



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 :

P/NO : 3828VA0556A (RF052B) ©

Safety Instructions

- It is recommended that 50PX4MH / 42/50PX5MH model only be used at an altitude of less than 6561 feet (2000m) to get the best quality picture and sound.

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.

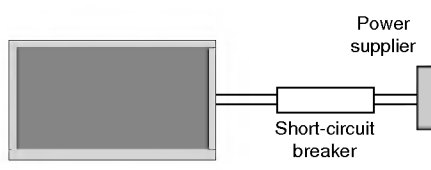
- This may cause a fire or could give an electric shock.

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.

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

- 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 centre.

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

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

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

During storm activity, unplug the set from the wall outlet and don't touch the antenna cable.

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

DISCONNECTING DEVICE FROM MAINS

- Mains plug is the disconnecting device. The plug must remain readily operable.

WARNING in U.K. only

- * This set is supplied with a BS 1363 approved 13 amp mains plug, fused at 13 amp. When replacing the fuse always use a 13 amp BS 1362, BSI or ASTA approved type. Never use this plug with the fuse cover omitted. To obtain a replacement fuse cover contact your dealer or "LG Electronics U.K. Ltd." If the type of plug supplied is not suitable for the mains sockets in your home, then the plug should be removed and a suitable type fitted. A mains plug removed from the mains lead of this set must be destroyed. A mains plug with bared wires is hazardous if inserted in a mains socket. Do not connect either wire to the earth pin, marked with the letter E or with the earth symbol  or coloured green or green and yellow. If any other plug is fitted, use a 13 amp fuse, either in the plug, or at the distribution board. The wires in this mains lead are coloured in accordance with the following codes: **BLUE: NEUTRAL, BROWN: LIVE** As the colours of the wires in the mains lead of this set may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows: The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

* 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

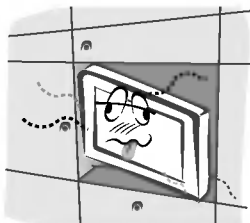
Never touch the power plug with a wet hand.

- This may cause an electric shock.

Disconnect from the mains and remove all connections before moving.

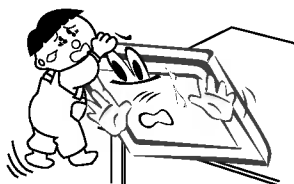
Do not place the set in a built-in installation such as a bookcase or rack.

- Ventilation required.



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

- 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 plug not the cord when disconnecting.

- 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 in unit if power cord or 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 prevent a child from eating them.

- In case of a child eating them, contact 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 set.

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

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

The distance between eyes and the screen should be approx. 5 ~ 7 times the diagonal length of the screen away.

- If not, eyes will strain.

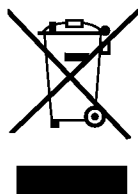
Unplug the set from the wall outlet when it is left unattended and unused for long periods of time or in the occurrence of a state of emergency.

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

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



Disposal of your old appliance

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

Introduction

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 (option)

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 reliability 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.

TO AVOID BURNING IMAGE INTO THE DISPLAY, DO NOT HAVE A STILL IMAGE ON SCREEN FOR EXTENDED PERIOD OF TIME. IMAGE AFTER BURN WILL NOT BE COVERED UNDER WARRANTY ie.Menus, Video games, Borders or LOGOS

WARNING

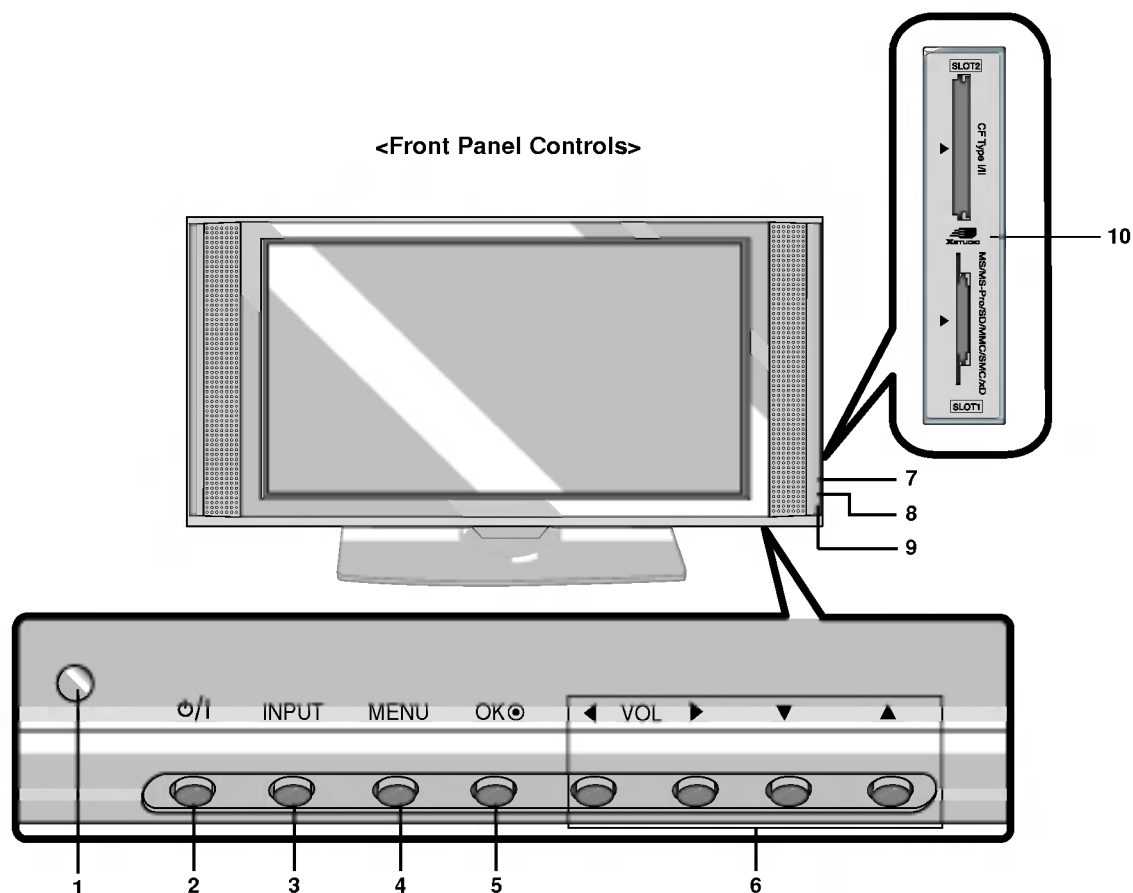
This is Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

WARNING

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

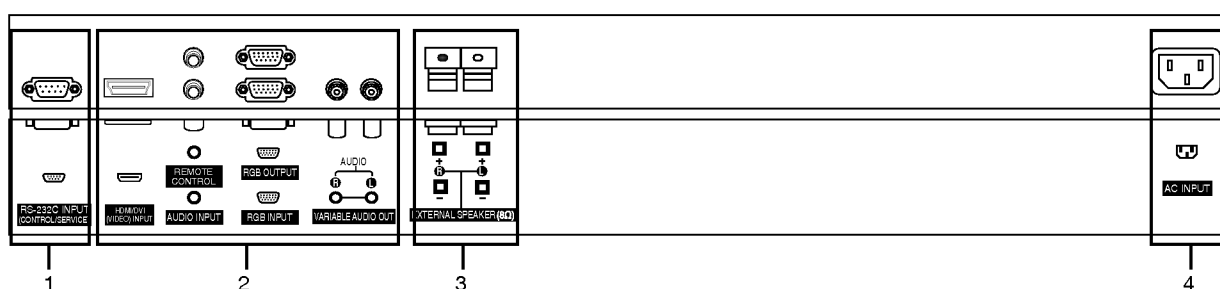
Location and Function of Controls

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



- | | |
|--|--|
| <p>1. Remote Control Sensor</p> <p>2. Power Button
Switches the set on from standby or off to standby.</p> <p>3. INPUT Button</p> <p>4. MENU
Displays on screen menus one by one.
Exits the current menu.
Memorizes menu changes.</p> <p>5. OK
Accepts your selection or displays the current mode.</p> <p>6. ▲ / ▼
Selects a menu item.
Switches the set on from standby.</p> | <p>◀ / ▶ (Volume Up/Down)
Adjusts the volume.
Adjusts menu settings.</p> <p>7. INDEX
Switches FRONT Display on or off.</p> <p>8. Power Indicator
Illuminates red in standby mode, illuminates green when the set is turned on.</p> <p>9. Intelligent Eye
Adjusts picture according to the surrounding conditions.</p> <p>10. Memory Card Slots 1, 2</p> |
|--|--|

<Back Panel>

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

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

2. HDMI(DVI VIDEO) / AUDIO INPUT / RGB INPUT SOCKETS

Connect the monitor output socket of the PERSONAL COMPUTER to this socket.

