
   Connect to the RS-232C port on a PC.

3. **DVI INPUT / RGB INPUT / AUDIO INPUT SOCKETS**
   Connect the monitor output socket of the PERSONAL COMPUTER to this socket.

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

4. **EXPANDED INPUT SOCKET**
   Connect the PDP Tuner Cable to PDP Tuner.

5. **AUDIO / COMPONENT INPUT / S-VIDEO / VIDEO INPUT / AUDIO INPUT SOCKETS**

   EURO SCART SOCKET

   Note : *The interface board (AP-42/50EA42/43) is not equipped on MT-42PZ46/47/92/93 / MZ-42PZ44/45/90/91 / MT-50PZ47/93 / MZ-50PZ46/47/92/93 series models. Contact your dealer for buying this optional item.*

6. **POWER CORD SOCKET**
   This Monitor operates on an AC power. The voltage is indicated on the Specifications page. Never attempt to operate the Monitor on DC power.

External Equipment Viewing Setups

Watching VCR (When the Interface board is installed.)

- When connecting the Monitor to external equipment, match the colours of connecting ports (Video - yellow, Audio (L) - white, Audio (R) -red).
- Connect the VIDEO INPUT socket (yellow) with the BNC-RCA adaptor to the VIDEO INPUT on the Monitor.
- If you have a mono VCR, connect the audio cable from the VCR to the AUDIO (L/MONO) input on the 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.
  Or, connect the Euro scart socket of the VCR to the Euro scart socket of the monitor.
- Use the orbiter function to Avoid having a fixed image remain on the screen for a long period of time. Typically a frozen still picture from a VCR.
  If a 4:3 picture format is used; the fixed image may remain visible on the screen.
- To avoid picture noise (interference), leave an adequate distance between the VCR and Monitor

1. Use the **INPUT SELECT** button on the remote control to select ***AV*** or (***AV1*** or ***AV2***).
(If connected to S-VIDEO, select the ***S-Video*** external input source.)
2. Insert a video tape into the VCR and press the **PLAY** button on the VCR. (See VCR owner's manual)

Watching Cable TV (When the Interface board is installed.)

- After subscribing to a cable TV service from a local provider and installing a converter, you can watch cable TV programming. This monitor cannot display TV programming unless a TV tuner device or cable TV converter box is connected to the Monitor.
- For further information regarding cable TV service, contact your local cable TV service provider(s).

1. Use the **INPUT SELECT** button on the remote control and select ***AV*** or (***AV1*** or ***AV2***).
2. Tune to cable service provided channels using the cable box.

Watching external AV source (When the Interface board is installed.)

- When connecting the monitor to an external source, match the colours of AUDIO/VIDEO input jacks on the monitor with the output jacks on the audio/video equipment: Video = yellow, Audio (Left) = white, Audio (Right) = red.
  Or, connect the Euro scart socket of the VCR to the Euro scart socket of the monitor.

1. Use the **INPUT SELECT** button on the remote control to select ***AV*** or (***AV1*** or ***AV2***).
2. Operate the corresponding external equipment. See external equipment operating guide.

Watching DVD (When the Interface board is installed.)

How to connect
Connect DVD video inputs to Y, P_B, P_R of COMPONENT (DVD INPUT) and audio inputs to Audio sockets of AUDIO INPUT.
Or, connect the Euro scart socket of the VCR to the Euro scart socket of the monitor.

How to use
1. Turn on the DVD player, and insert a DVD.
2. Use **INPUT SELECT** button on the remote control to select ***Component*** or (***AV1*** or ***AV2***). Refer to the DVD player's manual for operating instructions.

- **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	P_R

Video output ports of DVD player			
	Y	Pb	Pr
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	P_B	P_R

External Equipment Viewing Setups

Connecting PC

- To enjoy vivid picture and sound, connect a PC to the Monitor.
- 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.
- Connect PC to the RGB INPUT(PC INPUT) or DVI INPUT(DIGITAL RGB INPUT) port of the Monitor; change the resolution output of PC accordingly.
- There might be a noise according to some resolution, vertical pattern, contrast or brightness in PC mode. Then change the PC mode into other resolution or change the refresh rate into other rate or adjust the brightness and contrast on the menu until the picture is clean. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult it to the manufacturer of the PC graphic card.
- The synchronization input form for Horizontal and Vertical frequencies is separate.

Setup Instructions to Connect a PC to your Monitor

- We recommend using 640x480, 60Hz for the PC mode, they provide the best picture quality.
  In MT/MZ-50PZ44/45/46/47/90/91/92/93 series, we recommend using 1024x768, 60Hz for the PC mode, they provide the best picture quality.
- If the resolution of PC is over UXGA, there will be no picture on the Monitor.
- Connect the signal cable from the monitor output port of the PC to the RGB INPUT(PC INPUT) port of the Monitor or the signal cable from the DVI output port of the PC to the DVI INPUT(DIGITAL RGB INPUT) port on the Monitor.
- Connect the audio cable from the PC to the Audio input on the Monitor. (Audio cables are not included with the Monitor).
- If using a sound card, adjust PC sound as required.
- This monitor apply a VESA Plug and Play Solution. The monitor provides EDID data to the PC system with a DDC protocol. The PC adjusts automatically to use this monitor.
- DDC protocol is preset for RGB (Analog RGB), DVI (DVI, Digital RGB) mode.
- If required, adjust the monitor settings for Plug and Play functionally.
- If graphic card on the PC does not output analog and digital RGB simultaneously, connect only one of both RGB INPUT (PC INPUT) or DVI INPUT (DIGITAL RGB INPUT) to display the PC on the monitor.
  If graphic card on the PC does output analog and digital RGB simultaneously, set the monitor to either RGB or DVI; (the other mode is set to Plug and Play automatically by the monitor.)
- DOS mode may not work depending on video card if using a DVI-I cable.
- To see a normal picture, match the VGA mode and DVI signal (640x480, 848x480, 852x480, 1360x768 or 1366x768). (See page 11)

PC Setup

1. Turn on the PC and apply power to the Monitor.
2. Turn on the display by pressing the **POWER** button on the Monitor's remote control.
3. Use the **INPUT SELECT** button on the remote control to select the RGB or DVI input source.
4. Set the resolution output of the PC to SXGA or under (1280 x 1024, 60Hz).

