



APPENDIX G
: USER'S MANUAL



LG

Life's Good

ENGLISH

OWNER'S MANUAL

MONITOR SIGNAGE

Please read this manual carefully before operating the your set and retain it for future reference.

MONITOR SIGNAGE MODELS

42VS20

47VS20

55VS20

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LICENSES

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ABOUT DIVX VIDEO-ON-DEMAND: This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in your device setup menu. Go to vod.divx.com for more information on how to complete your registration.

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OPEN SOURCE LICENSES

To obtain the source code under GPL, LGPL, MPL and other open source licenses, that is contained in this product, please visit <http://opensource.lge.com>.

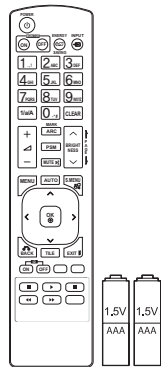
In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download.

LG Electronics will also provide open source code to you on CD-ROM for a charge covering the cost of performing such distribution (such as the cost of media, shipping and handling) upon email request to opensource@lge.com. This offer is valid for three (3) years from the date on which you purchased the product.

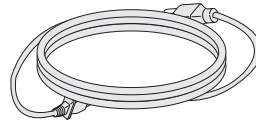
ASSEMBLING AND PREPARING

Accessories

Check your product box for the following items. If there are any missing accessories, contact the local dealer where you purchased your product. The illustrations in this manual may differ from the actual product and accessories.



Remote control and Batteries



Power Cord



DVD (Owner's Manual) / Card



D-sub 15 pin signal cable



CAUTION

- Do not use any pirated items to ensure the safety and product life span.
- Any damages or injuries by using pirated items are not covered by the warranty.



NOTE

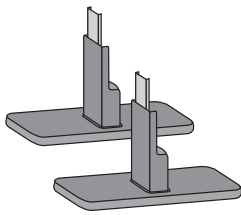
- The accessories supplied with your product may vary depending on the model.
- Product specifications or contents in this manual may be changed without prior notice due to upgrade of product functions.

Optional Accessories

Without prior notice, optional accessories are subject to change to improve the performance of the product, and new accessories may be added. The illustrations in this manual may differ from the actual product and accessories.

Stand kit

42VS20

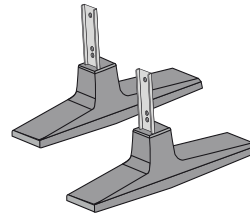


Stand



Screws

47VS20, 55VS20

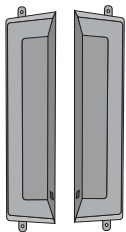


Stand



Screws

Speaker kit



Speaker



Screws/Cable



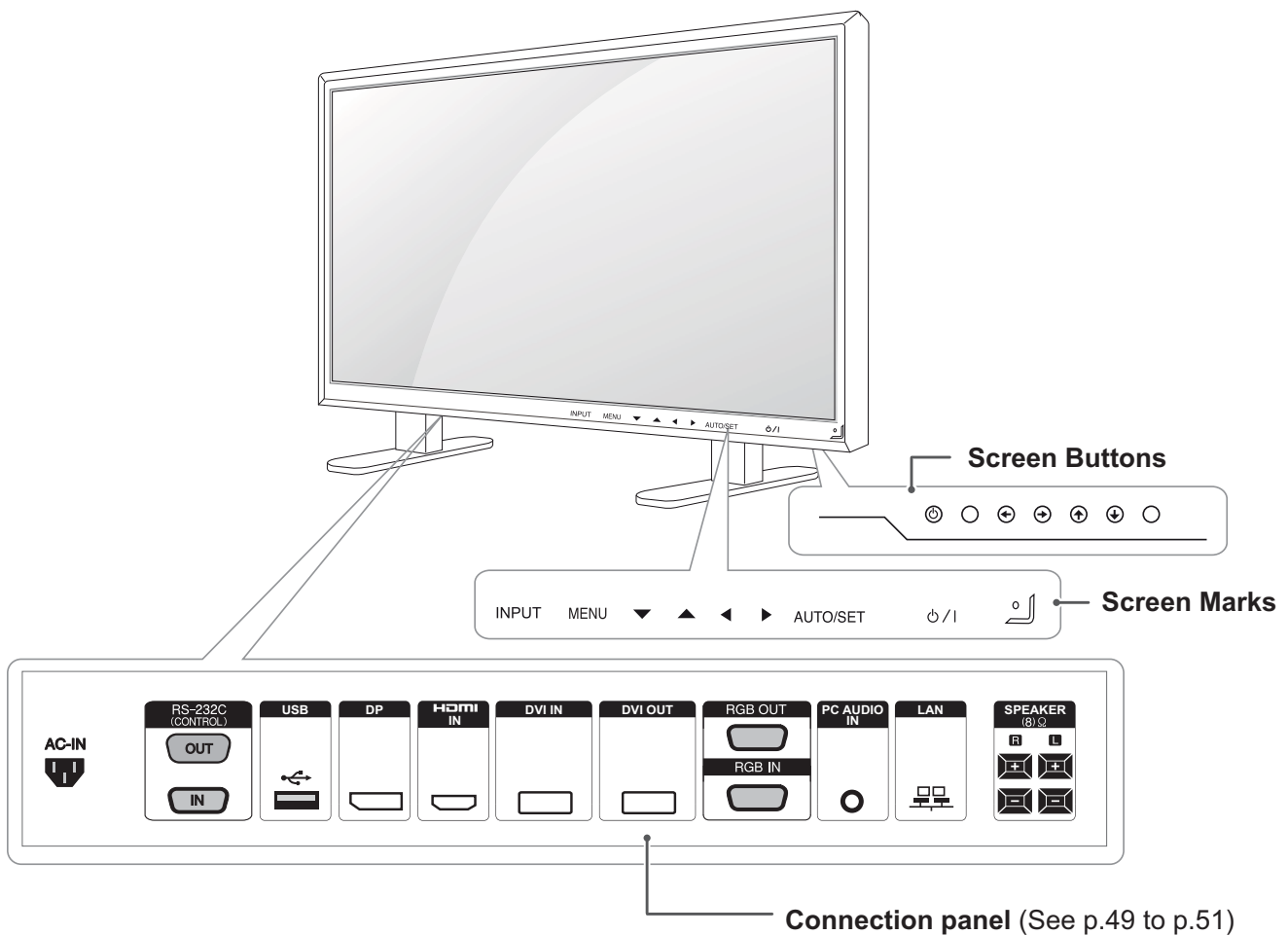
Cable holder/
Cable Tie



NOTE

- Cable holder/Cable tie may not be available in some areas or for some models.
- Optional accessories are not included for all models.

Parts and buttons



Connection panel (See p.49 to p.51)

Screen Marks	Description
INPUT	Changes the input source.
MENU	Accesses the main menus, or saves your input and exits the menus.
▼ ▲	Adjust the up and down.
◀ ▶	Adjusts the volume level.
AUTO/SET	Displays the current signal and mode. Press this button to adjust the screen automatically (available only in RGB mode)
⏻ / ⏿	Turns the power on or off.
IR Receiver	This is where the unit receives signals from the remote control.
Power Indicator	This Indicator lights up blue when the display operates normally (on mode). If the display is in sleep (Energy Saving) mode, this indicator color changes to amber.

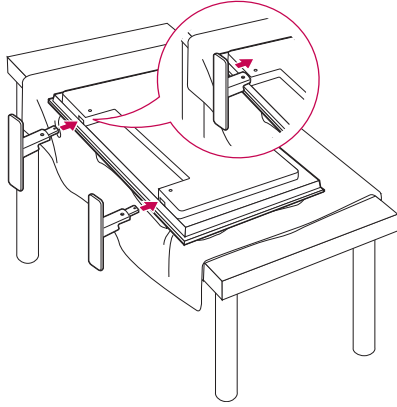
! NOTE

- You can set the Power indicator to on or off by selecting **OPTION** in the main menu.

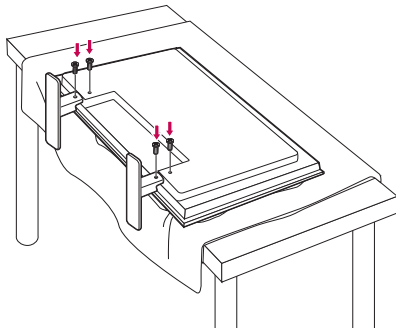
Connecting the stand

- Only on some models.

- 1 Place a soft cloth on the table and put the product with the screen facing downward.



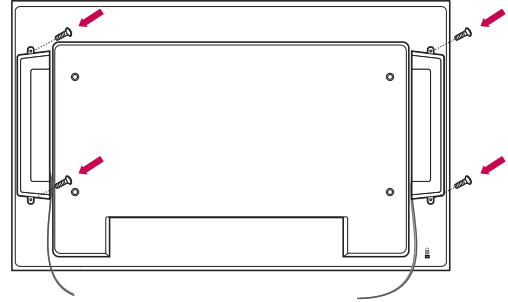
- 2 Use the screws to secure the stand on the rear side of the product as shown in the diagram.



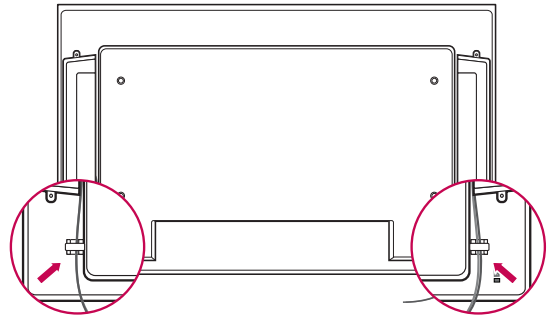
Connecting the Speakers

- Only on some models.

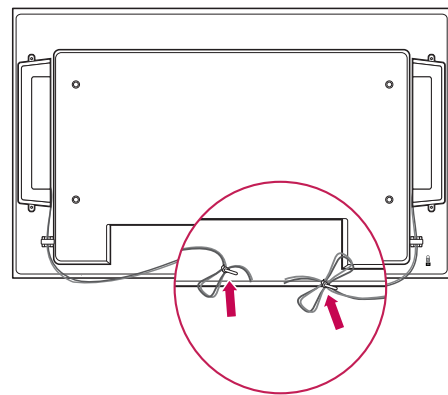
- 1 Connect an input signal cable to use before installing the speakers. Use a cable tie to organize and fix the cables.



- 2 Mount the speaker by using a screw as shown in the following. Then connect the speaker cable.



- 3 After installing your speakers, use holders and cable ties to organize the speaker cables.



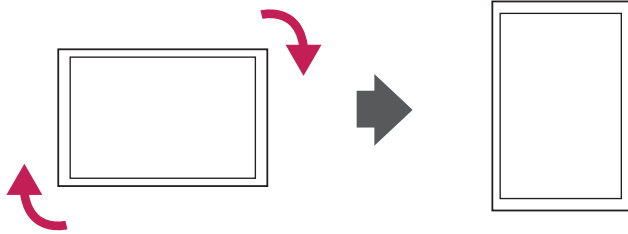
! NOTE

- Connect the speaker terminals noting the correct polarity.

Portrait Layout

- Only on some models.

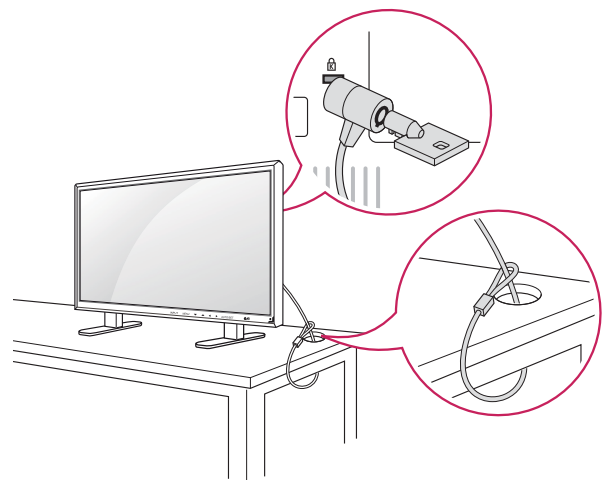
When installing in a Portrait Layout, rotate the monitor clockwise 90 degrees (when facing the screen).