Note: If you want to use RGB/DVI audio, we strongly recommend that you use the cable that has a core, or the EMI Filter core along with separate cable.

RGB OUTPUT SOCKET

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

REMOTE CONTROL**3. EXTERNAL SPEAKER OUTPUT (8 ohm)**

Connect to optional external speaker(s).

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

4. 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.

External Equipment Viewing Setups

Connecting PC

- To enjoy vivid picture and sound, connect a PC to the set.
- Avoid keeping a fixed image on the set'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 HDMI INPUT(DIGITAL RGB INPUT) port of the set; 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.

RGB / HDMI mode

Setup Instructions to Connect a PC to your set

- 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 set.
- Connect the signal cable from the monitor output port of the PC to the RGB INPUT port of the set or the signal cable from the HDMI output port of the PC to the HDMI INPUT port on the set.
- Connect the audio cable from the PC to the Audio input on the set. (Audio cables are not included with the set).
- If using a sound card, adjust PC sound as required.
- This set apply a VESA Plug and Play Solution. The set provides EDID data to the PC system with a DDC protocol. The PC adjusts automatically to use this set.
- DDC protocol is preset for RGB (Analog RGB), HDMI (Digital RGB) mode.
- If required, adjust the set 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 or HDMI INPUT to display the PC on the set.
If graphic card on the PC does output analog and digital RGB simultaneously, set the set to either RGB or HDMI ; (the other mode is set to Plug and Play automatically by the set.)
- DOS mode may not work depending on video card if you use a HDMI to DVI cable.

PC Setup

1. Turn on the PC and apply power to the set.
2. Turn on the display by pressing the ϕ / I button on the set.
3. Use the **INPUT** button to select the **RGB** or **HDMI** input source.
4. Set the resolution output of the PC to SXGA or under (1280 x 1024, 60Hz).

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
848x480	43.269	85.00
	31.500	60.00
	37.799	70.00
	39.375	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
832x624	53.674	85.06
	49.725	74.55
	48.363	60.00
	56.476	70.06
1024x768	60.023	75.02
	68.677	85.00
	47.700	60.00
1360x768	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
1152x870	68.681	75.06
1280x768	47.693	59.99
	60.091	74.93
1280x960	60.023	60.02
1280x1024	63.981	60.02



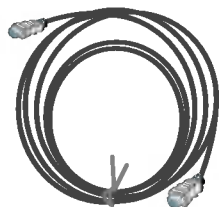
- HDMI™, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- This set can receive the High-Definition Multimedia Interface (HDMI) or Input of Digital Visual Interface(DVI).
- This set supports HDCP (High-bandwidth Digital Contents Protection) Protocol for the set (480p, 720p, 1080i) modes.
- When you Connect with HDMI/DVI Source Devices (DVD Player or Set Top Box or PC) supporting Auto HDMI/DVI function, automatically, support Plug & Play and then set the HDMI/DVI Source Devices 1280 x 720p. After reading in HDMI/DVI Source Devices using Display Data Channel(DDC) Protocol, EDID stored in the set is used. If HDMI/DVI Source Devices not supported Auto HDMI/DVI is been, the Resolution is set, manually.
- To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 1280 x 720p.
- To get the best picture quality, adjust the PC graphics card to 1024 x 768, 60Hz.
- When Source Devices have DVI Output Connector, you must connect audio with separated cable.(Refer to <How to connect>)

How to connect

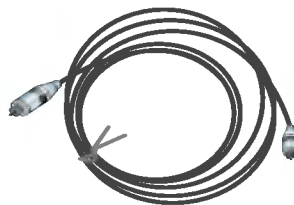
1. When Source Devices (DVD Player or Set Top Box) support HDMI.
 - If Source Devices have HDMI Output Connector, Source Devices connect to the set with HDMI Cable .(not supplied with the product).
 - If Source Devices support Auto HDMI, automatically, Source Devices divert output resolution in 1280 x 720p. But if not, resolution divert Manually Setting for reference Manual of Source Devices.
 - To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 1280 x 720p.
 - Because HDMI sends Digital Video and Audio with one cable, need not especial Audio Cable for using HDMI Cable.
2. When Source Devices (DVD Player or Set Top Box) supports DVI.
 - If Source Devices have DVI Output Connector, Source Devices connect to the set with HDMI to DVI Cable (not supplied with the product).
 - If Source Devices support Auto DVI, automatically, Source Devices divert output resolution in 1280 x 720p. But if not, resolution divert Manually Setting for reference Manual of Source Devices.
 - To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 1280 x 720p.
 - In this case, Audio use other cable. When Source Devices have Analog Audio Output Connector, RGB/DVI Audio Input of the set connect to Audio Cable (not supplied with the product). And then you can listen to normal Audio.
3. When PC supports DVI.
 - If PC have DVI Output Connector, Source Devices connect to the set with HDMI to DVI Cable (not supplied with the product).
 - To get the best picture quality, adjust the PC graphics card to 1024 x 768, 60Hz.
 - Use the the set's HDMI/DVI (VIDEO) for video connections, depending on your PC connector.
 - If the graphics card on the PC does not output analog RGB and DVI simultaneously, connect only one of either RGB Input or HDMI/DVI Input to display the PC on the set.
 - If he graphics card on the PC does output analog RGB and DVI simultaneously, the set to either RGB Input or HDMI/DVI Input; (the other mode is set to Plug and Play automatically by the set.)
 - Then, make the corresponding audio connections. If using a sound card, adjust the PC sound as required.
 - In this case, Audio use other cable. When PC (or sound card of PC) have Analog Audio Output Connector, RGB/DVI Audio Input of the set connect to Analog Audio Cable (not supplied with the product). And then you can listen to normal Audio.

Reference

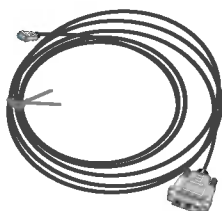
Cable sample



HDMI Cable
(not supplied with the product)



Analog Audio Cable (RCA type)
(not supplied with the product)



HDMI to DVI Cable
(not supplied with the product)



Analog Audio Cable (Stereo to RCA type)
(not supplied with the product)

How to use

1. Connect the HDMI/DVI Source Devices(DVD Player or Set Top Box or PC) and the set.
2. Turn on the display by pressing the POWER button on the set and HDMI/DVI Source Devices remote control.
3. Select HDMI/DVI Input source in Main Input option of PIP/DW menu.
4. Check the image on your set. There may be noise associated with the resolution, vertical pattern, contrast or brightness in HDMI/DVI Source Devices. If noise is present, change the HDMI/DVI Source Devices to another resolution, change the refresh rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphics card can not be changed, change the PC graphics card or consult the manufacturer of the PC graphics card.

Notes:

- Depending on the graphics card, DOS mode may not work if you use a HDMI to DVI Cable.
- Avoid keeping a fixed image on the set screen for a long period of time. The fixed image may become permanently imprinted on the screen. Use the Orbiter screen saver when possible.
- When Source Devices are connected with HDMI/DVI Input, output PC Resolution(VGA, SVGA, XGA), Position and Size may not fit to Screen. As shown on page 17, press the **MENU** button to adjust the screen Position of the set and contact an PC graphics card service center.
- When Source Devices connected HDMI/DVI Input output the set Resolution(480p, 720p, 1080i), the set Display fit EIA/CEA-861-B Specification to Screen. If not, refer to the Manual of HDMI/DVI Source Devices or contact your service center.
- In case HDMI/DVI Source Devices Cable is not connected or poor cable connection, "No Signal" OSD display will appear. And in case of Video Resolution not being supported by the set output in HDMI/DVI Source Devices, "No Signal" OSD display will appear. Refer to the Manual of HDMI/DVI Source Devices or contact your service center.

Turning on the Set

Turning on the set just after installation

1. Connect power cord correctly, the set is switched to standby mode.
2. Press the $\odot$ / I, **INPUT** or $\blacktriangle$ / $\blacktriangledown$ button on the set and then the set will switch on.