Displayable Monitor Specification

RGB / DVI mode

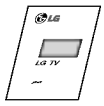
Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
	37.861	85.08
720x400	31.469	70.08
	37.927	85.03
640x480	31.469	59.94
	35.000	66.66
	37.861	72.80
	37.500	75.00
	43.269	85.00
848x480	31.500	60.00
	35.000	70.00
	37.500	75.00
852x480	31.500	60.00
	37.799	70.00
	39.375	75.00
800x600	35.156	56.25
	37.879	60.31
	48.077	72.18
	46.875	75.00
	53.674	85.06
832x624	49.725	74.55
1024x768	48.363	60.00
	54.476	70.06
	60.023	75.02
1152x864	54.348	60.05
	63.995	70.01
	67.500	75.00
1152x870	68.681	75.06
1280x960	60.000	60.00
1280x1024	63.981	60.02

MT/MZ-42PZ44/45/46/47/90/91/92/93 series

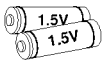
Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	37.861	85.08
720x400	31.469	70.08
	37.927	85.03
640x480	31.469	59.94
	35.000	66.66
	37.861	72.80
	37.500	75.00
	43.269	85.00
848x480	31.500	60.00
	35.000	70.00
	37.500	75.00
852x480	31.500	60.00
	35.000	70.00
	37.500	75.00
800x600	35.156	56.25
	37.879	60.31
	46.875	75.00
	53.674	85.06
832x624	49.725	74.55
1024x768	48.363	60.00
	56.476	70.06
	60.023	75.02
1360x768	47.700	60.00
	59.625	75.02
1366x768	47.700	60.00
	59.625	75.02
1152x864	54.348	60.05
	63.995	70.01
	67.500	75.00
1280x960	60.000	60.00
1280x1024	63.981	60.02

MT/MZ-50PZ44/45/46/47/90/91/92/93 series

Accessories



Owner's Manual



Alkaline batteries



BNC-RCA adaptor (optional)



Remote Control handset



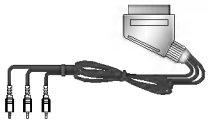
D-sub 15 pin cable



Power Cord



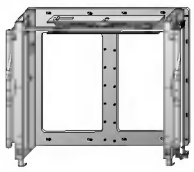
DVI-D Cable



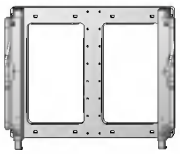
Phone scart cable (Optional)

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.



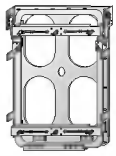
Tilt wall mounting bracket



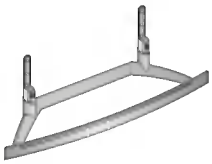
Wall mounting bracket

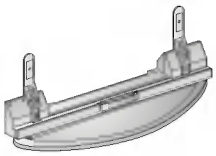


Ceiling mounting bracket



Vertical Wall mounting bracket





Desktop stand

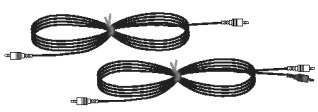




Desktop Speaker stand



Video cables



Audio cables

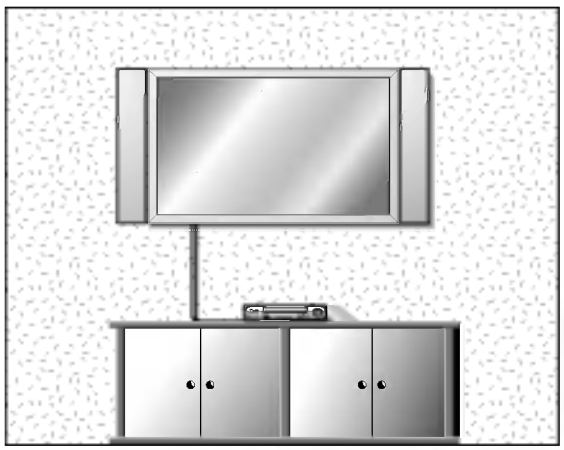


Speakers

Monitor Installation Options

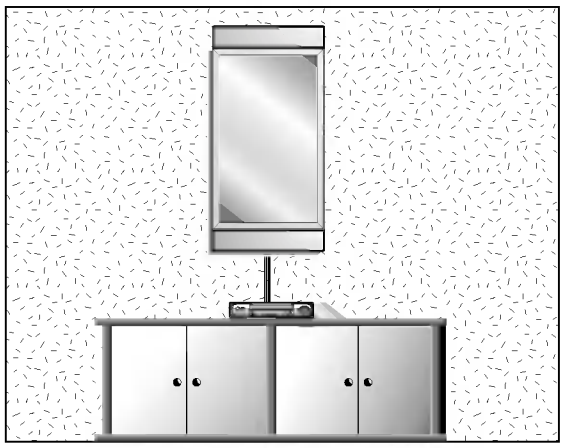
- The Monitor can be installed in different ways such as on a wall, or on a desktop etc.
- Install this monitor only in a location where adequate ventilation is available.
- This monitor is designed so that it can be mounted either horizontally or vertically.

Wall Mount: Horizontal Installation



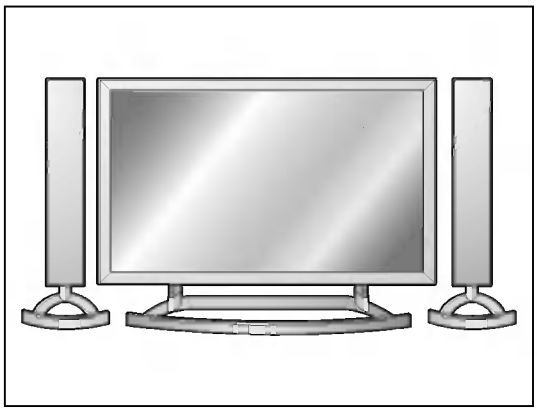
- The monitor can be installed on a wall as shown above. (For further information, refer to the optional 'Wall Mounting Bracket Installation and Setup Guide'.)
- Speakers are optional, and are shown for illustration only.

Wall Mount: Vertical Installation (MT/MZ-42/50PZ45/47 (or MT/MZ-42/50PZ91/93) series only)



- The monitor can be installed vertically on the wall as shown above.(For further information, refer to the optional 'Wall Mounting Bracket Installation and Setup Guide'.)
  Caution: When installing the monitor vertically, the front panel controls must be in the left-down side position as shown above.
- Speakers are optional, and are shown for illustration only.
- **Note:** To use the Monitor in a vertical orientation, the source's image must also be in a vertical format.

Desktop Pedestal Installation



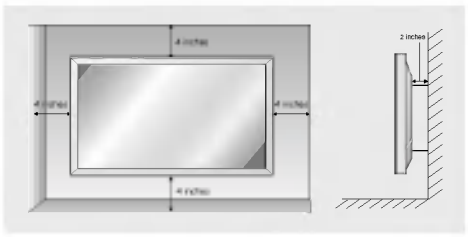
- The Monitor can be mounted on a desk as shown above. (For further information, refer to the optional 'Desktop Stand Installation and Setup Guide'.)
- Speakers and speaker stands shown are optional, and are shown for example only.

Caution

- When installing the monitor vertically, you have to change the menu display mode so that the menus will appear correctly and also to protect the monitor from overheating (Refer to p. 19).
- Install this monitor only in a location where adequate ventilation is available.

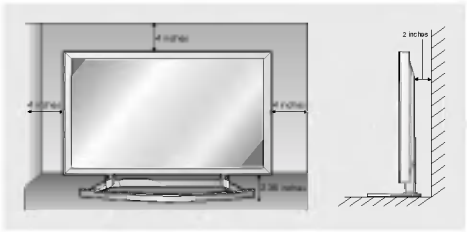
To Mount on a Wall

Wall mount minimum allowable clearances for adequate ventilation.



To Install on a Desktop

Pedestal mount minimum allowable clearances for adequate ventilation.