Using the Kensington security system

The Kensington security system connector is located at the back of the Monitor set. For more information of installation and using, refer to the manual supplied with the Kensington security system or visit <http://www.kensington.com>.

Connect the Kensington security system cable between the Monitor set and a table.

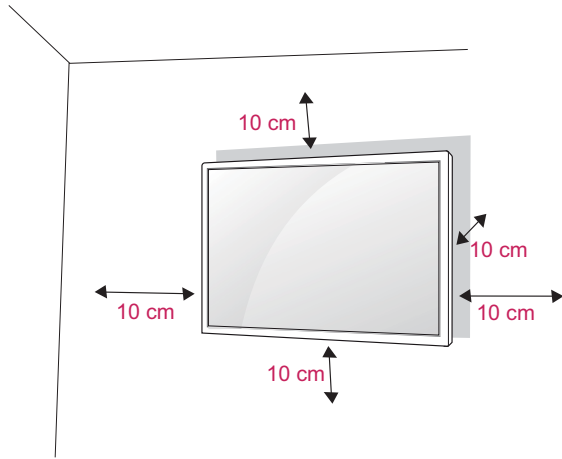


! NOTE

- The Kensington security system is optional. You can obtain additional accessories from most electronics stores.

Mounting on a wall

For proper ventilation, allow a clearance of 10 cm on each side and from the wall. Detailed installation instructions are available from your dealer, see the optional Tilt Wall Mounting Bracket Installation and Setup Guide.



If you intend to mount the TV to a wall, attach Wall mounting interface (optional parts) to the back of the set.

When you install the TV using the wall mounting interface (optional parts), attach it carefully so it will not drop.

- 1 Please, Use the screw and wall mount interface in accordance with VESA Standards.
- 2 If you use screw longer than standard, the monitor might be damaged internally.
- 3 If you use improper screw, the product might be damaged and drop from mounted position. In this case, LG Electronics is not responsible for it.
- 4 VESA compatible.
- 5 Please use VESA standard as below.
 - 785mm(31 inch) or greater
 - * Fastening screw: Diameter 6.0 mm x Pitch 1.0 mm x Length 10 mm



CAUTION

- Disconnect the power cord first, and then move or install the Monitor set. Otherwise electric shock may occur.
- If you install the Monitor set on a ceiling or slanted wall, it may fall and result in severe injury.
- Use an authorized LG wall mount and contact the local dealer or qualified personnel.
- Do not over tighten the screws as this may cause damage to the Monitor set and void your warranty.
- Use the screws and wall mounts that meet the VESA standard. Any damages or injuries by misuse or using an improper accessory are not covered by the warranty.



NOTE

- Use the screws that are listed on the VESA standard screw specifications.
- The wall mount kit includes an installation manual and necessary parts.
- The wall mount bracket is optional. You can obtain additional accessories from your local dealer.
- The length of screws may differ depending on the wall mount. Be sure to use the proper length.
- For more information, refer to the instructions supplied with the wall mount.

REMOTE CONTROL

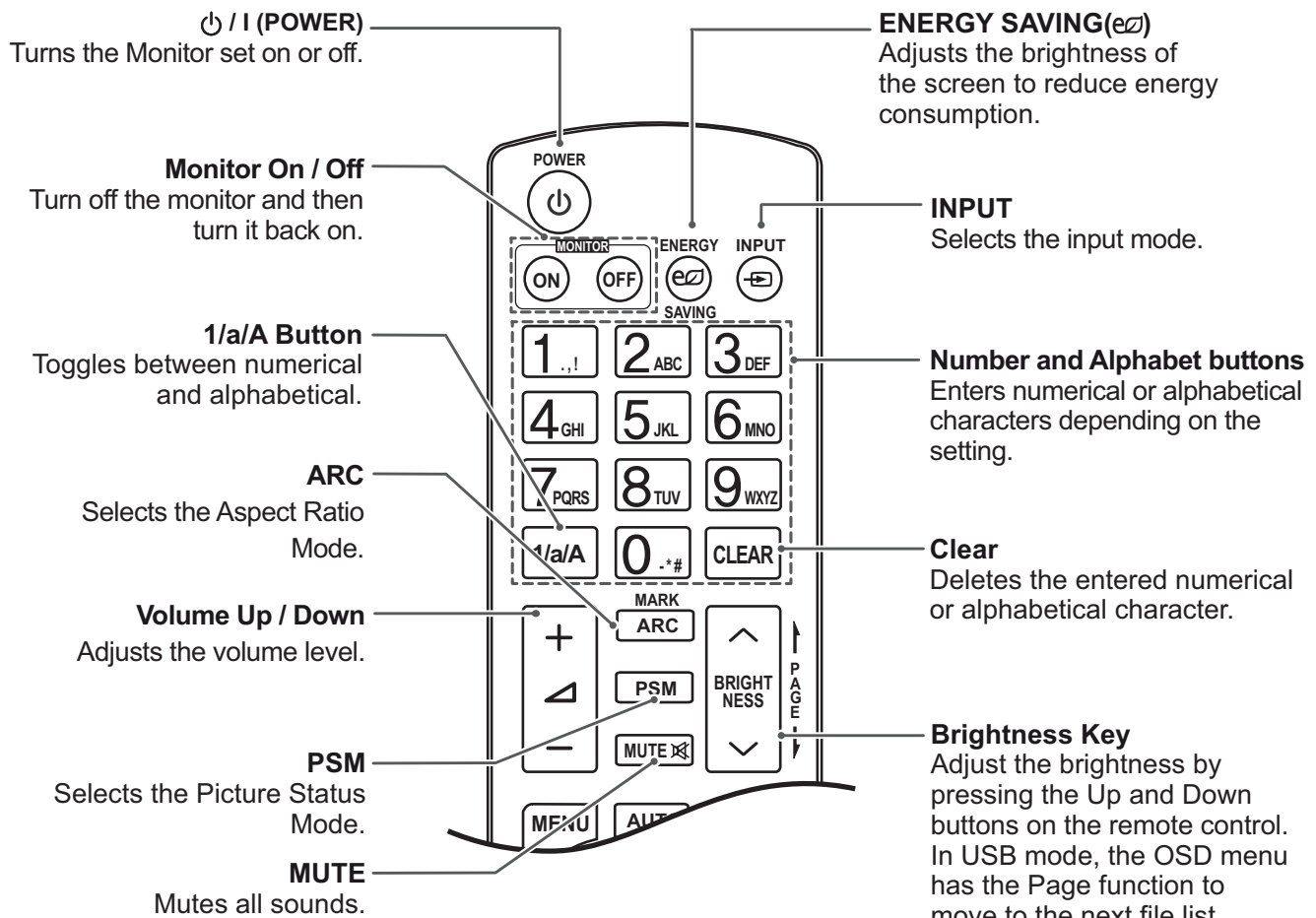
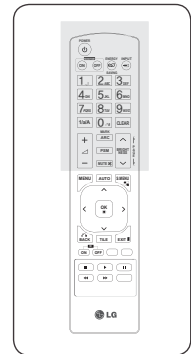
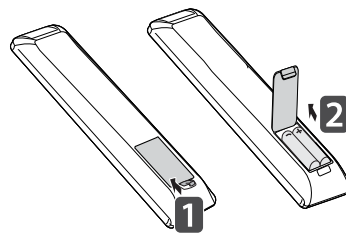
The descriptions in this manual are based on the buttons of the remote control. Please read this manual carefully and use the Monitor set correctly.

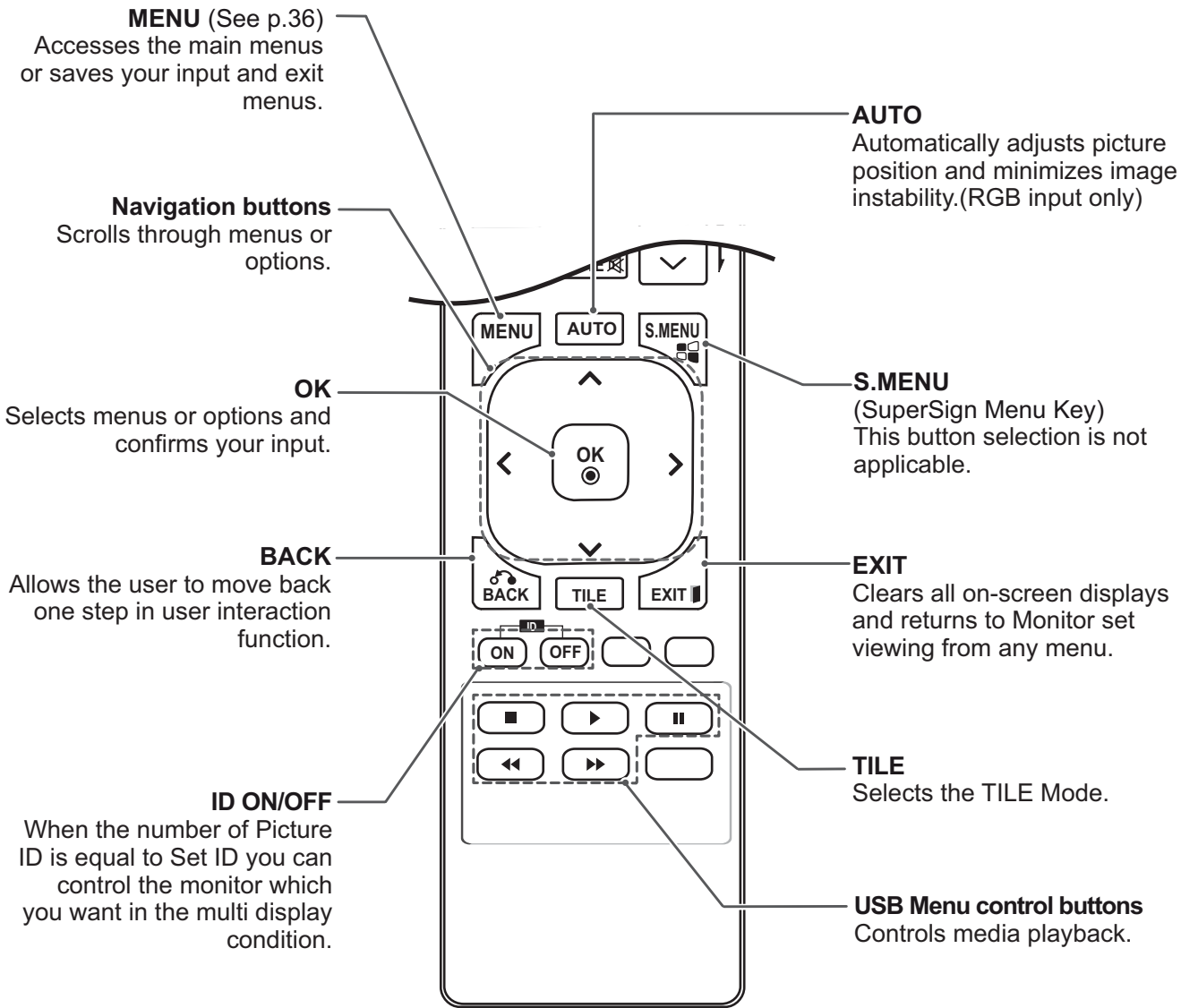
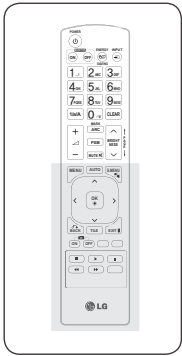
To replace batteries, open the battery cover, replace batteries (1.5 V AAA) matching ⊕ and ⊖ ends to the label inside the compartment, and close the battery cover.

To remove the batteries, perform the installation actions in reverse.

CAUTION

- Do not mix old and new batteries, as this may damage the remote control.
- Make sure to point the remote control to the remote control sensor on the Monitor set.





USING THE MONITOR SET

Connecting to a PC

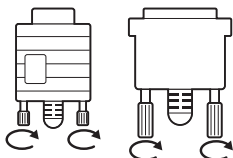
Your Monitor set supports the Plug & Play* feature.

* Plug & Play: The function when a PC recognizes a connected device that users connect to a PC and turn on, without device configuration or user intervention.