Turning on the set (power cord is still connected)

If the set was turned off with the $\odot$ / I button on the set

- Press the $\odot$ / I, **INPUT** or $\blacktriangle$ / $\blacktriangledown$ button on the set to turn the set 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 $\blacktriangle$ / $\blacktriangledown$ button to select the **SPECIAL** menu.
 2. Press the $\blacktriangleright$ button and then use $\blacktriangle$ / $\blacktriangledown$ button to select **Language**.
 3. Press the $\blacktriangleright$ button and then use $\blacktriangle$ / $\blacktriangledown$ button to select your desired language.
From this point on, the on-screen menus will be shown in the language of your choice.
 4. Repeatedly press the **MENU** button to return to normal viewing.

Picture Menu Options

PSM (Picture Status Memory)

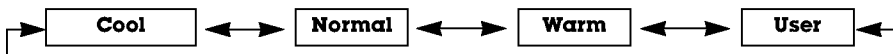
- This function adjusts the set to the best picture appearance.
- When adjusting picture options (contrast, brightness, colour, sharpness and tint (NTSC input only)) manually, PSM is automatically changed to **User**.
- When the Intelligent eye function is on, the most suitable picture is automatically adjusted according to the surrounding conditions.

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**.
3. Press the **▶** button and then use **▲ / ▼** button to select **Intelligent Eye**, **Dynamic**, **Standard**, **Mild** or **User**.
Picture options **Intelligent Eye**, **Dynamic**, **Standard** and **Mild** are preset and programmed for good picture quality at the factory and cannot be changed.
5. Repeatedly press the **MENU** button to return to normal viewing.

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. Repeatedly press the **MENU** button to return to normal viewing.
- Each press of **▲ / ▼** button changes the screen display as shown below.



Manual Colour Temperature Control

- 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 **CSM**.
 3. Press the **▶** button and then use **▲ / ▼** button to select **User**.
 4. Press the **▶** button and then use **▲ / ▼ / ◀ / ▶** button to make appropriate adjustments.
 5. Repeatedly press the **MENU** button to return to normal viewing.

XD

- You can enjoy the vivid and hi-definition picture with LG's Excellent Digital Reality processor technology.
- This function is not available for use in RGB[PC], HDMI[PC] mode.
- When selecting picture options (**Intelligent Eye**, **Dynamic**, **Standard** and **Mild**) in PICTURE menu, **XD** is automatically changed to **On**.

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 **On** or **Off**.
4. Repeatedly press the **MENU** button to return to normal viewing.

sRGB

- When the set is connected to external equipment with the sRGB function, the colour difference is adjusted the equal image of each other.
- This function works in the following mode : RGB[PC], HDMI[PC].
 1. Press the **MENU** button and then use **▲ / ▼** button to select the PICTURE menu.
 2. Press the **►** button and then use **▲ / ▼** button to select **sRGB**.
 3. Press the **►** button and then use **▲ / ▼** button to select **On** or **Off**.
 4. Repeatedly press the **MENU** button to return to normal viewing.

ACM (Active Colour Management)

- Adjust the **ACM** to select the desired skin colour option.
- This function is not available for use in RGB[PC], HDMI[PC] mode.
- It's not available to use this function in **XD Off** 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 **ACM**.
 3. Press the **►** button and then use **◀ / ▶** button to make appropriate adjustments.
 4. Repeatedly press the **MENU** button to return to normal viewing.

Manual Picture Control

- You can adjust picture contrast, brightness, colour, sharpness and tint (NTSC input only) to the levels you prefer.
- It's not available to use colour, sharpness function in RGB[PC], HDMI[PC] mode.
- In the broadcasting system PAL/SECAM, the picture item Tint doesn't work.
 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. Repeatedly press the **MENU** button to return to normal viewing.

Sound Menu Options

SSM (Sound Status Memory)

- 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 **MENU** button and then use **▲ / ▼** button to select the SOUND menu.
 2. Press the **▶** button and then use **▲ / ▼** button to select **SSM**.
 3. Press the **▶** button and then use **▲ / ▼** button to select **SRS TSXT**, **Flat**, **Music**, **Movie**, **Sports** or **User**.
The sound **SRS TSXT**, **Flat**, **Music**, **Movie** and **Sports** are programmed for good sound reproduction at the factory and cannot be changed.
 4. Repeatedly press the **MENU** button to return to normal viewing.
-  is a trademark of SRS Labs, Inc.
- TruSurround XT technology is incorporated under license from SRS Labs, Inc.

BBE

- BBE High Definition Sound restores clarity and presence for better speech intelligibility and musical realism.
 1. Press the **MENU** button and then use **▲ / ▼** button to select the SOUND menu.
 2. Press the **▶** button and then use **▲ / ▼** button to select **BBE**.
 3. Press the **▶** button and then use **▲ / ▼** button to select **On** or **Off**.
 4. Repeatedly press the **MENU** button to return to normal viewing.

BBE Manufactured under license from BBE Sound, 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. Repeatedly press the **MENU** button to return to normal viewing.

Adjusting Sound Control

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. Repeatedly press the **MENU** button to return to normal viewing.

Note : Treble, Bass or BBE aren't suitable to use **SRS TSXT**.

Speaker

- You can adjust the internal speaker status.
- In RGB[PC] and HDMI[PC] mode, speaker and/or variable audio can be outputted even though there is no video signal.
- If you want to use your external hi-fi stereo system, turn off the internal speakers of the set.
 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. Repeatedly press the **MENU** button to return to normal viewing.

Time Menu Options

Setting the Clock

- If current time setting is erased by a power failure or the set is unplugged, 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. Repeatedly press the **MENU** button to return to normal viewing.

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 set 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. Repeatedly press the **MENU** button to return to normal viewing.

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

Auto Sleep

- If there is no input signal, the set 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. Repeatedly press the **MENU** button to return to normal viewing.

Special Menu Options

Child Lock

- The set can be set up so that it can't be used with the button on the set.

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. Repeatedly press the **MENU** button to return to normal viewing.

- This set is programmed to remember which option it was last set to even if you turn the set off.
- In **Child lock 'On'**, if the set is turned off, press the **INPUT**, ▲ / ▼ button on the set.
- With the **Child lock On**, the display '▲ Child lock on' appears on the screen if any button on the front panel is pressed while viewing the set.

ISM (Image Sticking Minimization) Method

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

- **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 colour of the screen. The panel colour is automatically inverted every 30 minutes.

4. Repeatedly press the **MENU** button to return to normal viewing.

Low Power

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

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. Repeatedly press the **MENU** button to return to normal viewing.

XD Demo

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

1. Press the **MENU** button and then use ▲ / ▼ button to select the **SPECIAL** menu.
2. Press the ► button and then use ▲ / ▼ button to select **XD Demo**.
3. Press the ► button to begin **XD Demo**.
4. To stop **XD Demo**, press the **MENU** 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. Repeatedly press the **MENU** button to return to normal viewing.
- Although the image is still not correct, your set is functioning properly but needs further adjustment.
 - The **Auto config.** functions don't need to be run for HDMI mode.

Manual Configure

- 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**.
 - This function works in the following mode: RGB[PC], RGB[DTV], HDMI[DTV] mode only
 - It's not available to use Phase, Clock function in RGB[DTV], HDMI[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. Repeatedly press the **MENU** button to return to normal viewing.

Selecting Wide VGA/XGA mode

- To see a normal picture, match the resolution of RGB mode and selection of VGA/XGA mode.
 - In some models, it's not available to 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 **VGA Mode** (or **XGA Mode**).
 3. Press the **▶** button and then use **▲** / **▼** button to select the desired VGA/XGA resolution.
 4. Repeatedly press the **MENU** button to return to normal viewing.

Screen Menu Options

Setting the Picture Format

- You can watch the screen in various picture formats; **Spectacle**, **Full** (option), **Original**, **4:3**, **16:9** (Wide), **14:9** and **Zoom**.

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** (option), **Original**, **4:3**, **16:9**, **14:9** or **Zoom**.

- **Spectacle**

When your set receives the wide screen signal, when selected it will adjust the picture horizontally, in non-linear proportion, to fill the entire screen.

- **Full** (option)

When your set receives the wide screen signal, when selected it will adjust the picture horizontally or vertically, in a linear proportion, to fill the entire screen fully.

- **Original**

When your set 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 gray bars appearing at both the left and right sides.

- **16:9** (Wide)

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**

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.

4. Repeatedly press the **MENU** button to return to normal viewing.

- You can only select **4:3** and **16:9** (Wide) in RGB[PC], HDMI[PC] mode only.
- You can only select **4:3**, **16:9** (Wide) and **Zoom** in RGB[DTV], HDMI[DTV] mode only.
- There might be uncomfortable in full mode. Then change into other mode.