Turning on the Monitor

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

Turning on the Monitor just after installation

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 **INPUT SELECT** button on the Monitor or press the **POWER**, **INPUT SELECT** button on the remote control and then the Monitor will switch on.

Turning on the Monitor (power cord is still connected)

1. If the Monitor was turned off with the ⏻ ON/OFF button on the Monitor

- Press the ⏻ **ON/OFF** button on the Monitor to turn the Monitor on.

2. If the Monitor was turned off with the remote control and the ON/OFF button on the Monitor

- Press the ⏻ **ON/OFF** button on the Monitor and then press the **INPUT SELECT** button on the Monitor or press the **POWER**, **INPUT SELECT** button on the remote control to turn the Monitor on.

On-Screen Menu Language Selection (option)

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

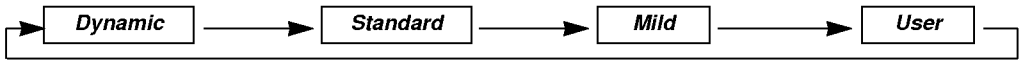
1. Press the **MENU** button and then use ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then use ▲ / ▼ button to select ***Language***.
3. Press the ► button and then use ▲ / ▼ button to select your desired language.
   From this point on, the on-screen menus will be shown in the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

Picture Menu Options

PSM (Picture Status Memory)

- This function adjusts the Monitor 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.

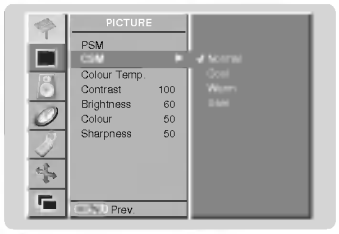


   - You can also select ***Dynamic***, ***Standard***, ***Mild*** or ***User*** in the ***PICTURE*** menu.
   - Picture options ***Dynamic***, ***Standard*** and ***Mild*** are preset and programmed for good picture quality at the factory and cannot be changed.

Adjusting Auto Colour Control

- To initialize values (reset to default settings), select the ***Normal*** option.
- When adjusting color temperature options (red, green, or blue) manually, CSM is automatically changed to ***User***.

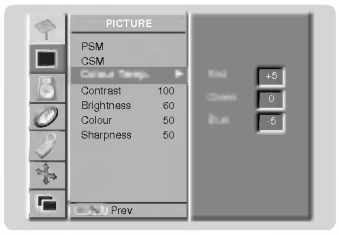
1. Press the **MENU** button and then use ▲ / ▼ button to select the PICTURE menu.
2. Press the ► button and then use ▲ / ▼ button to select ***CSM***.
3. Press the ► button and then use ▲ / ▼ button to select the desired colour temperature.
4. Press the **MENU** button.



Manual Colour Temperature Control (User option)

- You can adjust red, green, or blue to any colour temperature you prefer.

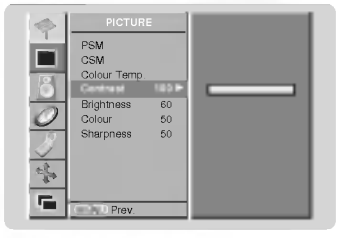
1. Press the **MENU** button and then use ▲ / ▼ button to select the PICTURE menu.
2. Press the ► button and then use ▲ / ▼ button to select ***Colour Temp.***.
3. Press the ► button and then use ▲ / ▼ button to select a colour.
4. Use the ◄ / ► button to make appropriate adjustments.
5. Press the **MENU** button.
   - The adjustment range of ***Red***, ***Green*** and ***Blue*** is -10~+10.



Manual Picture Control (User option)

- You can adjust picture contrast, brightness, colour, 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 the desired picture option.
3. Press the ► button and then use ◄ / ► button to make appropriate adjustments.
4. Press the **MENU** button.

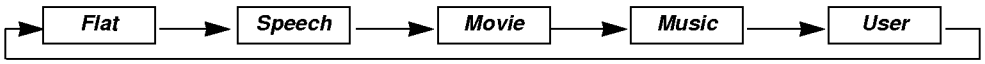


Sound Menu Options

SSM (Sound Status Memory)

- 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.
- When adjusting sound options (treble, bass, and balance) manually, SSM is automatically changed to ***User***.

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

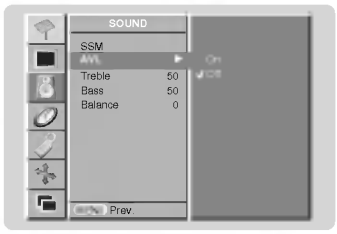


- You can also select ***Flat***, ***Speech***, ***Movie***, ***Music***, or ***User*** in the ***SOUND*** menu.

AVL (Auto Volume Leveler)

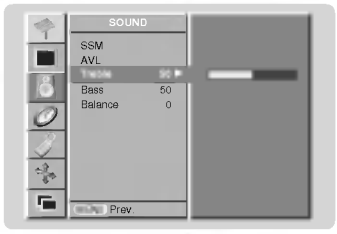
- This feature maintains an equal volume level; even if you change channels.

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 **MENU** button.



Adjusting Sound Control (User option)

1. Press the **MENU** button and then use ▲ / ▼ button to select the SOUND menu.
2. Press the ► button and then use ▲ / ▼ button to select the desired sound item.
3. Press the ► button and then use ◄ / ► button to make appropriate adjustments.
4. Press the **MENU** button.



Time Menu Options

Setting the Clock

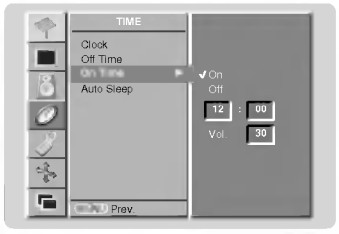
- If current time setting is erased by a power failure, if TV is unplugged or if the monitor is turned off with the ⏻ON/OFF button on the monitor, reset the clock.



1. Press the **MENU** button and then use ▲ / ▼ button to select the TIME menu.
2. Press the ► button and then use ▲ / ▼ button to select ***Clock***.
3. Press the ► button and then use ▲ / ▼ button to adjust the hour.
4. Press the ► button and then use ▲ / ▼ button to adjust the minute.
5. Press the **MENU** button.

Setting the On/Off Timer

- Timer function operates only if current time has been already set.
- Off Timer function overrides on Timer function if they are set to the same time.
- The monitor must be in standby mode for the On Timer to work.

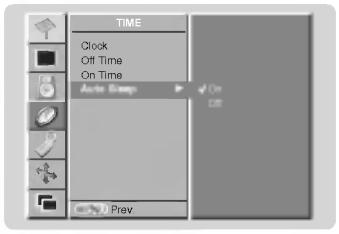


1. Press the **MENU** button and then use ▲ / ▼ button to select the TIME menu.
2. Press the ► button and then use ▲ / ▼ button to select ***Off Time*** or ***On Time***.
3. Press the ► button and then use ▲ / ▼ button to select ***On***.
4. Press the ► button and then use ▲ / ▼ button to adjust the hour.
5. Press the ► button and then use ▲ / ▼ button to adjust the minute.
6. **Only *On Time* function**; Press the ► button and then use ▲ / ▼ button to adjust volume level.
7. Press the **MENU** button.