NOTE

- It is recommended to use the Monitor set with the HDMI connection for the best image quality.
- Use a shielded signal interface cable, such as D-sub 15 pin signal cable and DVI/HDMI cable, with a ferrite core to maintain standard compliance for the product.
- If you turn the Monitor set on when the set becomes cold, the screen may flicker. This is normal.
- Some red, green, or blue spots may appear on the screen. This is normal.

CAUTION



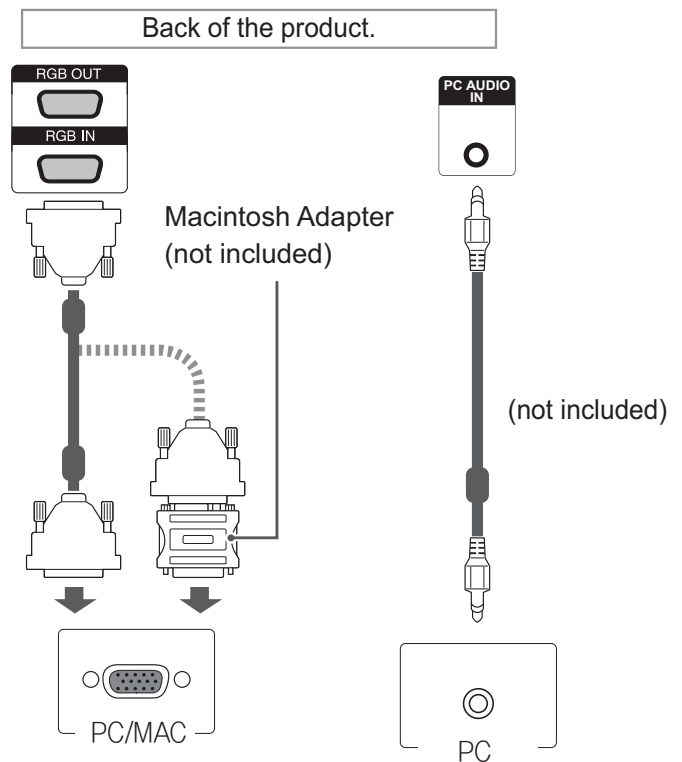
- Connect the signal input cable and tighten it by turning the screws clockwise.

- Do not press the screen with your finger for a long time as this may result in temporary distortion on the screen.
- Avoid displaying a fixed image on the screen for a long period of time to prevent image burn. Use a screensaver if possible.

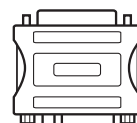
RGB connection

Transmits the analog video signal from your PC to the Monitor set. Connect the PC and the Monitor set with the 15 pin signal cable as shown the following illustrations.

Select RGB input.



NOTE

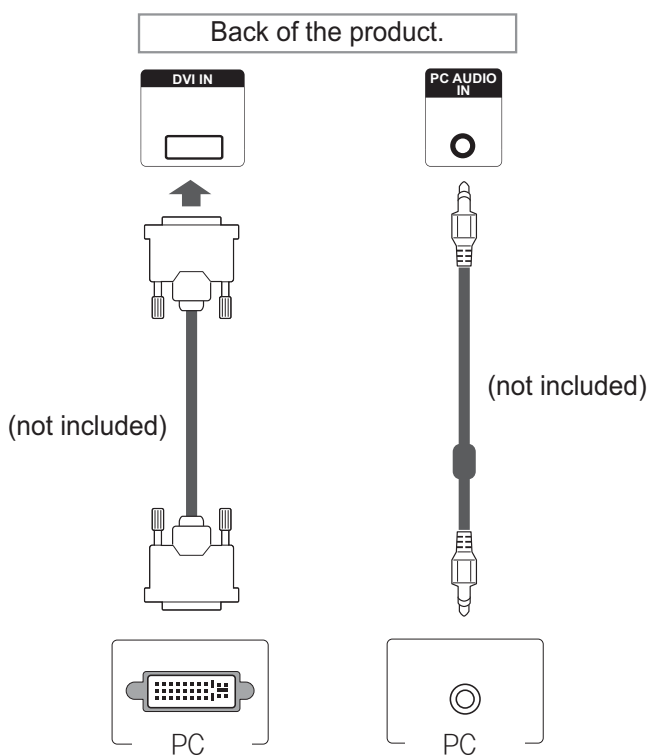


- Use the standard Macintosh adapter since an incompatible adapter is available in the market. (Different signaling system)
- Apple computers may require an adapter to connect to this monitor. Call or visit their web site for more information.

DVI connection

Transmits the digital video signal from your PC to the Monitor set. Connect the PC and the Monitor set with the DVI cable as shown the following illustrations.

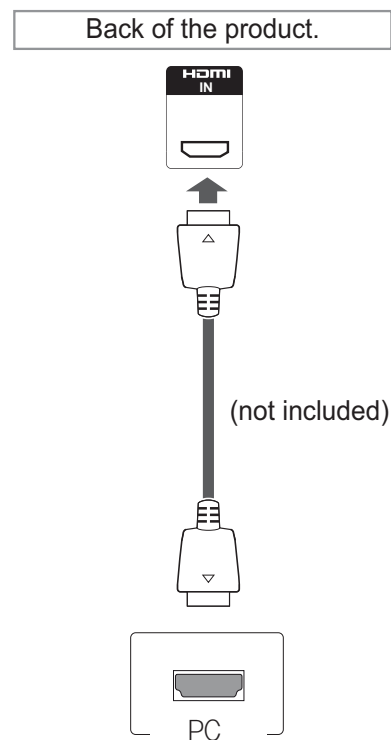
Select DVI input.



HDMI connection

Transmits the digital video and audio signals from your PC to the Monitor set. Connect the PC and the Monitor set with the HDMI cable as shown in the following illustrations.

Select HDMI input.



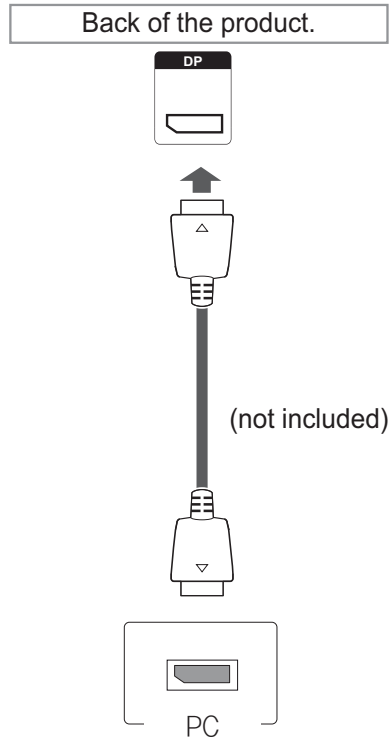
! NOTE

- When HDMI PC is used, a compatibility problem might occur.

DP connection

Transmits the digital video and audio signals from your PC to the Monitor set. Connect the PC and the Monitor set with the DP cable as shown in the following illustrations.

Select DP input.



! NOTE

- Sound may not be available depending on the DP version of your PC.

Adjusting the screen

Selecting an image mode

Display images in its optimized settings by selecting one of the preset image modes.

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **PICTURE** and press **OK**.
- 3 Press the Navigation buttons to scroll to **Picture Mode** and press **OK**.
- 4 Press the Navigation buttons to scroll to an image mode you want and press **OK**.

Mode	Description
Vivid	Adjusts the video image for the retail environment by enhancing the contrast, brightness, Colour, and sharpness.
Standard	Adjusts the image for the normal environment.
Cinema	Optimizes the video image for a cinematic look to enjoy movies as if you are in a movie theater.
Sport	Optimizes the video image for high and dynamic actions by emphasizing primary Colors such as white, grass, or sky blue.
Game	Optimizes the video image for a fast gaming screen such as PCs or games.

- 5 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Customizing image options

Customize basic and advanced options of each image mode for the best screen performance.

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **PICTURE** and press **OK**.
- 3 Press the Navigation buttons to scroll to **Picture Mode** and press **OK**.
- 4 Press the Navigation buttons to scroll to an image mode you want and press **OK**.
- 5 Select and adjust following options, and then press **OK**.

Option	Description
Backlight	Adjusts the brightness of the screen by controlling the LCD backlight. If you decrease the brightness level, the screen becomes darker and the power consumption will be reduced without any video signal loss.
Contrast	Increases or decreases the gradient of the video signal. You may use Contrast when the bright part of the picture is saturated.
Brightness	Adjusts the base level of the signal in the picture. You may use Brightness when the dark part of the picture is saturated.
Sharpness	Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
Color	Adjusts intensity of all colors.
Tint	Adjusts the balance between red and green levels.
Color Temp.	Set to warm to enhance hotter Colors such as red, or set to cool to make picture bluish.

Advanced Control	Customizes the advanced options. Refer to the Advanced image options.
Picture Reset	Restores the options to the default setting.

- When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Customizing PC display options

Customize options of each image mode for the best image quality.

- This function works in the following mode: RGB[PC] mode.
- Press **MENU** to access the main menus.
 - Press the Navigation buttons to scroll to **PICTURE** and press **OK**.
 - Press the Navigation buttons to scroll to **Screen** and press **OK**.
 - Select and adjust following options, and then press **OK**.

Option	Description
Resolution	Selects a proper resolution. See "Customizing PC display options".
Auto Config.	Sets to adjust the screen position, clock, and phase automatically. The displayed image may be unstable for a few seconds while the configuration is in progress.
Position/ Size/Phase	Adjusts the options when the picture is not clear, especially when characters are shaky, after the auto configuration.
Reset	Restores the options to the default setting.

- When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Adjusting the sound

Selecting an sound mode

Play the sound in its optimized settings by selecting one of the preset sound modes.

- Press **MENU** to access the main menus.
- Press the Navigation buttons to scroll to **AUDIO** and press **OK**.
- Press the Navigation buttons to scroll to **Sound Mode** and press **OK**.
- Press the Navigation buttons to scroll to a sound mode you want and press **OK**.

Mode	Description
Standard	Select when you want standard-quality sound.
Music	Select when you listen to music.
Cinema	Select when you watch movies.
Sports	Select when you watch sports events.
Game	Select when you watch sports events.

- When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Customizing sound options

Customize options of each sound mode for the best sound quality.

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **AUDIO** and press **OK**.
- 3 Press the Navigation buttons to scroll to **Sound Mode** and press **OK**.
- 4 Press the Navigation buttons to scroll to a sound mode you want and press **OK**.
- 5 Select and adjust following options, and then press **OK**.

Option	Description
Infinite Sound	LG's Infinity Sound option provides 5.1 channel stereo sound from two speakers.
Treble	Controls the dominant sounds in the output. When you turn up the treble, it will increase the output to the lower frequency range.
Bass	Makes the output sound softer. If the bass is increased, the frequency of the output also increases.
Reset	Resets the sound mode to the default setting.

- 6 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

Using additional options

Adjusting aspect ratio

Resize the image to view the image at its optimal size by pressing **ARC** while you are watching Monitor set.



CAUTION

- If a fixed image displays on the screen for a long period of time, it will be imprinted and become a permanent disfigurement on the screen. This is "image burn" or "burn-in" and not covered by the warranty.
- If the aspect ratio is set to 4:3 for a long period of time, image burn may occur on the letterboxed area of the screen.

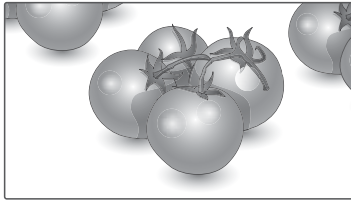


NOTE

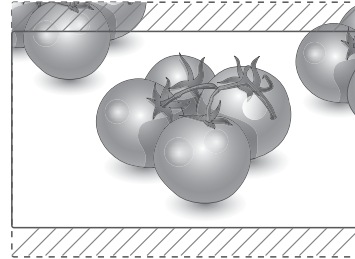
You can also change the image size by accessing the main menus.

MODE \ ARC	AV	Component	HDMI		DVI-D	RGB
			DTV	PC	PC	PC
16:9	o	o	o	o	o	o
Just Scan	x	o	o	x	x	x
4:3	o	o	o	o	o	o
Zoom	o	o	o	x	x	x
Cinema Zoom	o	o	o	x	x	x

- **16:9** : The following selection will allow you to adjust the picture horizontally, in linear proportion, to fill the entire screen(useful for viewing 4:3 formatted DVDs).