Picture Size Zoom

- When enlarging or reducing the picture, the screen may be display an unnatural looking picture.

1. Press the **MENU** button and then **▲** / **▼** button to select the SCREEN menu.
2. Press the **▶** button and then **▲** / **▼** button to select **Zoom +/-**.
3. Press the **▶** button and then **◀** / **▶** button to make appropriate adjustments.
4. Repeatedly press the **MENU** button to return to normal viewing.

Screen Position

- This function is available after adjusting Zoom +/-.

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. Repeatedly press the **MENU** button to return to normal viewing.

Cinema (option)

- When you watch the movie, this function adjusts the set to the best picture appearance.

1. Press the **MENU** button and then use **▲** / **▼** button to select the SCREEN menu.
2. Press the **▶** button and then use **▲** / **▼** button to select **Cinema**.
3. Press the **▶** button and then use **▲** / **▼** button to select **On** or **Off**.
4. Repeatedly press the **MENU** button to return to normal viewing.

NR (Noise Reduction)

- You can select **3D NR** or **MPEG NR** to reduce the picture noise which may appear on the screen during watching the set.
- This function is not available for use in RGB[PC], HDMI[PC] mode.
- **3D NR** is not available for use in RGB, HDMI 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 **NR**.
3. Press the **▶** button and then use **▲** / **▼** button to select **3D NR** or **MPEG NR**.
4. Press the **◀** / **▶** button to make appropriate adjustments.
5. Repeatedly press the **MENU** button to return to normal viewing.

Initializing (Reset to original factory settings)

This function operates in current mode.

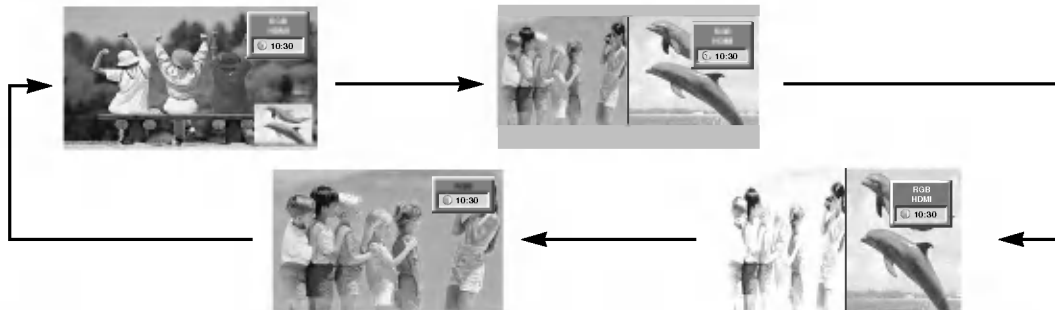
To initialize the adjusted value

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.

PIP (Picture-in-Picture) Feature

- PIP lets you view 2 different inputs (sources) on your set screen at the same time.

Watching PIP



Note :

- When the sub picture size is 1/2 of the main picture, the picture quality may decrease.
- The motion of the sub picture can be unnatural because the set displays full screen by synchronizing the main picture source when the refresh rate between the main picture source and the sub picture source is different in PIP mode.

Selecting an Input Signal Source for the PIP

1. Press the **MENU** button and then **▲ / ▼** button to select the PIP/DW menu.
2. Press the **▶** button and then **▲ / ▼** button to select **PIP Input**.
3. Press the **▶** button and then **▲ / ▼** button to select input source for sub picture.
4. Repeatedly press the **MENU** button to return to normal viewing.

In some models, when the sub picture quality get poor for sub picture, select Auto, PAL, SECAM or NTSC in PIP System menu.

Picture Size

1. Press the **MENU** button and then **▲ / ▼** button to select the PIP/DW menu.
2. Press the **▶** button and then **▲ / ▼** button to select **Win. size**.
3. Press the **▶** button and then **◀ / ▶** button to adjust the sub picture size.
In DW1, DW2 modes, main and sub picture is adjusted simultaneously. In PIP mode, sub picture is adjusted.
4. Repeatedly press the **MENU** button to return to normal viewing.

Moving the PIP (PIP mode only)

1. Press the **MENU** button and then **▲ / ▼** button to select the PIP/DW menu.
2. Press the **▶** button and then **▲ / ▼** button to select **Win. position**.
3. Press the **▶** button and then **▲ / ▼ / ◀ / ▶** button to adjust position for sub picture.
The sub picture moves up/down or left/right.
4. Repeatedly press the **MENU** button to return to normal viewing.

Adjusting PIP Transparency (PIP mode only)

1. Press the **MENU** button and then **▲ / ▼** button to select the PIP/DW menu.
2. Press the **▶** button and then **▲ / ▼** button to select **PIP Transparency**.
3. Press the **▶** button and then **◀ / ▶** button to adjust PIP transparency.
4. Repeatedly press the **MENU** button to return to normal viewing.

XSTUDIO

- You can use the JPEG and MP3 file by memorizing to Memory card in **XSTUDIO** mode.

Notes on Memory Card

When removing or handling the memory card, use only your hands. Do not use other devices or the memory card may be damaged.

Memory Card

This is a device equipped to communicate the data between AV external equipment. It's used in a digital camera, camcorder, MP3 player, notebook or PDA.

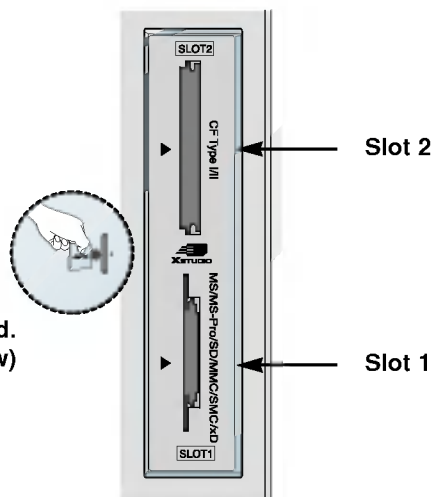
Precaution for Using the Memory Card

- Please be sure to insert the correct memory card type in the right direction.
(Confirm between the two memory slots before insertion.)
- Don't insert metal substances into the slots of the memory card.
- Do not bend, drop or apply strong shock to memory card.
- After pulling the memory card out from the set, please keep the memory stick in an appropriate case to prevent it from static shock.
- The stored data may be changed or lost as a result of misuse or static electricity.
- Do not turn the power off while the memory card is in operation.
- Don't eject the memory card while in use. Otherwise, it may cause a data loss or card damage.
- Insert only one card into each slot.
- Static electricity and/or electrical noise has the potential to change or erase the stored data. Please take measures to avoid.
- This Company takes no responsibility for problems such as the damage or malfunction that occurs while using the set, inappropriate settings, or any other reasons, except for defects or malfunctions intrinsic to the product.
- Ensure to use a memory card that lists the manufacturers name and serial number.
- The manufacturer will not be responsible for any data damage. Making back up data is strongly recommended.
- Make sure to comply with the following steps when ejecting a memory card.
- Ensure each memory card has complied with standard.

Notes on Memory Card

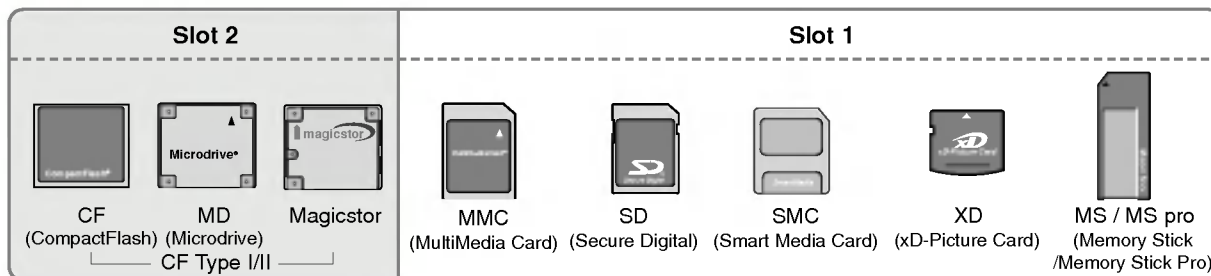
Available Memory Card

* Check the direction of the Memory card.
(refer to the pictures below)



Memory Card type

- Use the specified card based on the slot location.
- 8 types of Memory Card can be used for this set.
- NTFS file system is not supported.