- To cancel ***Off/On Time*** function
  Press the ▲ / ▼ button to select ***Off*** in step 3.

Auto Sleep

- If there is no input signal, the monitor turn off automatically after 10 minutes.



1. Press the **MENU** button and then use ▲ / ▼ button to select the TIME 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 **MENU** button.

Sleep Timer

- Sleep timer turns the Monitor off at the preset time.
- Press the **SLEEP** button to select the number of minutes. The display zZ--- ***Min*** will appear on the screen, followed by ***10***, ***20***, ***30***, ***60***, ***90***, ***120***, ***180*** and ***240***. The timer begins to count down from the number of minutes selected.

a. To check the remaining sleep time, press the **SLEEP** or **OK** button once.
b. To cancel the sleep time, repeatedly press the **SLEEP** button until the display zZ--- ***Min*** appears.
c. If you turn the monitor off after setting the sleep timer, the setting will be erased.

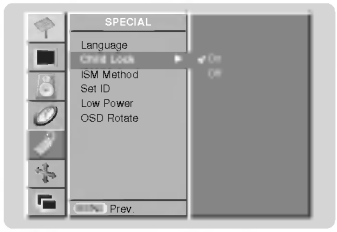
Special Menu Options

- In some models, the ***OSD Rotate*** will not display.

Child lock

- The monitor can be set up so that it can only be used with the remote control.

1. Press the **MENU** button and then ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then ▲ / ▼ button to select ***Child Lock***.
3. Press the ► button and then ▲ / ▼ button to select ***On*** or ***Off***.
4. Press the **MENU** button.



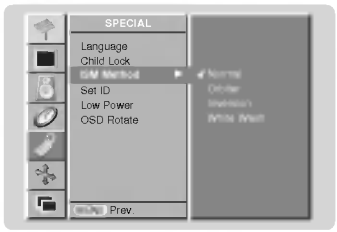
- This monitor programmed to remember which option it was last set to event if you turn the monitor off.
- In ***Child Lock*** '***On***', if the monitor is turned off, press the **INPUT SELECT** button on the monitor or **POWER** and **INPUT SELECT** on the remote control.
- With the ***Child Lock On***, the display '⚠ ***Child Lock***' appears on the screen if any button on the front panel is pressed while viewing the monitor.

ISM (Image Sticking Minimization) Method

- 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 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 ▲ / ▼ button to select ***ISM Method***.
3. Press the ► button and then ▲ / ▼ button to select either ***Normal***, ***White wash***, ***Orbiter*** or ***Inversion***. If you unnecessary to set this function, set ***Normal***.

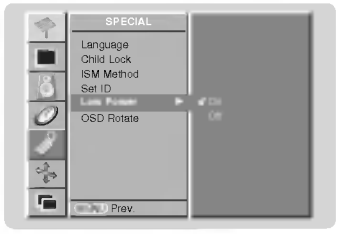
   • ***White wash***:
   White Wash removes permanent images from the screen. Note: An excessive permanent image may be impossible to clear entirely with White Wash. To return to normal viewing, press the any button.
   • ***Orbiter***:
   Orbiter may help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a permanent image on the screen, the screen will move every 2 minutes.
   • ***Inversion***:
   This is the function to invert the panel color of monitor. The panel color is automatically inverted every 30 minutes.
4. Press the **MENU** button.



Low Power

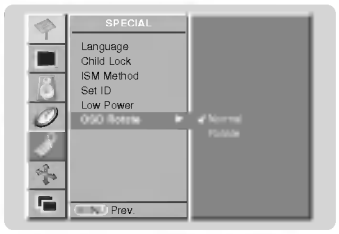
- This is the function to reduce the power consumption of the monitor.

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***.
4. Press the **MENU** button.



Menu Rotation for Vertical Viewing (For MT/MZ-42/50PZ45/47 (or MT/MZ-42/50PZ91/93) series models only)

1. Press the **MENU** button and then use ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then use ▲ / ▼ button to select ***OSD Rotate***.
3. Press the ► button and then use the ▲ / ▼ button to select ***Normal*** or ***Rotate***.
   • Select ***Normal*** : if the monitor is installed horizontally.
   • Select ***Rotate*** : if the monitor is installed vertically.
4. Press the **MENU** button.

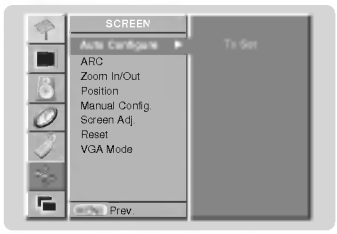


Screen Menu Options

Auto adjustment (RGB [PC] mode only)

- Automatically adjusts picture position and minimizes image shaking.

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 Configure***.
3. Press the ► button to start ***Auto Configure***.
   • When ***Auto Configure*** 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.***.



- Although the image is still not correct, your Monitor is functioning properly but needs further adjustment.
- The ***Auto Configure*** and the ***Manual Config.*** functions don't need to be run for DVI mode.
- This function doesn't work in RGB-Digital broadcast.

Setting Picture Format

- You can watch the screen in various picture formats; ***Auto***, ***4:3***, ***16:9*** (Wide), ***14:9*** and ***Zoom***.
- You can repeatedly press the **ARC** button to select your desired picture format.
- You can also select ***Auto***, ***4:3***, ***16:9*** (Wide), ***14:9*** and ***Zoom*** in the SCREEN menu.

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

4:3
Following selection will lead you to view a picture with an original 4:3 aspect ratio, with black bars appearing at both the left and right sides.

16:9
Following selection will lead you to adjust the picture horizontally, in a linear proportion, to fill the entire screen (useful for viewing 4:3 formatted DVDs).

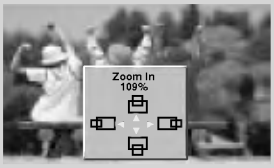
14:9
You can enjoy the picture format of 14:9 or general TV programme through the 14:9 mode. The screen 14:9 is viewed just like that the screen 4:3 is magnified to the left / right.

Zoom
Following selection will lead you to view the picture without any alternation, while filling the entire screen. However, the top and bottom portions of the picture will be cropped.

Picture Size Zoom

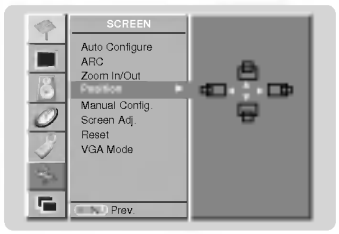
• When enlarging or reducing the picture, the screen may be display unnatural picture.

1. Press the **ZOOM+/ZOOM-** button to enlarge or reduce the picture size.
2. Adjust the main picture position with the ▲ / ▼ / ◄ / ► buttons in enlarged picture mode.