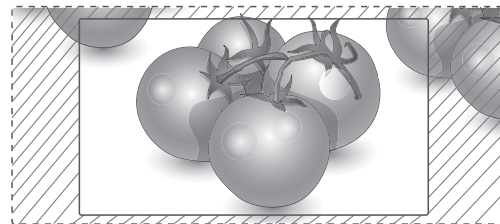
- **Zoom** : The following selection will allow you to view the picture without any alteration, while filling the entire screen. However, the top and bottom of the picture will be cropped.



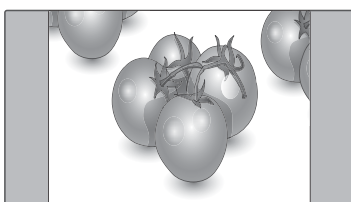
- **Just Scan** : Following Selection will lead to you view the picture of best quality without loss of original picture in high resolution image. Note: If there is noise in original Picture, You can see the noise at the edge.



- **Cinema Zoom** : Choose Cinema Zoom when you want to enlarge the picture in correct proportion. Note: When enlarging or reducing the picture, the image may become distorted.



- **4:3** : The following selection will allow you to view a picture with an original 4:3 aspect ratio, gray bars will appear on both the left and right of the screen.



Using the input list

Selecting an input source

- 1 Press **INPUT** to access the input source list.
- 2 Press the Navigation buttons to scroll to one of the input sources and press **OK**.

Input source	Description
AV(CVBS)	Watch video from a VCR or other external devices.
Component	Watch the contents in a DVD or other external devices, or through a digital set-top box
RGB	View a PC display on the screen
Display Port	View a PC display on the screen
DVI-D	View a PC display on the screen
HDMI	Watch contents in a PC, DVD of Digital set-top box other high definition devices

ENTERTAINMENT

Connecting to a wired network

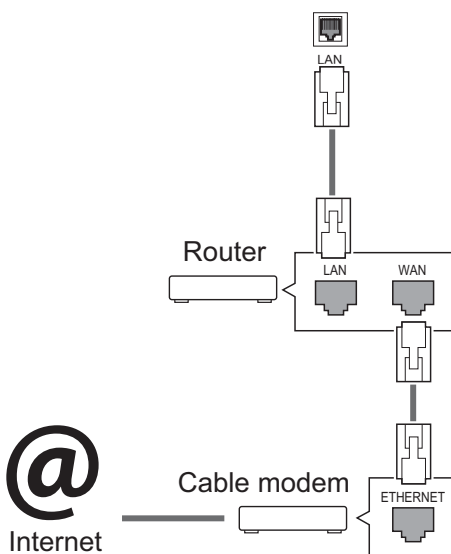
(Depending on model)

Connect the display to a local area network (LAN) via the LAN port as shown on the following illustration and set up the network settings.

Only supports wired network connection.

After making a physical connection, a small number of home networks may require the display network settings to be adjusted. For most home networks, the display will connect to automatically without any adjustments.

For detail information, contact your internet provider or router manual.



CAUTION

- Do not connect a modular phone cable to the LAN port.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or internet service provider.

To set up the network settings: (Even if your display has already connected automatically, running setup again will not harm anything),

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **NETWORK** and press **OK**.
- 3 Press the Navigation buttons to select **Network Setting** and press **OK**.
- 4 If you already set Network Setting, select **Resetting**. The new connection settings resets the current network settings.
- 5 Select **IP Auto Setting** or **IP Manual Setting**.
 - If selecting **IP Manual Setting**, press the Navigation and Number buttons. IP addresses will need to be input manually.
 - **IP Auto Setting**: Select this if there is a DHCP server (Router) on the local area network (LAN) via wired connection, the display will automatically be allocated an IP address. If you're using a broadband router or broadband modem that has a DHCP (Dynamic Host Configuration Protocol) server function. The IP address will automatically be determined.
- 6 When you are finished, press **EXIT**.

CAUTION

- Network setting menu will not be available until the display connected to physical network.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or internet service provider.

 **NOTE**

- If you want to access the Internet directly on your display, the internet connection should always be on.
- If you cannot access the Internet, check the network conditions from a PC on your network.
- When you use **Network Setting**, check the LAN cable or check if DHCP in the router is turned on.
- If you do not complete the network settings, the network may not work properly.

Tips for Network setting

- Use a standard LAN cable with this display. Cat5 or better with a RJ45 connector.
- Many network connection problems during set up can often be fixed by re-setting the router or modem. After connecting the display to the home network, quickly power off and/or disconnect the power cable of the home network router or cable modem. Then power on and/or connect the power cable again.
- Depending on the internet service provider (ISP), the number of devices that can receive internet service may be limited by the applicable terms of service. For details, contact your ISP.
- LG is not responsible for any malfunction of the display and/or the internet connection feature due to communication errors/malfunctions associated with your internet connection, or other connected equipment.
- LG is not responsible for problems within your internet connection.
- You may experience undesired results if the network connection speed does not meet the requirements of the content being accessed.
- Some internet connection operations may not be possible due to certain restrictions set by the Internet service provider (ISP) supplying your Internet connection.
- Any fees charged by an ISP including, without limitation, connection charges are your responsibility.
- A 10 Base-T or 100 Base-TX LAN port is required when using a wired connection to this display. If your internet service does not allow for such a connection, you will not be able to connect the display.

- A DSL modem is required to use DSL service and a cable modem is required to use cable modem service. Depending on the access method of and subscriber agreement with your ISP, you may not be able to use the internet connection feature contained in this display or you may be limited to the number of devices you can connect at the same time. (If your ISP limits sub-subscription to one device, this display may not be allowed to connect when a PC is already connected.)
- The use of a "Router" may not be allowed or its usage may be limited depending on the policies and restrictions of your ISP. For details, contact your ISP directly.

Network Status

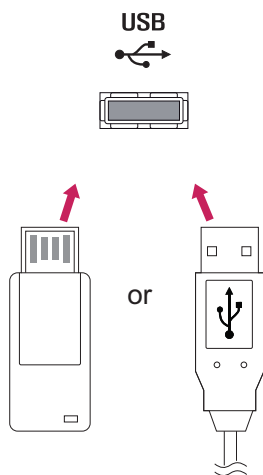
- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **NETWORK** and press **OK**.
- 3 Press the Navigation buttons to select **Network Status**.
- 4 Press **OK** to check the network status.
- 5 When you are finished, press **EXIT**.

Option	Description
Setting	Return to the network setting menu.
Test	Test the current network status after setting the network.
Close	Return to the previous menu.

Connecting USB storage devices

Connect USB storage devices such as a USB flash memory, external hard drive to the display and use multimedia features (See "Browsing files" on page 24).

Connect a USB flash memory or USB memory card reader to the Display as shown on the following illustration. The My media screen appears.



CAUTION

- Do not turn the display off or remove a USB storage device while EMF(my media) Menu is activated, as this could result in loss of files or damage to the USB storage device.
- Back up your files saved on a USB storage device frequently, as you may lose or damage the files and this may be not covered by the warranty.

Tips for using USB storage devices

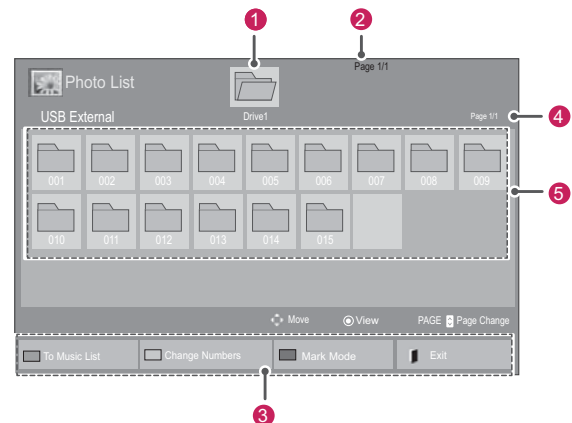
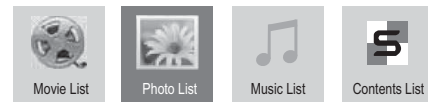
- Only a USB storage device is recognizable.
- If the USB storage device is connected through a USB hub, the device is not recognizable.
- A USB storage device using an automatic recognition programme may not be recognized.
- A USB storage device which uses its own driver may not be recognized.
- The recognition speed of a USB storage device may depend on each device.
- Please do not turn off the display or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- Please do not connect the USB storage device which was artificially maneuvered on the PC. The device may cause the product to malfunction or fail to be played. Never forget to use only a USB storage device which has normal music files, image files or movie files.
- Please use only a USB storage device which was formatted as a FAT32 file system, NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility programme which is not supported by Windows, it may not be recognized.
- Please connect power to a USB storage device(over 0.5 A) which requires an external power supply. If not, the device may not be recognized.
- Please connect a USB storage device with the cable offered by the device maker.
- Some USB storage devices may not be supported or operated smoothly.
- File alignment method of USB storage device is similar to Window XP and filename can recognize up to 100 English characters.

- Be sure to back up important files since data stored in a USB memory device may be damaged. We will not be responsible for any data loss.
- If the USB HDD does not have an external power source, the USB device may not be detected. So be sure to connect the external power source.
 - Please use a power adaptor for an external power source. We do not guarantee an USB cable for an external power source.
- If your USB memory device has multiple partitions, or if you use a USB multi-card reader, you can use up to 4 partitions or USB memory devices.
- If a USB memory device is connected to a USB multi-card reader, its volume data may not be detected.
- If the USB memory device does not work properly, disconnect and reconnect it.
- How fast a USB memory device is detected differs from device to device.
- If the USB is connected in Standby Mode, specific hard disk will automatically be loaded when the display is turned on.
- The recommended capacity is 1 TB or less for a USB external hard disk and 32 GB or less for USB memory.
- Any device with more than the recommended capacity may not work properly.
- If a USB external hard disk with a “Energy Saving” function does not work, turn the hard disk off and on again to make it work properly.
- USB storage devices below USB 2.0 are supported as well. But they may not work properly in the movie list.
- Maximum of 999 folders or files can be recognized under one folder.
- A USB 3.0 storage device may not work.

Browsing files

Access the photo, music, or movie lists and browse files.

- 1 Connect a USB storage device.
- 2 Press **MENU** to access the main menus.
- 3 Press the Navigation buttons to scroll to **My Media** and press **OK**.
- 4 Press the Navigation buttons to choose from **Movie List**, **Photo List**, **Music List** or **Contents List** and press **OK**.



No.	Description
①	Moves to upper level folder
②	Current page/Total pages
③	Corresponding buttons on the remote control
④	Current page/ total pages of contents under the folder focused on ①
⑤	Contents under the folder focused on ①
Buttom	Description
Green button	Press the green button to toggle between Photo List -> Music List, Music List -> Contents List, Contents List -> Movie List or Movie List -> Photo List.
Yellow button	A method to view in 5 large thumbnail or simple list.
Blue button	Convert to Mark Mode.