Available file in **XSTUDIO** mode

A sort of file	Photo Image (JPEG)	Music File (MP3)
Compatibility	*.jpg	*.mp3
Memory card capacity	CF: 2GB Microdrive: 2GB Magicstor: 2.2GB MMC: 256MB SD: 512MB - Some MagicStor Plus cards are not usable. An error may occur if you use a memory card with greater than the specified capacity.	SMC: 128MB XD: 512MB MS: 128MB MS PRO: 1GB
Unsupported or damaged file	Unsupported or damaged JPEG or MP3 files can cause errors. Do not try to change the file extension of unsupported file types to the file extension of supported file types.	

- Playback speed can vary dependent on the card type.
- You can assign 8 characters for the file name of the card. If the file name is longer than 8 characters, it will be truncated at 6 digits and "~1, 2, 3, and 4" will be appended to the 7-8th position.

The JPEG Decoding/The Image Preview Supplied Spec

	Compression Method		Colour format		
	Baseline	Progressive	4:4:4 11:11:11 (Y, Cb, Cr)	4:2:2 21:11:11 (Y, Cb, Cr) 12:11:11 (Y, Cb, Cr)	4:2:0 22:11:11 (Y, Cb, Cr)
JPEG Decoding Support	O	X	X	O	O
Image Display	Image	invalid format	invalid format	Image	Image
Preview Image Display	Display  when there is no thumbnail.			Display  when there is no thumbnail.	Display  when there is no thumbnail.

- If an error occurs when decoding the JPEG, "**Corrupted file**" is displayed on screen.

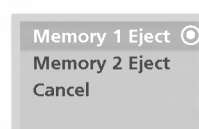
How to insert and eject the card

◆ Inserting a Card

1. Insert the card into the Slot 1 and/or Slot 2 with the hand softly and slowly.
2. Press the  button to enter the **XSTUDIO** mode.
Press the  button again to exit the **XSTUDIO** mode.

◆ Ejecting a card

1. Press the **M/C EJECT** button on the remote control.
2. Press **▲** / **▼** button to Select the **Memory 1 Eject** or **Memory 2 Eject** based on the inserted card location.
If selecting **Cancel**, OSD will disappear.
3. Carefully remove the card.



Notes:

- Screen saver will appear if you do not remove the card with the hand after operating the eject function.
- When entering the photo or music media at first, the **M/C EJECT** button will not work.
It's possible to use the **M/C EJECT** button while using the photo or music media.



Caution: Press the **M/C EJECT** button on remote control before removing the memory card.
Failure to do so may damage the card.

Notes on Memory Card

* In this manual, the OSD (On Screen Display) may be different from your set's because it is just an example to help you with the set operation.

Select the Photo or Music Media

- When you plug a memory card or press the **XSTUDIO** button, the below screens will be displayed.



1. Press **▲ / ▼ / ◀ / ▶** button to select photo or music for slot1/2.
2. Press the **OK** button to enter the photo or music media.
3. Press the **XSTUDIO** button to exit the **XSTUDIO** mode.

Notes:

- The OSD of the ejected card slot is inactivate when ejecting the card.
- If there is any error in a memory card, it's impossible to enter **XSTUDIO** mode.

JPEG File Viewing Options

- When you select **Photo** in entry menu, you will now see a screen filled with thumbnail photo media.

* In this manual, the OSD (On Screen Display) may be different from your set's because it is just an example to help you with the set operation.

Screen Components

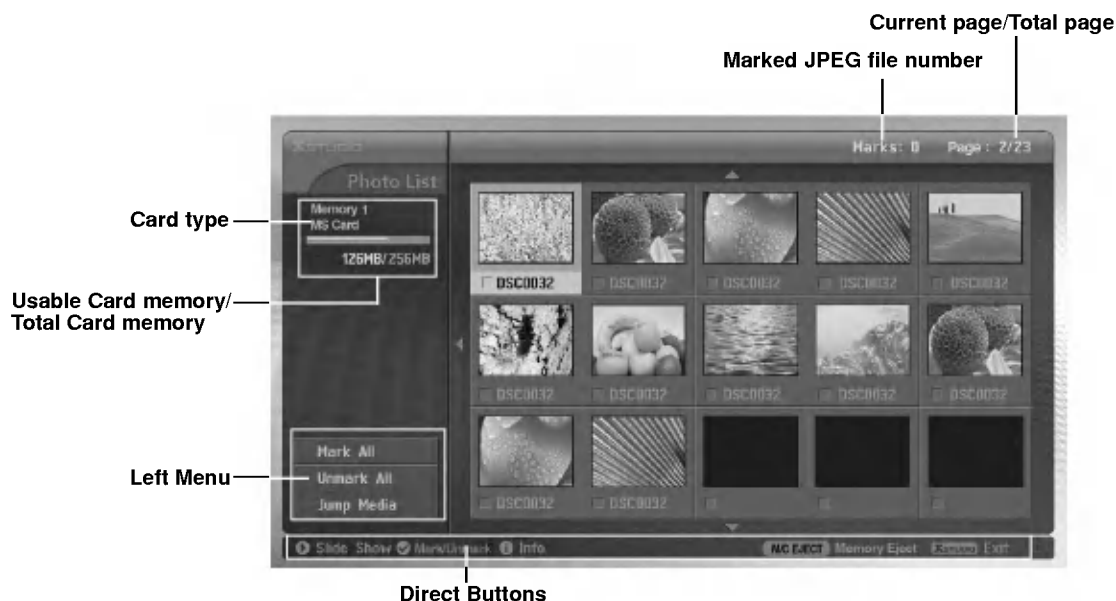


Photo Selection and PopUp menu

- Select your desired image file.



1. Insert the memory card to Slot 1 and/or Slot 2 on the set side panel.
2. Press the **XStudio** button.
3. Use **▲ / ▼ / ◀ / ▶** button to select photo media for slot1 or slot 2.
4. Press the **OK** button to enter the photo media.
Note: It's possible to display 15 JPEG files per page.
5. Press the **▲ / ▼ / ◀ / ▶** button to select JPEG file and then press the **OK** button.
6. Press the **▲ / ▼** button to select **View** and then press the **OK** button. The selected image will display over the entire screen.

JPEG File Viewing Options

Mark/Unmark for JPEG file

- You can mark/unmark the file to view the desired file or use slide show for desired file conveniently.
- The selected file displays orange in colour.

When pressing the **OK** button after marking a file, the marked file displays green in colour.



◆ Mark/Unmark for all files

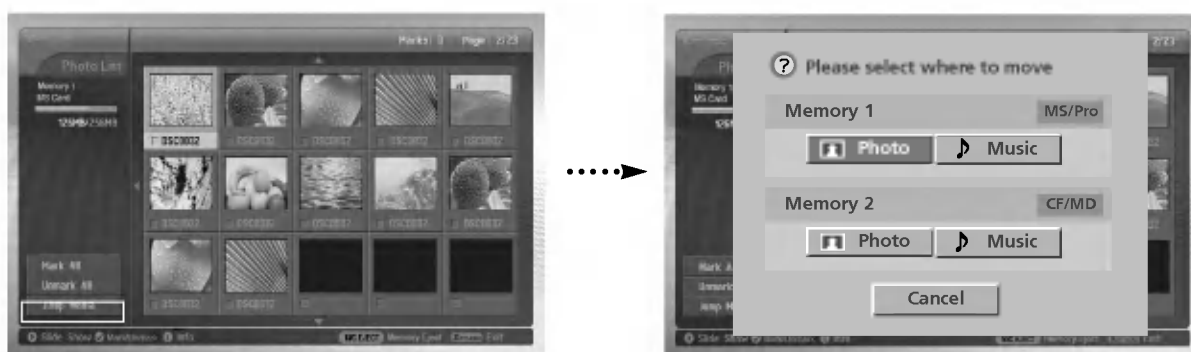
1. In photo media, repeatedly press **◀** button to enter the menu on the left.
2. Press the **▲** / **▼** button to select **Mark All** or **Unmark All**.
 - If you select **Mark All**, every file is selected.
 - If you select **Unmark All**, the selection for every file is released.
3. Press the **OK** button and then **▶** button to return to the photo list.

◆ Mark/Unmark for some file

Press the **MARK** button repeatedly to mark or unmark some JPEG file.

Jump Media

- Use this function to jump to other media during using photo media.



1. In photo media, press **◀** button repeatedly to enter the left menu.
2. Press the **▲** / **▼** button to select **Jump media** and then press the **OK** button.
3. Press the **▲** / **▼** / **◀** / **▶** button to select desired media and then press the **OK** button. The screen displays each media list.