Screen Position

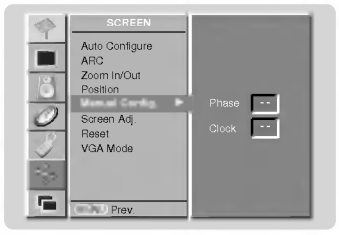
- This function works in the following mode:
  RGB-PC or COMPONENT 480p/576p/1080i/1152i.
- You are available to this function after adjusting ***Zoom In/Out*** in AV (or AV1, AV2), S-Video or COMPONENT 480i/576i mode.



1. Press the **MENU** button and then ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then ▲ / ▼ button to select ***Position***.
3. Press the ► button and then ▲ / ▼ or ◄ / ► button to adjust the position.
4. Press the **MENU** button.

Manual Configure (RGB [PC] mode only)

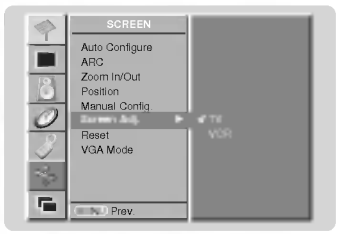
- If the picture isn't clear after auto adjustment and especially that characters are still trembling, adjust the picture phase manually.
- To correct the screen size, adjust ***Clock***.



1. Press the **MENU** button and then use ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then use ▲ / ▼ button to select ***Manual Config.***.
3. Press the ► button and then use ▲ / ▼ button to select ***Phase*** or ***Clock***.
4. Press the ◄ / ► button to make appropriate adjustments.
   - The adjustment range of ***Phase*** is 0 ~ 31.
   - The adjustment range of ***Clock*** is -50 ~ +50.
5. Press the **MENU** button.

Screen Adjustments (AV (or AV1, AV2), S-Video and COMPONENT 480i/576i mode only)

- Use this function to correct jittering or picture instability while viewing a video tape.



1. Press the **MENU** button and then use ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then use ▲ / ▼ button to select ***Screen Adj.***.
3. Press the ► button and then use ▲ / ▼ button to select ***TV*** or ***VCR***.
   - Select the ***VCR*** option if watching a VCR.
   - Select the ***TV*** option for other equipment.(Except VCR)
4. Press the **MENU** button.

Screen Menu Options

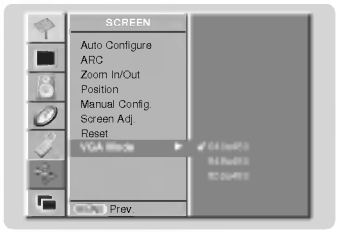
Initializing (Reset to original factory value)

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

Selecting Wide VGA mode (RGB, DVI mode only)

- To see a normal picture, match the resolution of RGB mode and selection of VGA mode.

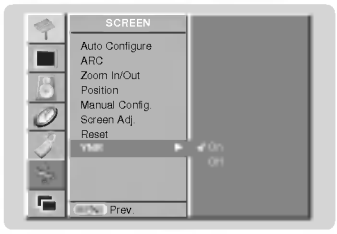
1. Press the **MENU** button and then use ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then use ▲ / ▼ button to select ***VGA Mode***.
3. Press the ► button and then use ▲ / ▼ button to select the desired VGA resolution.
4. Press the **MENU** button.



Luminance Noise Reduction (option)

- You can select ***On*** or ***Off*** to reduce the picture noise which may appear on the screen during watching the TV.
- This function works in the following mode:
  AV (AV1 or AV2), S-Video or COMPONENT 480i/576i.

1. Press the **MENU** button and then use ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then use ▲ / ▼ button to select ***YNR***.
3. Press the ► button and then use ▲ / ▼ button to select ***On*** or ***Off***.
4. Press the **MENU** button.

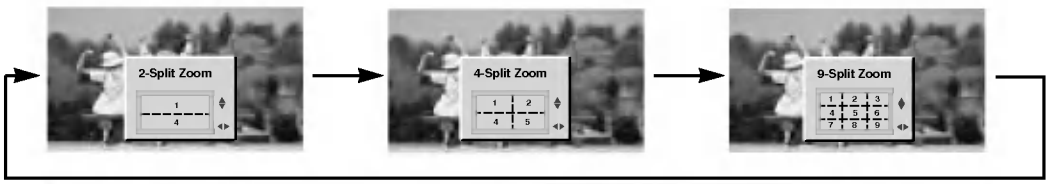


Split Zoom

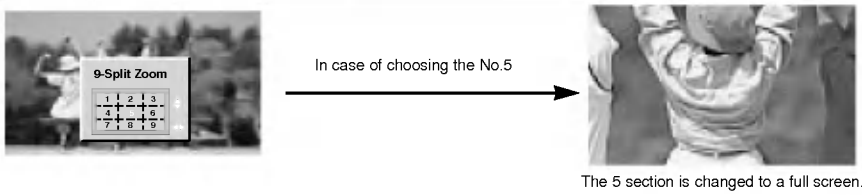
- This is the function to enlarge the screen with regular ration.
- It's available to use this function in every input source.
- It's not available to use this function in ***Rotate*** mode.
- With 2-SPLIT ZOOM, you can only move the screen into upside or downside.
- If a screen is enlarged, a screen can move without selecting a section of screen.

1. Press the **SPLIT ZOOM** button.

   • Each press of **SPLIT ZOOM** button changes the screen display as shown below.



In case of 9-Split Zoom:
Press the number button to select the section you enlarge.
If you choose No.5, the 5 section is enlarged and also can move the enlarged screen with using the ▲ / ▼ or ◄ / ► button.



The 5 section is changed to a full screen.

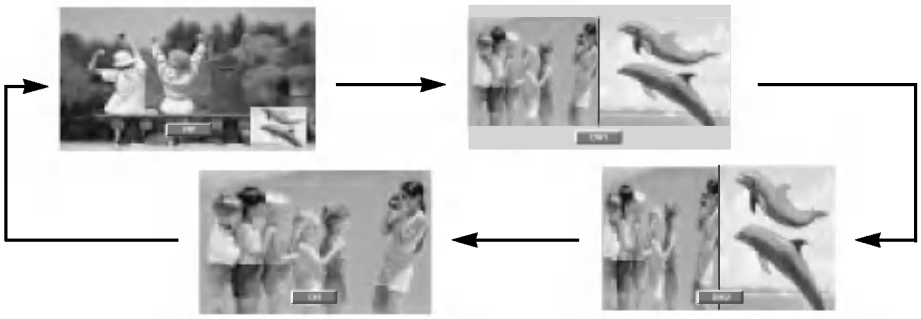
PIP (Picture-in-Picture) Feature

- PIP lets you view 2 different inputs (sources) on your monitor screen at the same time. One source will be large, and the other source will show a smaller inset image.

Watching PIP

Press the **PIP/DW** button to show the sub picture.

- Each press of **PIP/DW** button changes the screen display as shown below.



Selecting a Input Signal Source for the PIP

Press the **PIP INPUT** button to select the input source for the sub picture.



Moving the PIP

Press the **WIN.POSITION** button.

Repeatedly press the ▲ / ▼ or ◄ / ► button until desired position is achieved. The sub picture moves up/down or left/right.