Supported file format

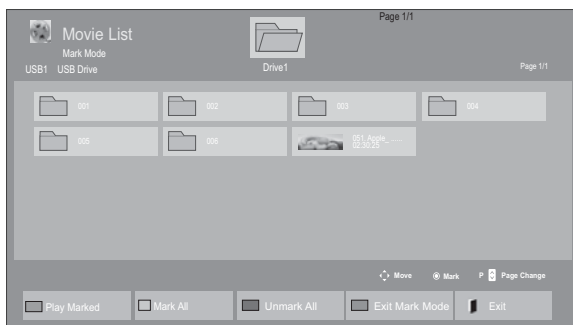
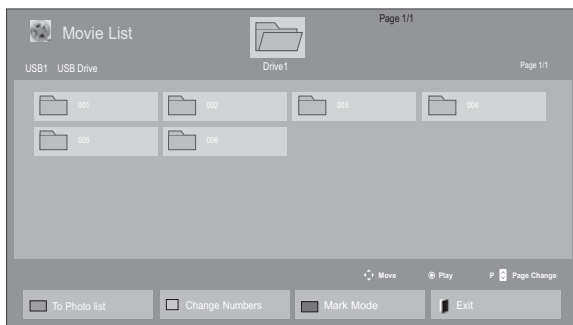
Type	Supported file format																
Movie	<p>DAT,MPEG,MPEG,VOB,AVI,DivX,MP4,MKV,TS,TRP,TP,ASF,WMV,FLV)</p> <p>Movie(* .mpg/* .mpeg/* .dat/* .ts/* .trp/* .tp/* .vob/* .mp4/* .mov/* .mkv/* .divx/* .avi/* .asf/* .wmv/* .flv/* .avi(motion-jpeg)/* .mp4(motion-jpeg)/* .mkv(motion-jpeg))supporting file</p> <p>Video format : DivX3.11, DivX4.12, DivX5.x, DivX6, Xvid1.00, Xvid1.01, Xvid1.02, Xvid1.03, Xvid1.10 beta-1/beta-2,</p> <p>Mpeg-1, Mpeg-2, Mpeg-4, H.264/AVC, VC1, JPEG, Sorenson H.263</p> <p>Audio format : Dolby Digital, AAC, Mpeg, MP3, LPCM, HE-AAC, ADPCM, WMA</p> <p>Bit rate : within 32 kbps to 320 kbps(MP3)</p> <p>External Subtitle format : *.smi/* .srt/* .sub (MicroDVD,Subviewer1.0/2.0)/* .ass/* .ssa/* .txt(TMPlayer)/* .psb(PowerDivX)</p> <p>Internal Subtitle format : only, XSUB (It is the subtitle format used in DivX6 files)</p>																
Photo	<p>JPEG</p> <p>Baseline : 64 x 64 to 15360 x 8640 Progressive : 64 x 64 to 1920 x 1440</p> <ul style="list-style-type: none"> You can play JPEG files only. Non-supported files are displayed in the form of predefined icon. <p>Only 3D Models</p> <table border="1"> <thead> <tr> <th></th> <th>File Extensions</th> <th>Item</th> <th>Profile</th> </tr> </thead> <tbody> <tr> <td rowspan="2">2D</td> <td rowspan="2">jpeg jpg jpe</td> <td>supported file format</td> <td> <ul style="list-style-type: none"> SOF0: baseline SOF1: Extend Sequential SOF2: Progressive </td> </tr> <tr> <td>photo size</td> <td> <ul style="list-style-type: none"> Min: 64 x 64 Max-Normal Type: 15360 (W) x 8640 (H) Progressive Type: 1920 (W) x 1440 (H) </td> </tr> <tr> <td rowspan="2">3D</td> <td rowspan="2">mpo</td> <td>supported file format</td> <td>mpo</td> </tr> <tr> <td>photo size</td> <td> <ul style="list-style-type: none"> 4:3 size: 3,648 x 2,736 2,592 x 1,944 2,048 x 1,536 3:2 size: 3,648 x 2,432 </td> </tr> </tbody> </table>		File Extensions	Item	Profile	2D	jpeg jpg jpe	supported file format	<ul style="list-style-type: none"> SOF0: baseline SOF1: Extend Sequential SOF2: Progressive 	photo size	<ul style="list-style-type: none"> Min: 64 x 64 Max-Normal Type: 15360 (W) x 8640 (H) Progressive Type: 1920 (W) x 1440 (H) 	3D	mpo	supported file format	mpo	photo size	<ul style="list-style-type: none"> 4:3 size: 3,648 x 2,736 2,592 x 1,944 2,048 x 1,536 3:2 size: 3,648 x 2,432
	File Extensions	Item	Profile														
2D	jpeg jpg jpe	supported file format	<ul style="list-style-type: none"> SOF0: baseline SOF1: Extend Sequential SOF2: Progressive 														
		photo size	<ul style="list-style-type: none"> Min: 64 x 64 Max-Normal Type: 15360 (W) x 8640 (H) Progressive Type: 1920 (W) x 1440 (H) 														
3D	mpo	supported file format	mpo														
		photo size	<ul style="list-style-type: none"> 4:3 size: 3,648 x 2,736 2,592 x 1,944 2,048 x 1,536 3:2 size: 3,648 x 2,432 														

Music	<p>MP3</p> <p>Bit rate 32 to 320</p> <ul style="list-style-type: none"> Sampling rate MPEG1 Layer3 : 32 kHz, 44.1 kHz, 48 kHz Sampling rate MPEG2 Layer3 : 16 kHz, 22.05 kHz, 24 kHz Sampling rate MPEG2.5 Layer3 : 8 kHz, 11.025 kHz, 12 kHz 		
Content (when using SuperSign Manager)	<p>File Extensions : *.cts/ *.cse</p> <p>Movie</p> <p>File Extensions: *.mpg/* .mpeg/* .dat/* .ts/* .trp/* .tp/* .vob/* .mp4/* .mov/* .mkv/* .avi/* .asf/* .wmv/* .avi(motion JPEG)/* .mp4(motion JPEG)/* .mkv(motion JPEG)</p> <p>Video format: MPEG1, MPEG2, MPEG4,H.264/AVC, DivX 3.11, DivX 4.12, DivX 5.x, DivX 6, Xvid 1.00,Xvid 1.01, Xvid 1.02, Xvid 1.03,Xvid 1.10-beta1/2, JPEG, VC1(WVC1/WMV3)</p> <p>Audio format: MP2,MP3,Dolby Digital, LPCM, AAC, HE-AAC,LPCM, ADPCM, WMA, MP3</p>		
	File Extensions	Item	Profile
Photo	JPEG JPG PNG BMP	supported file format	<ul style="list-style-type: none"> SOF0: baseline SOF1: Extend Sequential SOF2: Progressive
		Photo size	<ul style="list-style-type: none"> Min: 64 x 64 Max Type: 1366 x 768
Music	MP3	Bit rate	32 kbps to 320 kbps
		Sampling rate	<ul style="list-style-type: none"> 32 kHz, 44.1 kHz, 48 kHz (MPEG1 L3) 16 kHz, 22.05 kHz, 24 kHz (MPEG2 L3) 8kHz, 11.025 kHz, 12 kHz (MPEG2.5 L3)

Viewing movies

Play video files on display. Your display shows all of the video files saved in a USB storage device or shared folder on a PC.

- 1 Press the Navigation buttons to scroll to **My Media** and press **OK**.
- 2 Press the Navigation buttons to scroll to **Movie List** and press **OK**.
- 3 Press the Navigation buttons to scroll to a folder you want and press **OK**.
- 4 Press the Navigation buttons to scroll to a file you want and press **OK**.



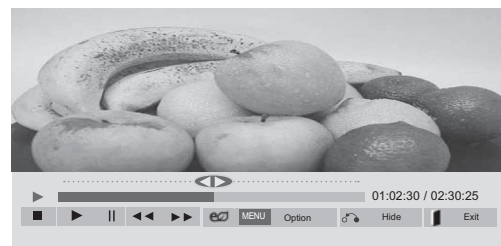
Menu	Description
Play Marked	Play the selected movie file. Once a movie file finishes playing, the next selected one will be played automatically.
Mark All	Mark all movie files on the screen.
Unmark All	Deselect all marked movie files.
Exit Mark Mode	Exit the Mark Mode.

- 5 Play a movie.

! NOTE

- Non-supported files are displayed the preview image by icon only
- Abnormal files are displayed in the form of bitmap

- 6 Control playback by using the following buttons.



Button	Description
	Stops the playback
	Plays a video
	Pauses or resumes the playback
	Scans backward in a file
	Scans forward in a file
MENU	Show the Option menu.
HIDE	Hide the menu on the full-sized screen.
EXIT	Return to Movie List .
< or >	Skips to specific points in a file during playback. The time of a specific point will appear on the status bar. In some files, this function may not work properly.
ENERGY SAVING (e0)	Press the ENERGY SAVING button repeatedly to increase the brightness of your screen.

Tips for using playing video files

- Some user-created subtitles may not work properly.
- Some special characters are not supported in subtitles.
- HTML tags are not supported in subtitles.
- Subtitles in languages other than the supported languages are not available.
- The screen may suffer temporary interruptions (image stoppage, faster playback, etc.) when the audio language is changed.
- A damaged movie file may not be played correctly, or some player functions may not be usable.
- Movie files produced with some encoders may not be played correctly.
- If the video and audio structure of recorded file is not interleaved, either video or audio is outputted.
- HD videos with a maximum of 1920x1080@25/30P or 1280x720@50/60P are supported, depending on the frame.
- Videos with resolutions higher than 1920x1080@25/30P or 1280x720@50/60P may not work properly depending on the frame.
- Movie files other than the specified types and formats may not work properly.
- Max bitrate of playable movie file is 20 Mbps. (only, Motion JPEG : 10 Mbps)
- We do not guarantee smooth playback of profiles encoded level 4.1 or higher in H.264/AVC.
- DTS Audio codec is not supported.
- A movie file more than 30 GB in file size is not supported for playback.
- A DivX movie file and its subtitle file must be located in the same folder.
- A video file name and its subtitle file name must be identical for it to be displayed.
- Playing a video via a USB connection that doesn't support high speed may not work properly.
- Files encoded with GMC(Global Motion Compensation) may not be played.
- When you are watching the movie by Movie List function, you can adjust an image by Energy Saving key on the remote control. User setup for each image mode does not operate.

Video options

- 1 Press **MENU** to access the **Pop-Up** menus.
- 2 Press the Navigation buttons to scroll to **Set Video Play.**, **Set Video.** or **Set Audio.** and press **OK**.

NOTE

- Option values changed in **Movie List** does not affect **Photo List** and **Music List**.
- Option value changed in **Photo List** and **Music List** are changed likewise in **Photo List** and **Music List** excluding **Movie List**.
- When replaying the video file after stopping, you can play from where it stopped previously.

When you select the **Set Video Play**,

- 1 Press the Navigation buttons to scroll to show the **Picture Size, Audio Language, Subtitle Language** or **Repeat**.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.

Menu	Description
Picture Size	Selects your desired picture format during movie play.
Audio Language	Changes the Language Group of the audio during movie play. Files with a single audio track cannot be selected.
Subtitle Language	Turn on/off the subtitle.
Language	Activated for SMI subtitle and can select the language within the subtitle.
Code Page	Can select the font for subtitle. When set to default, same font as general menu will be used.
Sync	Adjusts the time synchronisation of the subtitle from -10 secs to +10 secs by steps of 0.5 secs during movie play.
Position	Changes the position of the subtitle either up or down during movie play.
Size	Selects your desired Subtitle size during movie play.

Repeat	Turn on/off repeat function of movie playback. When turned on, the file within the folder will be played back repeatedly. Even when the repeated playback is turned off, it can run the playback if the file name is similar to the previous file.
---------------	--

Code Page	Support Language
Latin1	English, Spanish, French, German, Italian, Swedish, Finnish, Dutch, Portuguese, Danish, Romanian, Norwegian, Albanian, Gaelic, Welsh, Irish, Catalan, Valencian
Latin2	Bosnian, Polish, Croatian, Czech, Slovak, Slovenian, Serbian, Hungarian
Latin4	Estonian, Latvian, Lithuanian
Cyrillic	Bulgarian, Macedonian, Russian, Ukrainian, Kazakh
Greek	Greek
Turkish	Turkish
Korean	Korean

NOTE

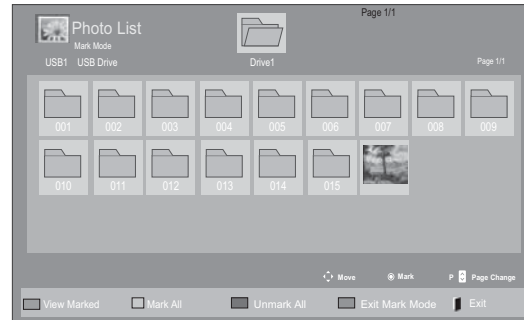
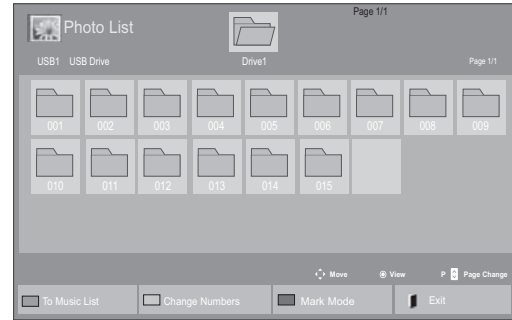
- Only 10,000 of sync blocks can be supported within the subtitle file.
- When playing a video, you can adjust the Picture Size by pressing the RATIO button.
- Subtitles in your language are only supported when the OSD menu is also in this language.
- The code page options may be disabled depending on the language of the subtitle files.
- Select the appropriate code page for the subtitle files.