The Image Adjustment

- You can display the selected image on the entire screen and do the various adjustments for the JPEG file.



1. Press the ▲ / ▼ / ◀ / ▶ button to select JPEG file and then press the **OK** button.
2. Press the ▲ / ▼ button to select **View** and then press the **OK** button. The selected image will display on entire screen.
3. Adjust the JPEG file.



Image selection	• Press the ▶ button to select next image. • Press the ◀ button to select previous image. • If you mark a file, you can see only the marked image.
Image Rotation	• Press the ▲ / ▼ button to rotate the image. • ▲: Rotate clockwise • ▼: Rotate counterclockwise • The enlarged image cannot be rotated.
Image Zoom In/Out	• Press the PR ▲ / ▼ button to enlarge or reduce the image 2 or 4 times. • Press the ▲ / ▼ / ◀ / ▶ button to move the enlarged image.
Image Deletion	• Press the MARK button to delete the current image.
Go to the Menu	• Press the EXIT button to return to the photo list.
Shown/Hidden the menu	• Each press of the OK button, the menu will toggle hidden or shown. • The OSD menu will automatically disappear after a while.

JPEG File Viewing Options

Slide Show



1. Press the $\blacktriangle$ / $\blacktriangledown$ / $\blacktriangleleft$ / $\blacktriangleright$ button to select JPEG file and then press the **OK** button.
2. Press the $\blacktriangle$ / $\blacktriangledown$ button to select **Slide Show** or **Show Marked** and then press the **OK** button. (If you mark the file with using **MARK** button, **Show Marked** is displayed on screen.)



3. You can choose the slide show delayed time and effect.
Press the $\blacktriangle$ / $\blacktriangledown$ / $\blacktriangleleft$ / $\blacktriangleright$ button to choose the slide show delayed time and effect.
4. Press the $\blacktriangle$ / $\blacktriangledown$ / $\blacktriangleleft$ / $\blacktriangleright$ button to select **OK**. Slide show start.

Notes:

- You can also operate the **Slide Show** or **Show Marked** with  button directly as shown.
- If you mark a file, Slide Show will show only the marked image.



Next / previous Image Selection	• Press the $\blacktriangleright$ button to select next image. • Press the $\blacktriangleleft$ button to select previous image.
Image Pause	• Press the II button to pause the current image. • Press the  button to restart the slide show. • By pressing $\blacktriangleleft$ / $\blacktriangleright$ button, you can also select the next or previous image while pausing the image.
Go to the menu	• Press the EXIT button to return to the photo list.
Shown/Hidden the menu	• Each press of the OK button, the menu is toggle hidden or shown. • The OSD menu will automatically disappear after a while.

JPEG file Deletion and Cancel



1. Use the ▲ / ▼ / ◀ / ▶ button to select JPEG file and then press the **OK** button.
2. To delete the file, press the ▲ / ▼ button to select **Delete** and then press the **OK** button. When "Do you want to delete the file?" message is displayed, select **YES (YES or NO)** with ◀ / ▶ button. The file is deleted, all the following files are shifted up one position.



* If you select **Delete** after marking some files, all of the marked files are deleted. But in case MS, SMC, SD memory card is set to write protect, "Protection Mode. Please push the **OK** button." message is displayed. When you select the **OK**, the screen will return to the photo list. (Release the write protection to delete a JPEG file.)

3. To return to the photo list, press the ▲ / ▼ button to select **Cancel** and then press the **OK** button.

File Information

- Use it to check information for selected JPEG file.



1. In photo media, select your desired JPEG file.
2. Press the **INFO** button. The file information for selected JPEG file is displayed. If JPEG file has no information, you can't check it.
3. Press the **OK**, **EXIT** or **INFO** button to return to the photo list.

Screen Saver

- While displaying the photo list, if a button is not pressed within approx. 30 seconds, the screen saver is activated.



* The 'Screen Saver'?
Screen saver is to prevent screen pixel burning caused by long time still picture.

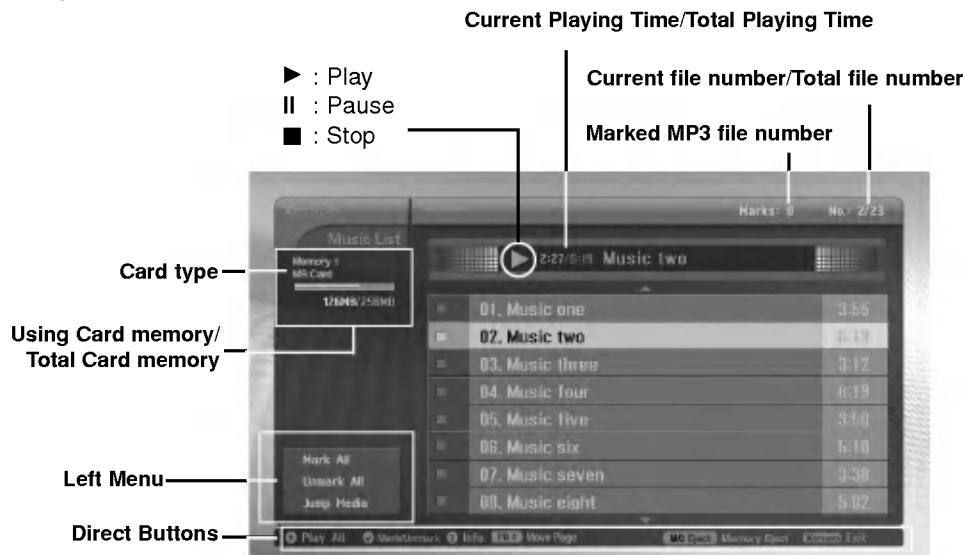


- Press the ▲ / ▼ / ◀ / ▶, **EXIT**, ►(play), II, ■, ◀◀, ▶▶, **INFO**, PR ▲ / ▼, **MARK** buttons to release the screen saver.

MP3 File Playing Operation

- Purchased MP3/music files may contain copyright restrictions. Playback of these files may not be supported by this model.

Screen Components



MP3 File Selection and Playback

- MP3 file Selection and deletion function don't work while playing music.
- If pressing any button except , , button on the remote control while playing music, the music playing is stopped.
- Moves from the current 8 files list to the next files list with **PR ▲ / ▼** button.



1. Insert the memory card into Slot 1 and/or Slot 2 on the set side panel.
2. Press the button.
3. Use **▲ / ▼ / ◀ / ▶** button to select music media for slot1 or slot 2.
4. Press the **OK** button to enter the music media.
Note: It's possible to display 8 MP3 files per page.
5. Press the **▲ / ▼** button to select desired MP3 file and then press the **OK** button.
6. Press the **▲ / ▼** button to select **Play** or **Play Marked** and then press the **OK** button.(If you mark the file with using **MARK** button, **Play Marked** is displayed on screen.)

Notes:

- You can also play the music with button directly.
- The current playing MP3 file displays in front of the title.
- While playing music, press the **▶▶** button to select the next music directly.
- If you press the **◀◀** button while playing music, the MP3 will replay from beginning.
(If you press the **◀◀** button within 1~2 seconds after playing the music, the MP3 plays the previous file.)

* In this manual, the OSD (On Screen Display) may be different from your set's because it is just an example to help you with the set operation.

Stop/Pause Playback

◆ Stop Playback

To stop playback, press the **■** button on the remote control.

To stop playback, press the **OK, PR (▲ / ▼)** button on the set.

Notes:

- If you replay the MP3 file after stopping, the highlighted MP3 file on menu will play.
- On stopping, **VOL (◀ / ▶)** and **PR (▲ / ▼)** buttons on the TV are used to navigate.

◆ Pause Playback

1. Press the **II** button to pause playback.
2. Press the **II** or **▶** button to starts from the point of your paused part.

Mark/Unmark for MP3 file

- You can mark/unmark the file to play the desired file only.
- The menu on the left can be used when playback is stoped.



◆ Mark/Unmark for all files

1. In music media, press the **◀** button.
2. Press the **▲ / ▼** button to select **Mark All** or **Unmark All**.
 - If you select **Mark All**, every file is selected.
 - If you select **Unmark All**, the selection for every file is released.
3. Press the **OK** button and then **▶** button to return to the music list.