PIP Size

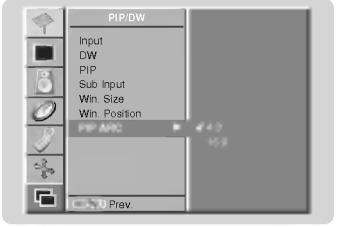
Press the **WIN.SIZE** button and then ◄ / ► button to adjust the sub picture size.

With **WIN.SIZE** button in twin picture mode, main and sub picture is adjusted simultaneously. With **WIN.SIZE** button in PIP mode, sub picture is adjusted.



PIP Aspect Ratio

1. Press the **MENU** button and then use ▲ / ▼ button to select the PIP/DW menu.
2. Press the ► button and then use ▲ / ▼ button to select ***PIP ARC***.
3. Press the ► button and then use ▲ / ▼ button to select ***4:3*** or ***16:9***.
4. Press the **MENU** button.



External Control Device Setup

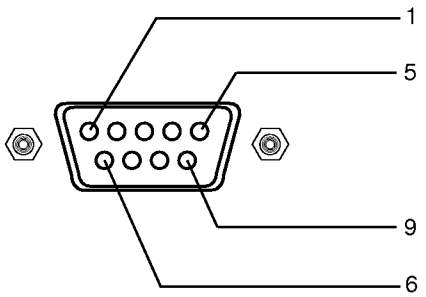
- Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the Monitor's functions externally.

How to connect external control equipment

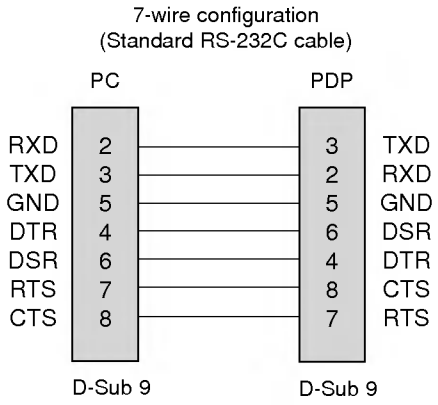
- Connect the serial port of the control device to the RS-232C jack on the Monitor back panel.
- RS-232C connection cables are not supplied with the Monitor.
- The Monitor remote control and front panel controls (except main power) will not be functional if the Monitor is controlled by a PC computer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

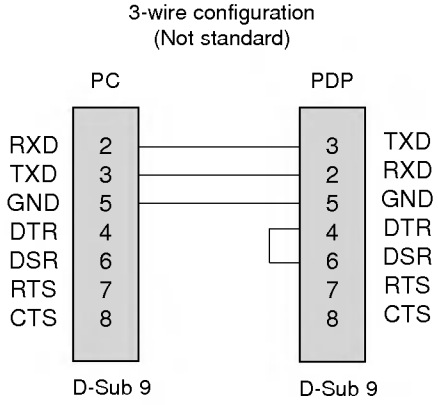
Type of connector; D-Sub 9-pin male

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

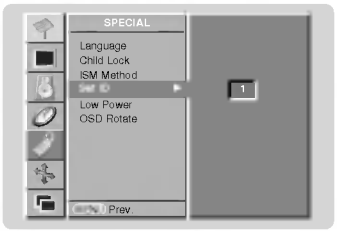




Set ID

- Use this function to specify a monitor ID number.
- Refer to 'Real Data Mapping 1'. See page 29.

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 : 115200 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code

* Use a crossed (reverse) cable.

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1
02. Input Select	k	b	0 ~ 4
03. Aspect Ratio	k	c	0 ~ 4
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. Colour	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. PIP/Twin Picture (DW)	k	n	0 ~ 3
15. PIP Aspect Ratio	k	o	0 ~ 1
16. Split Zoom	k	p	21~99
17. PIP Position	k	q	0 ~ 3
18. Treble	k	r	0 ~ 64
19. Bass	k	s	0 ~ 64
20. Balance	k	t	0 ~ 64
21. Colour Temperature (CSM)	k	u	0 ~ 2
22. Red Adjustment	k	v	0 ~ 64
23. Green Adjustment	k	w	0 ~ 64
24. Blue Adjustment	k	$	0 ~ 64
25. PIP input Source	k	y	0 ~ 4
26. SSM Mode	k	x	0 ~ 4
27. Abnormal Status	k	z	0 ~ a
28. ISM Method	j	p	0 ~ 3
29. Low Power	j	q	0 ~ 1
30. Orbiter Time Setting	j	r	1 ~ FE
31. Orbiter Pixel Setting	j	s	0 ~9
32. Auto Configure	j	u	1

* When setting the 27 ~ 32, a menu doesn't display on screen.

Transmission / Receiving Protocol

Transmission

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

* [Command 1] : First command to control PDP set. (j or k)
* [Command 2] : Second command to control PDP set.
* [Set ID] : You can adjust the set ID to choose desired monitor ID number in special menu. See previous page. Adjustment range is 1 ~ 99. When selecting Set ID '0', every connected PDP 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][Data][x]

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

Data 1: Illegal Code
2: not support function
3: Wait more time

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

Ack

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

▶ To show Power On/Off.

Transmission

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

Ack

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

* In like manner, if other functions transmit '0xFF' data based on this format, Acknowledgement data feed back presents status about each function.

02. Input Select (Command 2 : b)

▶ 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

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

Data 0 : RGB
1 : Component (or AV1)
2 : AV (or AV2)
3 : S-Video
4 : DVI

Ack

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

03. Aspect Ratio (Command 2 : c) (Main Picture Size)

▶ To adjust the screen format. (Main picture 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 0 : Wide screen (16:9)
1 : Normal screen (4:3)
2 : Full screen (Zoom)
3 : Auto
4 : 14:9

Ack

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

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

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)

Ack

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

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)

Ack

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

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 mapping 1'. See page 29.

Ack

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

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'. See page 29.

Ack

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

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'. See page 29.

Ack

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

09. Colour (Command 2 : i)

▶ To adjust the screen colour.
You can also adjust colour in the PICTURE menu.

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 29.

Ack

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

10. Tint (Command 2 : j) (option)

▶ 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'. See page 29.

Ack

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

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'. See page 29.

Ack

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

12. OSD Select (Command 2 : l)

▶ To select OSD (On Screen Display) on/off when controlling remotely.

Transmission

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

Data 0 : OSD off 1 : OSD on

Ack

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

13. Remote control lock mode (Command 2 : m)

▶ To lock the front panel controls on the monitor and remote control.

Transmission

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

Data 0 : Lock off 1 : Lock on

Ack

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

* If you're not using the remote control, use this mode. When main power is on/off, external control lock is released.

14. PIP / Twin (DW) (Command 2 : n)

▶ To control the PIP (Picture In picture)/Twin picture.
You can also control the PIP/TWIN picture using the PIP/DW button on the remote control or in the PIP/DW menu.

Transmission

[k][n][ ][Set ID][ ][Data][Cr]

Data 0: PIP off
1: PIP
2: DW1
3: DW2

Ack

[n][ ][Set ID][ ][OK][Data][x]

15. PIP Aspect Ratio (Command 2 : o)

▶ To select the PIP picture format.
You can also adjust the screen format for PIP in the PIP/DW menu.