When you select the **Set Video**,

- 1 Press the Navigation buttons to scroll to make appropriate adjustments.

When you select the **Set Audio**,

- 1 Press the Navigation buttons to scroll to show the **Sound Mode**, **Clear Voice II** or **Balance**.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.



Viewing photos



View image files saved in a USB storage device. The displays on the screen may differ from the model.

- 1 Press the Navigation buttons to scroll to **My Media** and press **OK**.
- 2 Press the Navigation buttons to scroll to **Photo List** and press **OK**.
- 3 Press the Navigation buttons to scroll to a folder you want and press **OK**.
- 4 Press the Navigation buttons to scroll to a file you want and press **OK**.

Menu	Description
View Marked	Display the selected photo file.
Mark All	Mark all photo files on the screen.
Unmark All	Deselect all marked photo files.
Exit Mark Mode	Exit the Mark Mode.

- 5 View photos.

NOTE

- Non-supported files are displayed the pre-view image by icon only .
- Abnormal files are displayed in the form of bitmap .

Using photo options

Use the following options while viewing photos.



Options

Number of selected photos

Option	Description
Slideshow	Starts or stops a slideshow with selected photos. If there are no selected photos, all photos saved in the current folder display during a slideshow. To set a slideshow speed, select Option .
BGM	Turns the background music on or off. To set the background music folder, select Option . You can adjust Option by MENU button on the remote control.
⤵ (Rotate)	Rotates photos clockwise (90°, 180°, 270°, 360°). NOTE <ul style="list-style-type: none"> The supported photo size is limited. You cannot rotate a photo if the resolution of the rotated width is larger than the supported resolution size.
Q	View the photo by zoom in 2, 4 times. NOTE <ul style="list-style-type: none"> Photos with a resolution of 960x540 or less cannot be enlarged.

ENERGY SAVING(e2)	Press the ENERGY SAVING button repeatedly to change the brightness of your screen.
Option	<ul style="list-style-type: none"> Slide Speed: Selects a slideshow speed (Fast, Medium, Slow). BGM: Selects a music folder for the background music. NOTE <ul style="list-style-type: none"> You cannot change the music folder while the background music is playing. You can only select the MP3 folder saved on the device that currently displays the photo.
Hide	Hides the option window. To display the options, press OK .
EXIT	Return to Photo List .

Photo options

- 1 Press **MENU** to show the **Option** menus.
- 2 Press the Navigation buttons to scroll to **Set Photo View.**, **Set Video.** or **Set Audio.** and press **OK**.

NOTE

- Option values changed in **Movie List** does not affect **Photo List** and **Music List**.
- Option value changed in **Photo List** and **Music List** are changed likewise in **Photo List** and **Music List** excluding **Movie List**.

When you select the **Set Photo View**,

- 1 Press the Navigation buttons to scroll to select **Slide Speed** or **BGM..**
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.

When you select the **Set Video**,

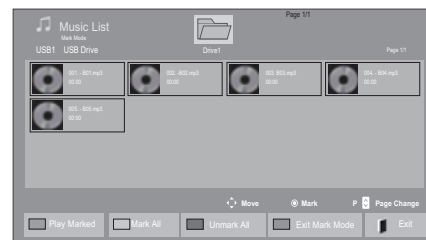
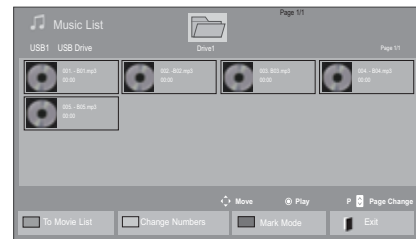
- 1 Press the Navigation buttons to scroll to make appropriate adjustments.

When you select the **Set Audio**,

- 1 Press the Navigation buttons to scroll to show the **Sound Mode**, **Clear Voice II** or **Balance**.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.

Listening to music

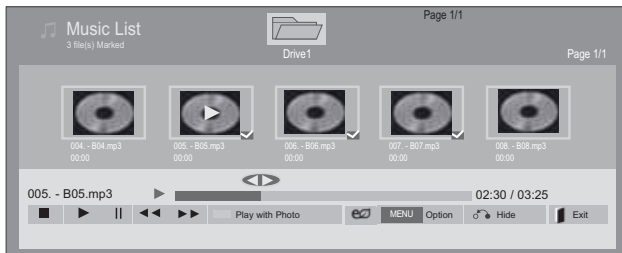
- 1 Press the Navigation buttons to scroll to **My Media** and press **OK**.
- 2 Press the Navigation buttons to scroll to **Music List** and press **OK**.
- 3 Press the Navigation buttons to scroll to a folder you want and press **OK**.
- 4 Press the Navigation buttons to scroll to a file you want and press **OK**.



Menu	Description
Play Marked	Display the selected music file.
Mark All	Mark all music files on the screen.
Unmark All	Deselect all marked music files.
Exit Mark Mode	Exit the Mark Mode.

- 5 Play music.

6 Control playback by using the following buttons.



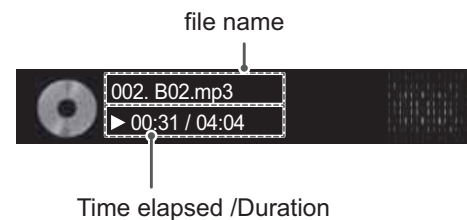
Button	Description
	Stops playback
	Plays a music file
	Pauses or resumes playback
	Skips to the next file
	Skips to the previous file
	When playing, When you press the button, the previous music file will be played. When you press the button, the next music file will be played.
Green button	Start playing the selected music files and then move to the Photo List .
ENERGY SAVING ()	Press the ENERGY SAVING button repeatedly to change the brightness of your screen.
MENU	Show the Option menu.
Hide	Hides the option window. To display the options, press OK .
EXIT	When you press the EXIT button while the Music player is displayed, only the music will be stopped and the player will not return to normal viewing. When you press the EXIT button while the music is stopped or while the music player is hidden, the player will return to normal viewing.
< or >	When using the < or > button during playback a cursor indicating the position can be played.

Tips for playing music files

- This unit cannot support the ID3 Tag embedded MP3 files.

! NOTE

- Non-supported files are displayed the pre-view image by icon only
- Abnormal files are displayed in the form of bitmap
- A damaged or corrupted music does not play but displays 00:00 in playtime.
- A music downloaded from a paid service with copyright protection does not start but displays inappropriate information in playtime.
- If you press OK, buttons, screen saver is stopped.
- The PLAY() , Pause() , , buttons on the remote control are also available in this mode.
- You can use the button to select the next music and the button to select the previous music.



Music options

- 1 Press **MENU** to access the **Pop-Up** menus.
- 2 Press the Navigation buttons to scroll to **Set Audio Play.** or **Set Audio.** and press **OK**.

NOTE

- Option values changed in **Movie List** does not affect **Photo List** and **Music List**.
- Option value changed in **Photo List** and **Music List** are changed likewise in **Photo List** and **Music List** excluding **Movie List**.

When you select the **Set Audio Play.**,

- 1 Press the Navigation buttons to scroll to select the **Repeat** or **Random**.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.

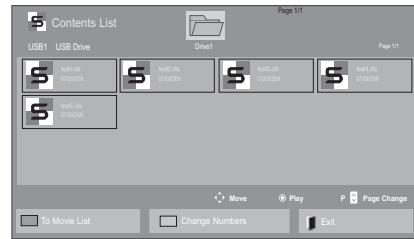
When you select the **Set Audio.**,

- 1 Press the Navigation buttons to scroll to select the **Sound Mode**, **Clear Voice II** or **Balance**.
- 2 Press the Navigation buttons to scroll to make appropriate adjustments.

Viewing the Contents List

Plays back the stored files using the Export option in SuperSign Manager.

- 1 Press the Navigation buttons to scroll to **My Media** and press **OK**.
- 2 Press the Navigation buttons to scroll to **Contents List** and press **OK**.
- 3 Press the Navigation buttons to scroll to a folder you want and press **OK**.
- 4 Press the Navigation buttons to scroll to a file you want and press **OK**.

**NOTE**

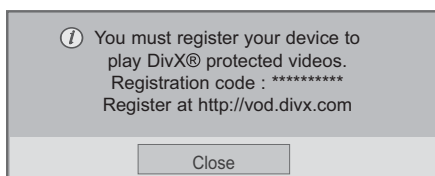
- While playing media files from Contents List, only the **BACK** or **EXIT** button are available. Selecting the **BACK** or **EXIT** button stops playing media files and returns to the screen view mode.
- If there is the **AutoPlay** folder in the USB device and its files are in supported formats, they can be played back automatically when the USB device is connected to the monitor.

DivX registration code

Registering the DivX code

Check and register the DivX registration code of your display so that you can rent or purchase the latest movies at www.divx.com/vod. To play a rented or purchased DivX file, the file's registration code should be same with your Display's DivX registration code.

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **MY MEDIA** and press **OK**.
- 3 Press the Blue button.
- 4 Press the Navigation buttons to scroll to **DivX Reg. Code** and press **OK**.
- 5 View the registration code of your display.
- 6 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.



NOTE

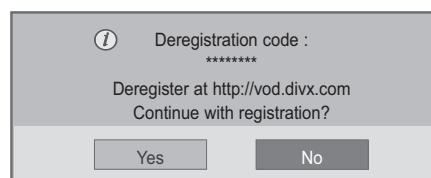
- Movie files are supported as follows
Resolution : under 1920x1080 WxH pixels
Frame rate : under 30 frames/sec(1920x1080), under 60 frames/sec(under 1280x720)
- Video Codec : MPEG 1, MPEG 2, MPEG 4, H.264/AVC, DivX 3.11, DivX 4.12, DivX 5.x, DivX 6, Xvid 1.00, Xvid 1.01, Xvid 1.02, Xvid 1.03, Xvid 1.10-beta1, Xvid 1.10-beta2, JPEG, VC1, Sorenson H.263/H.264.

Deactivating the DivX feature

Deactivate all of the devices through the web server and block devices from activating.

Delete the existing authentication information to receive a new DivX user authentication for the display. Once this function is executed, a DivX user authentication is required again to see DivX DRM files.

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **MY MEDIA** and press **OK**.
- 3 Press the Blue button.
- 4 Press the Navigation buttons to scroll to **Deactivation** and press **OK**.
- 5 Press the Navigation buttons to select **Yes** to confirm.



- 6 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.

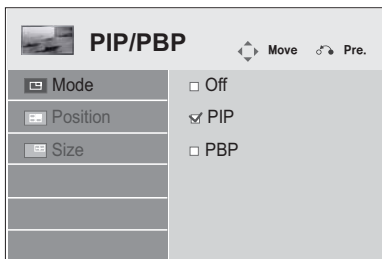
NOTE

- If you do not use an optional external speaker, connect the PC to the Monitor set with the supplied audio cable.
- If you turn the Monitor set on when the set becomes cold, the screen may flicker. This is normal.
- Some red, green, or blue spots may appear on the screen. This is normal.

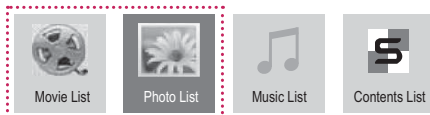
Using PIP/PBP

Displays videos or photos stored in the USB device on a single monitor by dividing it into the main and sub screens. (See p.45)

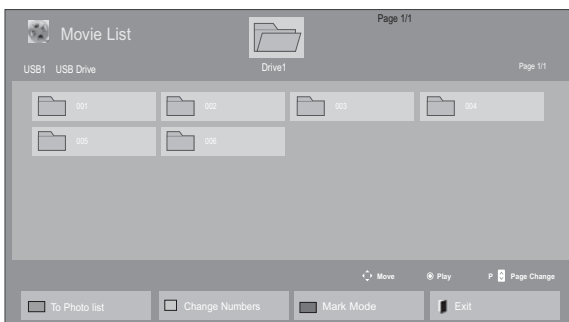
- 1 Press the MENU button to move to **OPTION** and press **OK**.
- 2 Press **PIP/PBP** to select **PIP** or **PBP** and then press **OK**.



- 3 Select **Movie List** or **Photo List** from **My Media**. (With **PIP/PBP** selected, the **Music List** and **Contents List** are deactivated.)