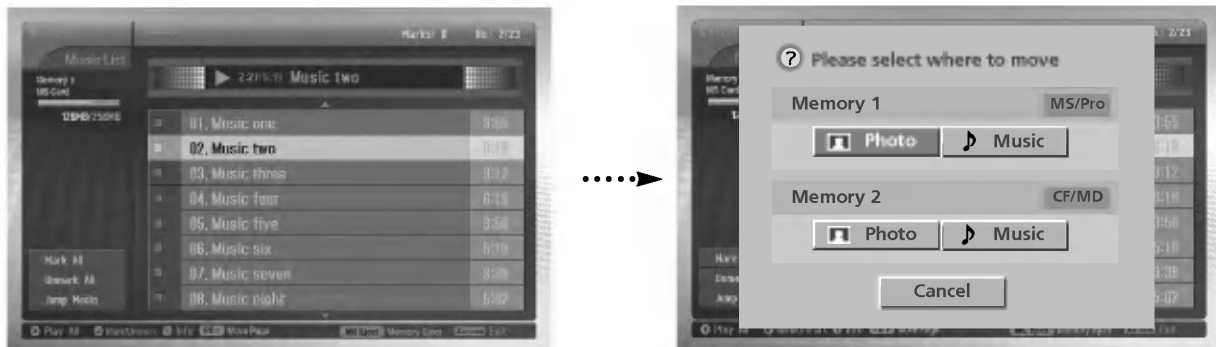
◆ Mark/Unmark for some file

Press the **MARK** button repeatedly to mark or unmark some MP3 file.

MP3 File Playing Operation

Jump Media

- Use this function to jump to other media during using music media.



1. In music media, press the ◀ button.
2. Press the ▲ / ▼ button to select **Jump media** and then press the OK button.
3. Press the ▲ / ▼ / ◀ / ▶ button to select desired media and then press the OK button. The screen displays each media list.

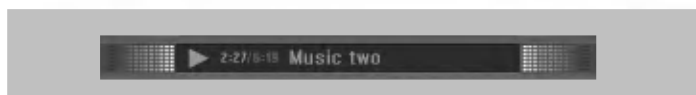
Screen Saver

- If you don't press any button for about 30 seconds, the screen saver is activated.

◆ During playing the MP3



* The 'Screen Saver'?
Screen saver is to prevent screen pixel burning caused by long time still picture.



- Press the ⏮, ⏪, ⏩, ⏭ buttons. The screen saver is released but the MP3 playback is restarted.
- ⏮, ⏪ : Return to a initial portion of the MP3 playback.
- ⏩, ⏭ : Playback the next MP3.
- If you press any other button, the screen saver is released and the MP3 playback is stopped.

◆ During stopping the MP3



- Press the ▲ / ▼ / ◀ / ▶, EXIT, ▶(play), II, ■, ⏮, ⏭, INFO, PR ▲ / ▼, MARK buttons to release the screen saver.

MP3 file deletion and Cancel

- It's impossible to delete the music during playback.



1. Use the ▲ / ▼ button to select MP3 file and then press the **OK** button.
2. To delete the file, press the ▲ / ▼ button to select **Delete** and then press the **OK** button. When "Do you want to delete the file?" message is displayed, select **YES** (**YES** or **NO**) with ◀ / ▶ button. The file is deleted, all the following files are shifted up one position.



* If you select **Delete** after marking some files, all of the marked files are deleted.
But in case MS, SMC, SD memory card set the write protection, "Protection Mode. Please push the **OK** button." message is displayed. When you select the **OK**, the screen is returned to the photo list. (Release the write protection to delete a MP3 file.)

3. To return to the music list, press the ▲ / ▼ button to select **Cancel** and then press the **OK** button.

File Information

- Use it to check information for selected MP3 file.



1. In music media, select your desired MP3 file.
2. Press the **INFO** button. The file information for selected MP3 file is displayed.
If MP3 file has no information, you can't check it.
3. Press the **OK**, **EXIT** or **INFO** button to return the previous menu.

External Control Device Setup

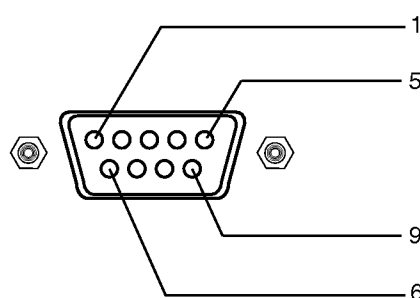
- Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the set's functions externally.

How to connect external control equipment

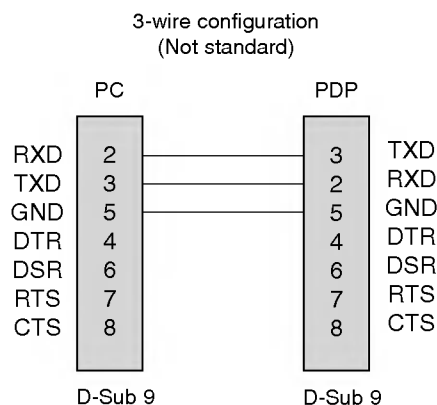
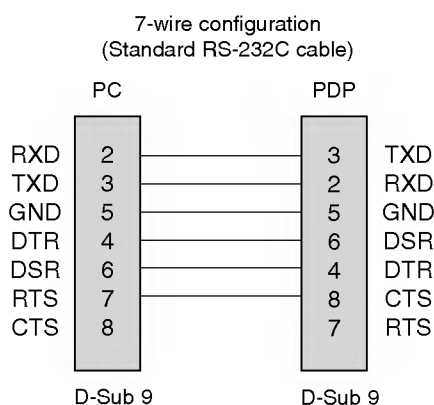
- Connect the serial port of the control device to the RS-232C jack on the back panel.
- RS-232C connection cables are not supplied with the set.
- The set remote control and front panel controls (except main power) will not be functional if the set is controlled by a PC computer or other external device.

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 set ID number.
- Refer to 'Real Data Mapping 1'. See page 39.

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.

4. Repeatedly press the **MENU** button to return to normal viewing.

Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- * Use a crossed (reverse) cable.
- 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	0 ~ 1
03. Aspect Ratio	k	c	Refer to p. 36
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 (option)	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/DW	k	n	Refer to p. 37
15. PIP Position	k	q	0 ~ 3
16. Treble	k	r	0 ~ 64
17. Bass	k	s	0 ~ 64
18. Balance	k	t	0 ~ 64
19. Colour Temperature (CSM)	k	u	0 ~ 3
20. Red Adjustment	k	v	0 ~ 50
21. Green Adjustment	k	w	0 ~ 50
22. Blue Adjustment	k	\$	0 ~ 50
23. PIP input Source	k	y	0 ~ 1
24. Abnormal Status	k	z	0 ~ a
25. ISM Method	j	p	0 ~ 3
26. Low Power	j	q	0 ~ 1
27. Orbiter Time Setting	j	r	1 ~ FE
28. Orbiter Pixel Setting	j	s	1 ~ 3
29. Picture Size	j	t	0 ~ 20
30. Auto Configure	j	u	1
31. Send IR Code	m	c	Key Code

- * When setting the 24 ~ 31, 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, k or m)
- * [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.
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 set 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 set 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

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

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

Data 0 : Power Off 1 : Power On

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

► To show Power On/Off.

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

[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.

- To select input source for the set.

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

Data 0 : RGB 1 : HDMI

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

► To adjust the screen format. (Main picture format)
You can also adjust the screen format in the SCREEN menu.

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

Data 1 : Normal screen (4:3)	6 : Original
2 : Wide screen (16:9)	7 : Wide screen (14:9)
3 : Spectacle	8 : Full (Option)
4 : Full screen (Zoom)	

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

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

- ▶ To select screen mute on/off.

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

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

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

- ▶ To control volume mute on/off.

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

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

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

► To adjust volume.
You can also adjust volume with the volume buttons on the set.

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 39.

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

► To adjust screen contrast.
You can also adjust contrast in the PICTURE menu.

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 39.

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

► To adjust screen brightness.
You can also adjust brightness in the PICTURE menu.

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 39.

[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 39.

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 39.

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 39.

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 set 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 / DW (Command 2 : n)

- To control the PIP (Picture In picture)/DW.
You can also control the PIP/DW in the PIP/DW menu.

Transmission

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

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

Ack

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

15. PIP Position (Command 2 : q)

- To select sub picture position for PIP.
You can also adjust the sub picture position 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]

16. 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 39.

Ack

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

17. 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 39.

Ack

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

18. 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 39.

Ack

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

19. 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: Cool 1: Normal 2: Warm 3: User

Ack

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

20. Red Adjustment (Command 2 : v)

- To adjust red in colour temperature.

Transmission

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

Data Min : 0 ~ Max : 50

* Refer to 'Real data mapping 2'. See page 39.