Transmission

[k][o][ ][Set ID][ ][Data][Cr]

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

Ack

[o][ ][Set ID][ ][OK][Data][x]

16. Split Zoom (Command 2 : p)

▶ To operate split zoom function and select the split zoom section number.

Transmission

[k][p][ ][Set ID][ ][Data][Cr]

Data Min: 21 ~ Max:99
ex. Data 21: Selection 1 of 2 split zoom.
• Refer to 'Real data mapping 2'.

Ack

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

*** Real data mapping 2**

21 : Selection 1 of 2 split zoom
24 : Selection 4 of 2 split zoom
41 : Selection 1 of 4 split zoom
42 : Selection 2 of 4 split zoom
44 : Selection 4 of 4 split zoom
45 : Selection 5 of 4 split zoom
91 : Selection 1 of 9 split zoom
⋮
99 : Selection 9 of 9 split zoom

17. PIP Position (Command 2 : q)

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

Transmission

[k][q][ ][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

Ack

[q][ ][Set ID][ ][OK][Data][x]

18. Treble (Command 2 :r)

▶ To adjust treble.
You can also adjust treble in the SOUND menu.

Transmission

[k][r][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 29.

Ack

[r][ ][Set ID][ ][OK][Data][x]

19. Bass (Command 2 : s)

▶ To adjust bass.
You can also adjust bass in the SOUND menu.

Transmission

[k][s][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 29.

Ack

[s][ ][Set ID][ ][OK][Data][x]

20. Balance (Command 2 : t)

▶ To adjust balance.
You can also adjust balance in the SOUND menu.

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 29.

Ack

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

21. Colour Temperature (Command 2 : u)

▶ To adjust colour temperature.
You can also adjust CSM in the PICTURE menu.

Transmission

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

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

Ack

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

22. Red Adjustment (Command 2 : v)

▶ To adjust red in colour temperature.

Transmission

[k][v][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 3'. See page 29.

Ack

[v][ ][Set ID][ ][OK][Data][x]

23. Green Adjustment (Command 2 : w)

▶ To adjust green in colour temperature.

Transmission

[k][w][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 3'. See page 29.

Ack

[w][ ][Set ID][ ][OK][Data][x]

24. Blue Adjustment (Command 2 : $)

▶ To adjust blue in colour temperature.

Transmission

[k][$][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 3'. See page 29.

Ack

[$][ ][Set ID][ ][OK][Data][x]

25. PIP Input Select (Command 2 : y)

▶ To select input source for sub picture in PIP/Twin picture mode. You can also adjust input source for sub picture using PIP INPUT button on remote control.

Transmission

[k][y][ ][Set ID][ ][Data][Cr]

Data 0 : RGB
1 : Component (or AV1)
2 : AV (or AV2)
3 : S-Video
4 : DVI

Ack

[y][ ][Set ID][ ][OK][Data][x]

26. SSM Mode (Command 2 : x)

▶ To select sound mode.

Transmission

[k][x][ ][Set ID][ ][Data][Cr]

Data 0 : Flat
1 : Speech
2 : Movie
3 : Music
4 : User

Ack

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

27. Abnormal State (Command 2 : z)

▶ To recognize an abnormal state.

Transmission

[k][z][ ][Set ID][ ][FF][ ][Cr]

Data 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
5: 5V down
6: AC down
7: Turn the monitor off by Fan Alarm function
8: Turn the monitor off by off time function
9: Turn the monitor off by auto off function
a: Turn the monitor off by AV board detect

Ack

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

* This function is "read only".

28. ISM Method (Command 1 : j, Command 2 : p)

▶ To control the ISM method. You can also adjust ISM Method in SPECIAL menu.

Transmission

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

Data 0 : Normal Mode
1 : Orbiter
2 : Inversion
3 : White Wash

Ack

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

29. Low Power (Command 1 : j, Command 2 : q)

▶ To reduce the power consumption of the monitor. You can also adjust Low Power in SPECIAL menu.

Transmission

[j][q][ ][Set ID][ ][Data][ ][Cr]

Data 0 : Off
1 : On

Ack

[q][ ][Set ID][ ][OK][Data][x]

30. Orbiter Time Setting (Command 1 : j, Command 2 : r)

▶ To adjust orbiter operation time term.

Transmission

[j][r][ ][Set ID][ ][Data][Cr]

Data Min: 1 ~ Max: FE
• Refer to 'Real data mapping 1'. See page 29.

Acknowledgement

[r][ ][Set ID][ ][OK][Data][x]

31. Orbiter Pixel Setting (Command 1 : j, Command 2 : s)

▶ To adjust pixel number in orbiter function.

Transmission

[j][s][ ][Set ID][ ][Data][Cr]

Data Min: 0 ~ Max: 9
• Refer to 'Real data mapping 1'. See page 29.

Acknowledgement

[s][ ][Set ID][ ][OK][Data][x]

32. Auto Configure (Command 1 : j, Command 2 : u)

▶ To adjust picture position and minimize image shaking automatically. It works only in RGB (PC), DVI (PC) mode.

Transmission

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

Data 1: To set

Acknowledgement

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

*** 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)
⋮
64 : Step 100

*** Real data mapping 3**

0 : -10
5 : -9
A : -8
⋮
2D: -1
32 : 0
37 : +1
⋮
5F : +9
64 : +10

IR Code (NEC Format)

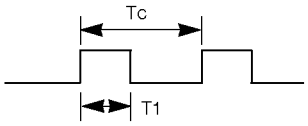
How to connect

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

Remote Control IR Code (NEC Format)

▶ **Output waveform**

Single pulse, modulated with 37.917KHz signal at 455KHz

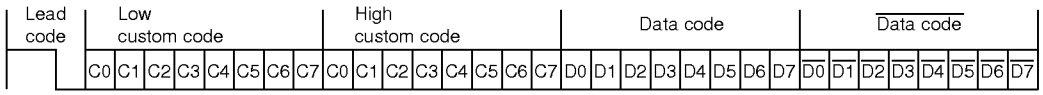


Carrier frequency

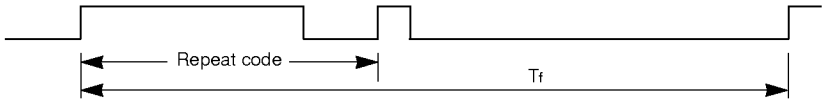
F_{CAR} = 1/Tc = fosc/12
Duty ratio = T1/Tc = 1/3