- 4 Select a file you want and then press **OK**.



- 5 Select the PIP or PBP icon from the play list.

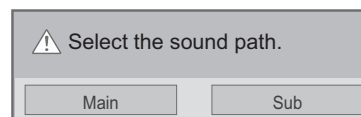


< Movie List >

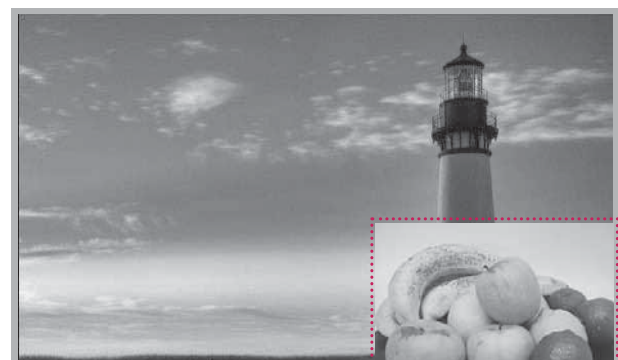


< Photo List >

- 6 Select either Main or Sub for sound. You must to select the output sound before running the PIP or PBP function.



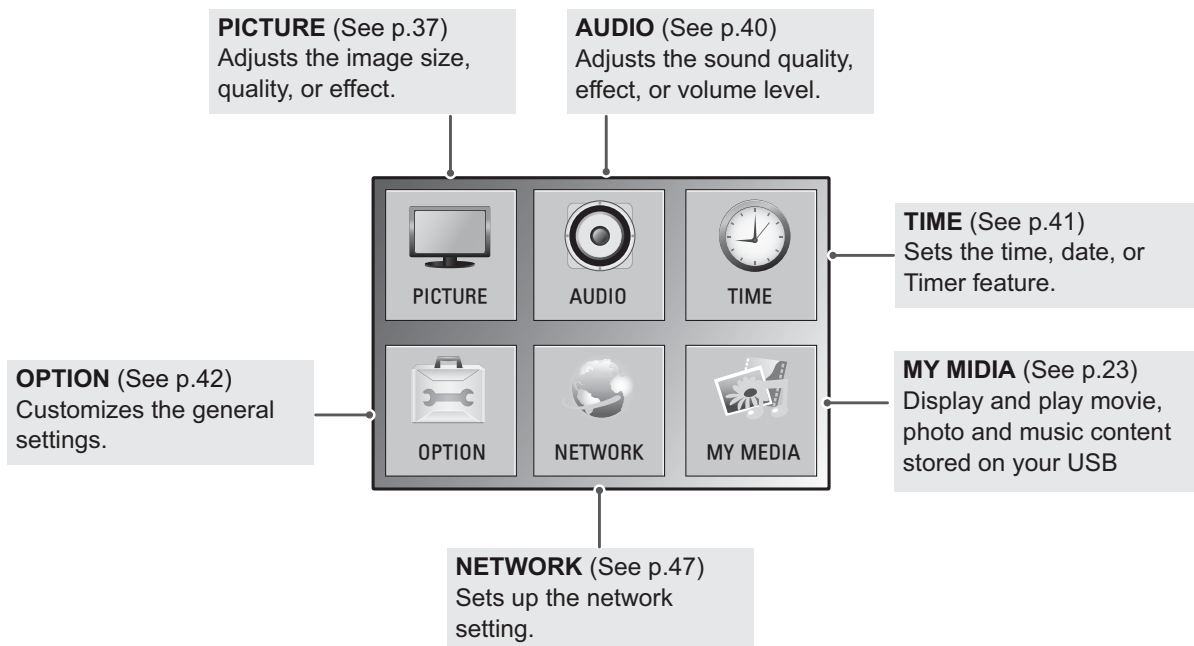
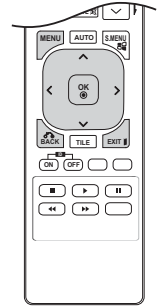
- 7 The sub screen is displayed on the main screen.



CUSTOMIZING SETTINGS

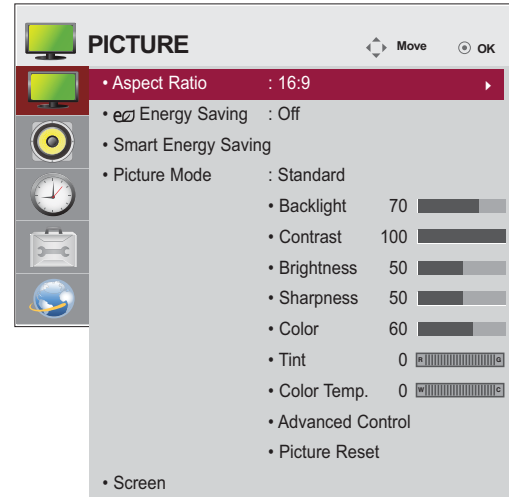
Accessing main menus

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to one of the following menus and press **OK**.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- 4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.



PICTURE settings

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **PICTURE** and press **OK**.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
- To return to the previous level, press **BACK**.
- 4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.



The available picture settings are described in the following:

Setting	Description	
Aspect Ratio	Changes the image size to view images at its optimal size (See p.18).	
Energy Saving	Sets to automatically adjust the screen brightness corresponding to the surroundings.	
	Level	
	Off	100%
	Minimum	80 %
	Medium	60 %
	Maximum	40 %
Smart Energy Saving	Screen Off	0 %
	Adjusts the backlight and contrast depending on the screen brightness.	
	Level	
	On	Enables the Smart Energy Saving function to save power consumption as much as the value set in the smart energy saving rate.
	Off	Disables the Smart Energy Saving function.
Picture Mode	Selects one of the preset image or customizes options in each mode for the best Monitor set screen performance. You are also able to customize advanced options of each mode. The available preset picture modes vary depending on the Monitor set .	
	Mode	
	Vivid	Adjusts the video image for the retail environment by enhancing the contrast, brightness, Color, and sharpness.
	Standard	Adjusts the image for the normal environment.
	Cinema	Optimizes the video image for a cinematic look to enjoy movies as if you are in a movie theater.
	Sport	Optimizes the video image for high and dynamic actions by emphasizing primary Colours such as white, grass, or sky blue.
	Game	Optimizes the video image for a fast gaming screen such as PCs or games.

Setting	Description	
SCREEN (In RGB Mode Only)	Customizes the PC display options in RGB mode.	
	Option	
	Resolution	Selects a proper resolution. See "Customizing PC display options".
	Auto Configure	Sets to adjust the screen position, clock, and phase automatically. The displayed image may be unstable for a few seconds while the configuration is in progress.
	Position/Size/Phase	Adjusts the options when the picture is not clear, especially when characters are shaky, after the auto configuration.
	Reset	Restores the options to the default setting.

Basic image options

Setting	Description
Backlight	Adjusts the brightness of the screen by controlling the LCD backlight. If you decrease the brightness level, the screen becomes darker and the power consumption will be reduced without any video signal loss.
Contrast	Increases or decreases the gradient of the video signal. You may use Contrast when the bright part of the picture is saturated.
Brightness	Adjusts the base level of the signal in the picture. You may use Brightness when the dark part of the picture is saturated.
Sharpness	Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
Color	Adjusts intensity of all colors.
Tint	Adjusts the balance between red and green levels.
Color Temp .	Set to warm to enhance hotter Colors such as red, or set to cool to make picture bluish.
Advanced Control	Customizes the advanced options. Refer to the Advanced image options. (See p.39).
Picture Reset	Restores the options to the default setting.

! NOTE

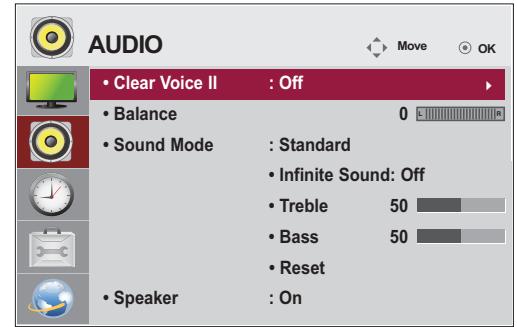
- If the 'Picture Mode' setting in the Picture menu is set to **Vivid, Standard, Cinema, Sport** or **Game** the subsequent menus will be automatically set.
- You cannot adjust color and tint in the RGB-PC / HDMI-PC mode.

Advanced Control

Setting	Description
Dynamic Contrast (Off/High/Medium/Low)	Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker. (This function can be used only under AV(CVBS) and Component.)
Dynamic Color (Off/High/Low)	Adjusts screen Colors so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue, green and white look more vivid. (This function can be used only under AV(CVBS) and Component.)
Clear White (Off/High/Low)	Make the white area of screen brighter and more white.
Skin Color (-5 to 5)	It detects the skin area of video and adjusts it to express a natural skin color.
Noise Reduction (Off/High/Medium/Low)	Reduces screen noise without compromising video quality. (This function can be used only under AV(CVBS) and Component.)
Digital Noise Reduction (Off/High/Medium/Low)	This option reduces the noise produced while creating digital video signals.
Gamma (High/Medium/Low)	Set your own gamma value. On the monitor, high gamma values display whitish images and low gamma values display high contrast images.
Black Level (High/Low)	<ul style="list-style-type: none"> ● Low: The picture of the screen gets darker. ● High: The picture of the screen gets brighter. Set black level of the screen to proper level. (Function works in the following mode - Component, HDMI-DTV)

AUDIO settings

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **AUDIO** and press **OK**.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
 - To return to the previous level, press **BACK**.
- 4 When you are finished, press **EXIT**.
 - When you return to the previous menu, press **BACK**.

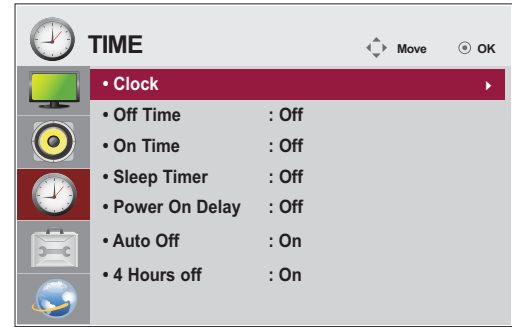


The available audio options are described in the following:

Setting	Description
Clear Voice II	By differentiating the human sound range from others, it helps users listen to human voices better.
Balance	Adjusts balance between the left and right speakers according to your room environment.
Sound Mode	The best sound tone quality will be selected automatically depending on the video type that you're currently watching.
	Mode
	Standard The most commanding and natural audio.
	Music Select this option to enjoy the original sound when listening to the music.
	Cinema Select this option to enjoy sublime sound.
	Sport Select this option to watch sports broadcasting.
	Game To enjoy dynamic sound when playing a game.
	<div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>NOTE</p> <p>If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amplifier to cope with different user environments.</p> </div>
	Option
	Infinite Sound LG's Infinity Sound option provides 5.1 channel stereo sound from two speakers.
	Treble Controls the dominant sounds in the output. When you turn up the treble, it will increase the output to the higher frequency range.
	Bass Makes the output sound softer. When you turn up the bass, it will increase the output to the lower Frequency.
	Reset Resets the sound mode to the default setting.
Speaker	ON: Enables sound to the monitor speaker. (* The monitor speaker is sold separately.) OFF: Disables sound to the monitor speaker. Use this option when using an external sound device.

TIME settings

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **TIME** and press **OK**.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
 - To return to the previous level, press **BACK**.
- 4 When you are finished, press **EXIT**.
When you return to the previous menu, press **BACK**.



The available time settings are described in the following:

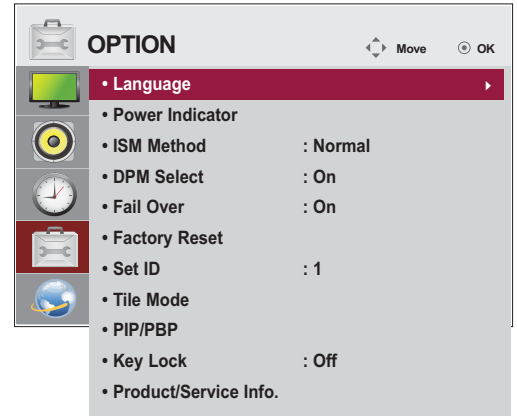
Setting	Description
Clock	Sets the time feature.
On/Off Time	Sets the time to turn on or off the Monitor set.
Sleep Timer	Sets the length of time until the Monitor set to turns off. When you turn the Monitor set off and turn it on again, the Sleep Timer will be set to off.
Power on delay	When connecting multiple monitors and turning the power on, the monitors are turned on individually to prevent overload.
Auto off	If Auto off is active and there is no input signal, the set switches to off mode automatically after 15 minutes.
4 Hours off	If you do not use the monitor for more than 4 hours, it will be in standby mode automatically.