Ack

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

21. Green Adjustment (Command 2 : w)

- To adjust green in colour temperature.

Transmission

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

Data Min : 0 ~ Max : 50

* Refer to 'Real data mapping 2'. See page 39.

Ack

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

22. Blue Adjustment (Command 2 : \$)

- To adjust blue in colour temperature.

Transmission

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

Data Min : 0 ~ Max : 50

* Refer to 'Real data mapping 2'. See page 39.

Ack

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

23. PIP Input Select (Command 2 : y)

- To select input source for sub picture in PIP/DW picture mode.

Transmission

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

Data 0 : RGB 1 : HDMI

Ack

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

24. Abnormal State (Command 2 : z)

- To recognize an abnormal state.

Transmission

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

Data FF : Read

Ack

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

Data 0: Normal (Power on and signal exist)

1: No signal (Power on)

2: Turn the set off by remote control

3: Turn the set off by sleep time function

4: Turn the set off by RS-232C function

5: 5V down

6: AC down

7: Turn the set off by Fan Alarm function (option)

8: Turn the set off by Off time function

9: Turn the set off by Auto sleep function

a: Turn the set off by AV board detect

* This function is "read only".

**25. 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

2 : Orbiter

1 : White Wash

3 : Inversion

Ack

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

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

- To reduce the power consumption of the set. 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]

27. 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'.

Ack

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

28. 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: 1 ~ Max: 3
* Refer to 'Real data mapping 1'.

Ack

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

29. Picture Size Setting for DW Mode**(Command 1 : j, Command 2 : t)**

- To select the DW picture format.

Transmission

[j][t][][Set ID][][Data][Cr]

Data Min: 0 ~ Max: 20
* Refer to 'Real data mapping 1'.

Ack

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

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

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

Transmission

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

Data 1: To set

Ack

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

32. Send IR Code**(Command 1 : m, Command 2 : c)**

- To send IR remote key code.

Transmission

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

Data Key code - Refer to page 41.

Ack

[c][][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
⋮
6E : Step 110
⋮
73 : Step 115
74 : Step 116
⋮
C7 : Step 199
⋮
FE : Step 254
FF : Step 255

*** Real data mapping 2**

0 : -40
1 : -39
2 : -38
⋮
28 : 0
⋮
4E : +38
4F : +39
50 : +40

IR Code (NEC Format)

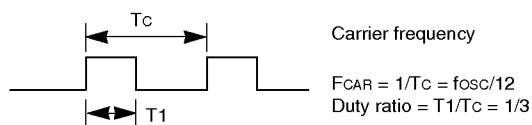
How to connect

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

Remote Control IR Code (NEC Format)

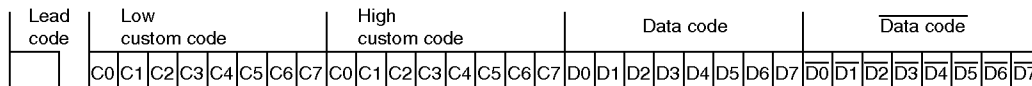
▶ Output waveform

Single pulse, modulated with 37.917KHz signal at 455KHz

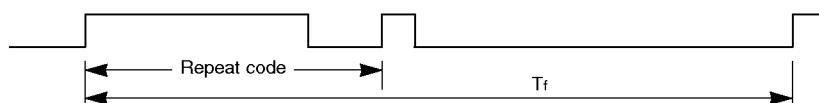


▶ Configuration of frame

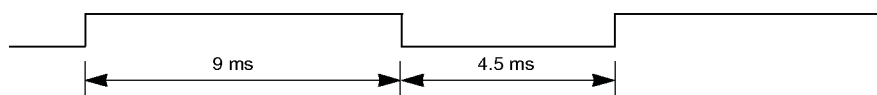
- 1st frame



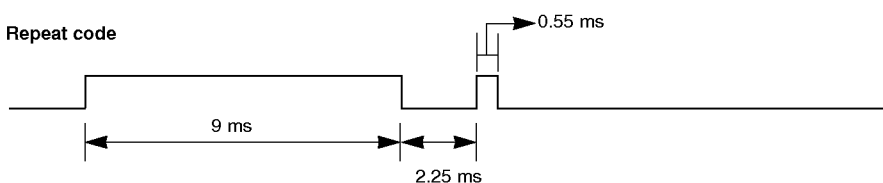
- Repeat frame



▶ Lead code

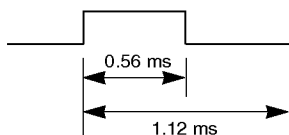


▶ Repeat code

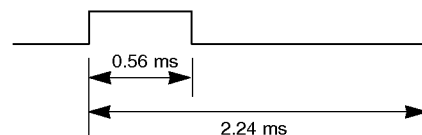


▶ Bit description

- Bit "0"

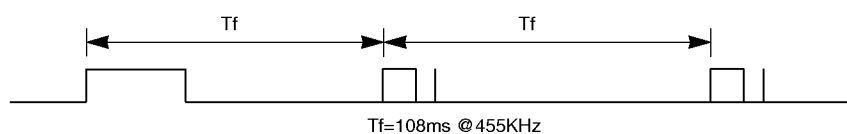


- Bit "1"



▶ Frame interval : Tf

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



Code (Hexa)	Function	Note
00	PR ▲	R/C Button
01	PR ▼	R/C Button
02	VOL ▲	R/C Button
03	VOL ▼	R/C Button
40	▲	R/C Button
41	▼	R/C Button
06	►	R/C Button
07	◄	R/C Button
08	POWER	R/C Button (Power On/Off)
C4	POWER ON	Discrete IR Code (Only Power On)
C5	POWER OFF	Discrete IR Code (Only Power Off)
09	MUTE	R/C Button
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
0B	INPUT	R/C Button
98	MULTIMEDIA	R/C Button
C6	HDMI	Discrete IR Code (Input HDMI Selection)
D5	RGB	Discrete IR Code (Input RGB Selection)
0E	SLEEP	R/C Button
43	MENU	R/C Button
44	OK(●)	R/C Button
4D	PSM	R/C Button
52	SSM	R/C Button
62	POSITION	R/C Button
64	SIZE	R/C Button
60	PIP	R/C Button
61	PIP INPUT	R/C Button
63	SWAP	R/C Button
5C	Zoom +	R/C Button
5D	Zoom -	R/C Button
79	ARC	R/C Button
76	ARC (4:3)	Discrete IR Code (Only 4:3 mode)
77	ARC (16:9)	Discrete IR Code (Only 16:9 mode)
AF	ARC (Zoom)	Discrete IR Code (Only Zoom mode)
C8	EPF MENU	R/C Button
7D	MARK	R/C Button
AA	INFO	R/C Button
BO	PLAY	R/C Button
B1	STOP	R/C Button
BA	PAUSE	R/C Button

Troubleshooting Checklist

No picture & No sound	• Check whether the set is turned on. • Power cord inserted into wall outlet? • Plug another product's power cord into the wall outlet where the set's power cord was plugged in.
Picture OK & No sound	• Press the VOLUME (►) button. • Sound muted? Press MUTE button. • Check whether the speaker is "on" in the SOUND menu.
Picture appears slowly, after switching on	• This is normal as the image is muted during the startup process of the set. 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.13) • Keep a certain distance between the set 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.14)
Unusual sound from inside the set	• A change in ambient humidity or temperature may result in an unusual noise at the time of switching off or on of the set and does not indicate a fault with the set.

Product Specifications

MODEL	50PX4M 50PX4M-TB 50PX4M-ZB	50PX4MH 50PX4MH-TB
Width (inches / mm)	57.6 / 1461	
Height (inches / mm)	32.9 / 835	
Depth (inches / mm)	13.1 / 331.3	
Weight (pounds / kg)	121.7 / 55.2	
Power requirement	AC100-240V, 50/60Hz	
Operating Temperature Range	32 ~ 104°F (0 ~ 40°C)	
Operating Humidity Range	Less than 80%	

MODEL	42PX5M 42PX5M-TB 42PX5M-ZB	42PX5MH 42PX5MH-TB	50PX5M 50PX5M-TB 50PX5M-ZB	50PX5MH 50PX5MH-TB
Width (inches / mm)	49.3 / 1252		57.6 / 1461	
Height (inches / mm)	27.8 / 705.5		32.9 / 835	
Depth (inches / mm)	10.7 / 270.7		13.1 / 331.3	
Weight (pounds / kg)	91.3 / 41.4		121.7 / 55.2	
Power requirement	AC100-240V, 50/60Hz			
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.