▶ **Configuration of frame**

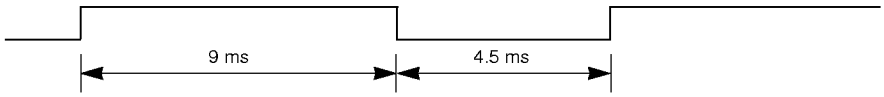
• 1st frame



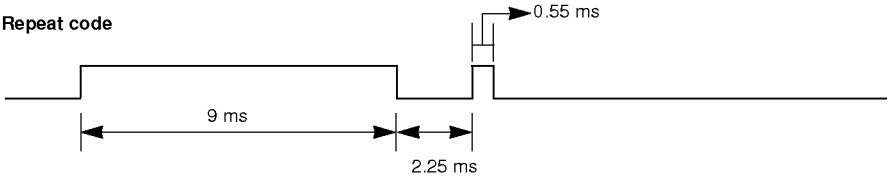
• Repeat frame



▶ **Lead code**

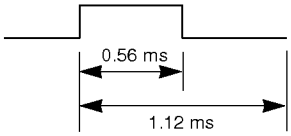


▶ **Repeat code**

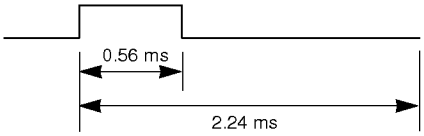


▶ **Bit description**

• Bit "0"

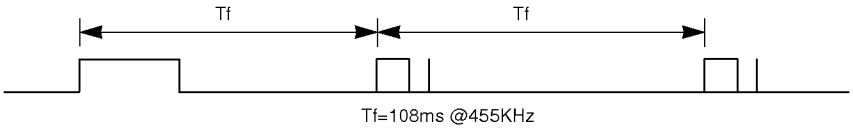


• Bit "1"



▶ **Frame interval : Tf**

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



Code (Hexa)	Function	Note
00H	UP (▲)	R/C Button
01H	DOWN (▼)	R/C Button
02H	VOL+ (►)	R/C Button
03H	VOL- (◄)	R/C Button
08H	POWER	R/C Button (Power On/Off)
C4H	POWER ON	Discrete IR Code (Only Power On)
C5H	POWER OFF	Discrete IR Code (Only Power Off)
09H	MUTE	R/C Button
10H	Number Key 0	R/C Button
11H	Number Key 1	R/C Button
12H	Number Key 2	R/C Button
13H	Number Key 3	R/C Button
14H	Number Key 4	R/C Button
15H	Number Key 5	R/C Button
16H	Number Key 6	R/C Button
17H	Number Key 7	R/C Button
18H	Number Key 8	R/C Button
19H	Number Key 9	R/C Button
0BH	INPUT SELECT	R/C Button
98H	MULTIMEDIA	R/C Button (Input COMPONENT, RGB or DVI Selection)
BFH	COMPONENT	Discrete (Input COMPONENT Selection)
C6H	DVI	Discrete (Input DVI Selection)
D5H	RGB	Discrete (Input RGB Selection)
D6H	TV	Discrete (Input TV Selection)
5AH	AV	Discrete (Input AV Selection)
D8H	S-VIDEO	Discrete (Input S-VIDEO Selection)
0AH	I/II/*	R/C Button
0EH	SLEEP	R/C Button
43H	MENU	R/C Button
40H	ZOOM +	R/C Button
41H	ZOOM -	R/C Button
44H	OK(■)	R/C Button
4DH	PSM	R/C Button
52H	SSM	R/C Button
53H	LIST	R/C Button
20H	TEXT/*	R/C Button
2AH	REVEAL	R/C Button
22H	MODE	R/C Button
24H	MIX	R/C Button
26H	TIME	R/C Button
62H	UPDATE	R/C Button
64H	SIZE	R/C Button
65H	HOLD	R/C Button
70H	INDEX	R/C Button
60H	PIP/DW	R/C Button
61H	PIP INPUT	R/C Button
63H	SWAP	R/C Button
69H	WIN.SIZE	R/C Button
6AH	WIN.POSITION	R/C Button
71H	PR+/*	R/C Button
72H	PR-/*	R/C Button
7BH	SPLIT ZOOM	R/C Button
79H	ARC	R/C Button (4:3/16:9 Mode Selection)
76H	ARC (4:3)	Discrete IR Code (Only 4:3 mode)
77H	ARC (16:9)	Discrete IR Code (Only 16:9 mode)
AFH	ARC (Zoom)	Discrete IR Code (Only Zoom mode)

Notes

Notes

Troubleshooting Checklist

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.6) • Install new batteries. (Refer to p.6)
Picture appears slowly, after switching on	• This is normal as the image is muted during the startup process of the monitor. Please contact your service centre, if the picture has not appeared after five minutes.
No or Poor colour or Poor picture	• Select ***Colour*** in the ***Picture*** menu and press the **VOLUME** (►) button. (Refer to p.15) • Keep a certain 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.)
Horizontal/vertical bars or picture shaking	• Check for local interference such as an electrical appliance or power tool.
No output from one of the speakers	• Adjust ***Balance*** in the ***Sound*** menu. (Refer to p.16)
Unusual sound from inside the monitor	• A change in ambient humidity or temperature may result in an unusual noise at the time of switching off or on of the monitor and does not indicate a fault with the monitor.

Product Specifications

MODEL	MT-42PZ44/H/B/R/S MT-42PZ46/H/B/R/S MT-42PZ45V/B/R/S MT-42PZ47V/B/R/S MT-42PZ45M/B/R/S MT-42PZ47M/B/R/S MZ-42PZ44/H/B/R/S MZ-42PZ45V/B/R/S MZ-42PZ45M/B/R/S	MT-42PZ90/H/B/R/S MT-42PZ92/H/B/R/S MT-42PZ91V/B/R/S MT-42PZ93V/B/R/S MT-42PZ91M/B/R/S MT-42PZ93M/B/R/S MZ-42PZ90/H/B/R/S MZ-42PZ91V/B/R/S MZ-42PZ91M/B/R/S
Width (inches / mm)	40.7 / 1033	
Height (inches / mm)	24.5 / 622	
Depth (inches / mm)	3.2 / 81	
Weight (pounds / kg)	75 / 34	
Power requirement	AC100-240V, 50/60Hz	
Resolution	852 x 480 (Dot)	
Colour	16,770,000 (256 steps of each R, G and B)	
Operating Temperature Range	32 ~ 104°F (0 ~ 40°C)	
Operating Humidity Range	Less than 80%	

MODEL	MT-50PZ44/H/B/R/S MT-50PZ46/H/B/R/S MT-50PZ45V/B/R/S MT-50PZ47V/B/R/S MT-50PZ45M/B/R/S MT-50PZ47M/B/R/S MZ-50PZ44/H/B/R/S MZ-50PZ45V/B/R/S MZ-50PZ45M/B/R/S	MT-50PZ90/H/B/R/S MT-50PZ92/H/B/R/S MT-50PZ91V/B/R/S MT-50PZ93V/B/R/S MT-50PZ91M/B/R/S MT-50PZ93M/B/R/S MZ-50PZ90/H/B/R/S MZ-50PZ91V/B/R/S MZ-50PZ91M/B/R/S
Width (inches / mm)	48.2 / 1223	
Height (inches / mm)	28.9 / 734	
Depth (inches / mm)	4.1 / 105	
Weight (pounds / kg)	95.2 / 45	
Power requirement	AC100-240V, 50/60Hz	
Resolution	852 x 480 (Dot)	
Colour	16,770,000 (256 steps of each R, G and B)	
Operating Temperature Range	32 ~ 104°F (0 ~ 40°C)	
Operating Humidity Range	Less than 80%	

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