! NOTE

- Once the on or off time is set, these functions operate daily at the preset time.
- The scheduled power-off function works properly only when the device time is set correctly.
- When the scheduled power-on and power-off times are the same, the power-off time has priority over the power-on time if the set is turned on, and vice versa if the set is turned off.


OPTION settings

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **OPTION** and press **OK**.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
 - To return to the previous level, press **BACK**.
- 4 When you are finished, press **EXIT**.
 - When you return to the previous menu, press **BACK**.



The available option settings are described in the following:

Setting	Description
Language	To choose the language in which the control names are displayed.
Power Indicator	Use this function to set the power indicator on the front side of the product to On or Off.
ISM Method	A frozen or still picture from a PC/Video game displayed on the screen for prolonged periods could result in a ghost image remaining even when you change the image. Avoid allowing a fixed image to remain on the screen for a long period of time.
	Setting
	Normal Leave on normal if you don't foresee image burn in being a problem.
	Color Wash Removes a ghost image on the screen. The color block with the screen moved a little and the white pattern are alternately displayed.
	White Wash White wash fills the screen with solid white. This helps removes permanent images burned into the screen. A permanent image may be impossible to clear entirely with white wash.
DPM Select	A user can choose to turn the power saving mode on / off.
Fail Over	If there is no input signal, it automatically switches to another input with signal.
Factory Reset	Select this option to return to the default factory settings.
Set ID	You can assign a unique Set ID NO (name assignment) to each product when several products are connected for display. Specify the number (1 to 255) using the button and exit. Use the assigned Set ID to individually control each product using the Product Control Program.

Setting	Description	
Tile Mode	Tile Mode	To use this function - Must be displayed with various other products. - Must be in a function that can be connected to RGB Cable by distributor and RS-232C. Tile mode and choose Tile alignment and set the ID of the current product to set location. * Only after pressing the SET button the adjustments made to the settings will be saved. - Tile mode : column x row (c = 1 to 15 r = 1 to 15) - 15 x 15 available. - Configuration of an integration screen is also available as well as configuration of One by one Display.
	Auto Config.	Sets to adjust the screen position, clock, and phase automatically. The displayed image may be unstable for a few seconds while the configuration is in progress.
	Position	Moving the screen position horizontally and vertically.
	Size	Adjust the horizontal and vertical size of the screen taking into account the size of the bezel.
	Natural	The image is omitted by the distance between the screens to be naturally shown.
	Reset	Function to initialize and release Tile. All Tile setting are released when selecting Tile recall and the screen returns to Full screen.
PIP/PBP	Displays videos or photos stored in the USB device on a single monitor by dividing it into the main and sub screens.	
	Option	
	Mode	Sets the type of secondary screen. * OFF : Disables the secondary screen. * PIP (Picture In Picture) : Displays the secondary screen in the main screen. * PBP (Picture By Picture) : Displays the secondary screen next to the main screen.
	Position	Adjusts the position of the sub screen (top left, bottom left, top right, bottom right) The default value is the bottom right.
	Size	Adjusts the size of the sub screen (Size 0 to 10). The default size of PIP (Size: 0) is 480x240; the maximum size 10 is 960x540.
<div style="border: 1px solid black; border-radius: 10px; padding: 10px;"> <p> NOTE</p> <ul style="list-style-type: none"> The Position and Size options are enabled only in PIP mode. </div>		
Key Lock	Turns the local key function on or off. If Key Lock is enabled, the local key does not work.	
Product/Service Info.	You can find informations about Software Version, Serial No, F/W version and IP Address.	

Tile Mode

This monitor can be tiled with additional monitors to create a large tiled display.

Off

When the Tile Mode option is disabled

2X1

When using 2 monitors



2X2

When using 4 monitors



3X3

When using 9 monitors



4X4

When using 16 monitors



5X5

When using 25 monitors



Tile Mode - Natural mode

When active, the part of the image that would normally be displayed in the gap between the monitors is omitted.

Before



After



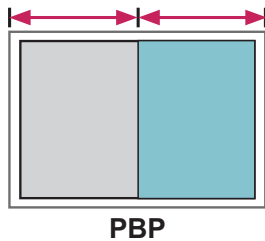
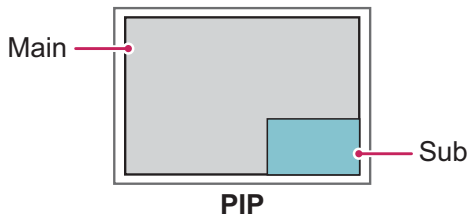
PIP/PBP

Displays videos or photos stored in the USB device on a single monitor by dividing it into the main and sub screens. (See p.35)

Mode

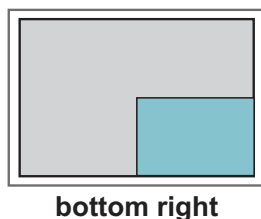
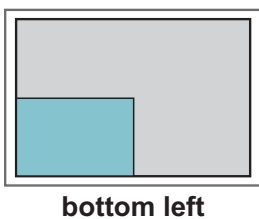
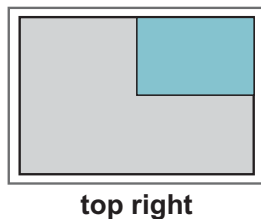
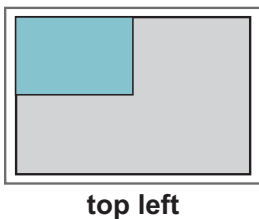
***PIP(Picture In Picture):** Displays the Sub screen in the main screen.

***PBP(Picture By Picture):** Displays the Sub screen next to the main screen.



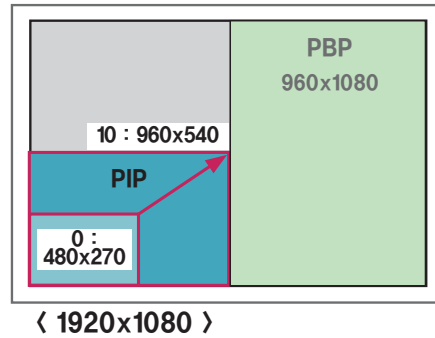
Position

Adjusts the position of the sub screen (top left, bottom left, top right, bottom right)



Size

Adjusts the size of the sub screen (Size 0 to 10).

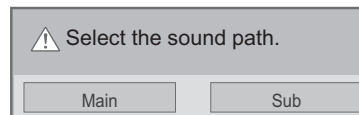


NOTE

- The sub screen is supported only when using the USB device.

		Sub
		USB
Main	Component	O
	RGB	O
	HDMI/DVI/Display Port	O
	AV	X

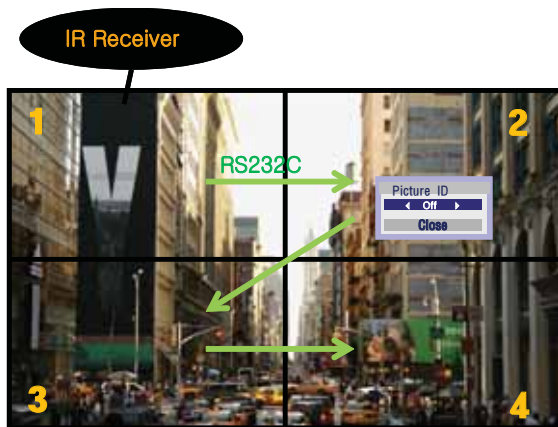
- You can change the size and position only in PIP mode.
- With PBP selected, the Aspect Ratio option in the PICTURE menu is disabled (Fixed as 16:9).
- While running the PBP function, the Tile Mode function does not work.
- You must select the output sound before running the PIP or PBP function. (Select either Main or Sub.)



- If you fail to select Main or Sub from the sound selection box and OSD disappears after some time, or it disappears by pressing the Exit or Back key, the PIP/PBP sub screen is not activated.
- You cannot change the sound while running the PIP or PBP function. If you want to change the sound, please restart PIP/PBP.
- The picture quality of the sub screen is set according to the values set in the main menu, not in the USB device.

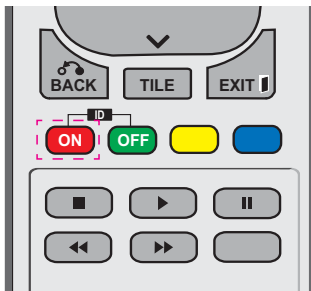
Picture ID

Picture ID is used to change the settings of a specific display using a single IR receiver for multi-vision. The set receiving the IR signal communicates with another set via an RS232 connection. Each set is identified by a Set ID. If you assign the Picture ID using the remote control, only displays with the same Picture ID and Set ID can be controlled remotely.

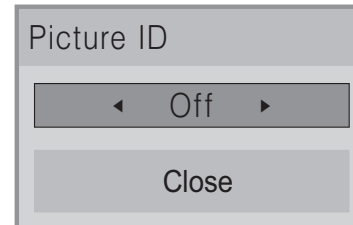


2X2 Multi-Vision (Total Set ID: 4)
Set IDs are assigned as shown in the picture.

- 1 Press the red ON button on the remote control to assign the Picture ID.



- 2 If you press the left/right buttons or press the ON button repeatedly, the Picture ID cycles through OFF and 0 to 4. Assign the ID you want.



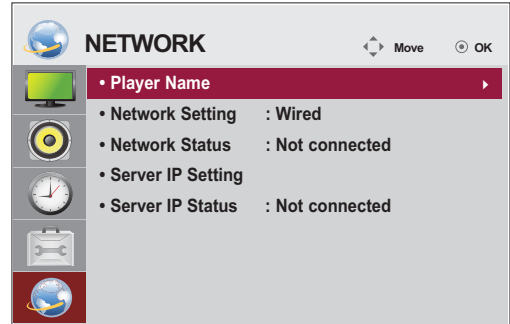
- If you assign the Set ID to each set with multi-vision, and then assign the Picture ID using the red button on the remote control, the key command is displayed for the set with the same Set ID and Picture ID. A set with different Set IDs and Picture IDs cannot be controlled by IR signals.
- For more information on how to assign the Set ID, see "Set ID" on page 41.
- Please refer to the Installation Manual for more information on Total Set ID assignment.

NOTE

- For example, if the Picture ID is assigned to 2, the upper right display (Set ID: 2) can be controlled by IR signals.
- For each set, you can change the settings for the PICTURE, AUDIO, TIME, NETWORK and MY MEDIA menus or the hot keys on the remote control.
- If you press the green OFF button for Picture IDs, the Picture IDs for all sets are turned off. If you then press any button on the remote control, all sets will start working again.
- Picture ID will be disabled while using the MY MEDIA menu.

NETWORK settings

- 1 Press **MENU** to access the main menus.
- 2 Press the Navigation buttons to scroll to **NETWORK** and press **OK**.
- 3 Press the Navigation buttons to scroll to the setting or option you want and press **OK**.
 - To return to the previous level, press **BACK**.
- 4 When you are finished, press **EXIT**.
 - When you return to the previous menu, press **BACK**.



The available option settings are described in the following:

Setting	Description
Player Name	Sets the player name used in SuperSign Manager.(Up to 20 characters)
Network Setting	Configure the network settings.
Network Status	Display the network status. - Internet is connected : Externally connected - Home network is connected : Only internally connected - Not connected : When there is no network connection
Server IP Setting	Sets the IP address of the computer (server) on which SuperSign Manager is installed.
Server IP Status	Displays the connection status with the server. - Not connected : When there is no network connection with SuperSign server - Waiting for approval : When network connection with SuperSign server has been made, but access to server has not been approved by the server - Rejected : When network connection with SuperSign server has been made, but access to server has been rejected by the server - Internet is connected : When network connection with SuperSign server has been made and access to server has also been approved by the server



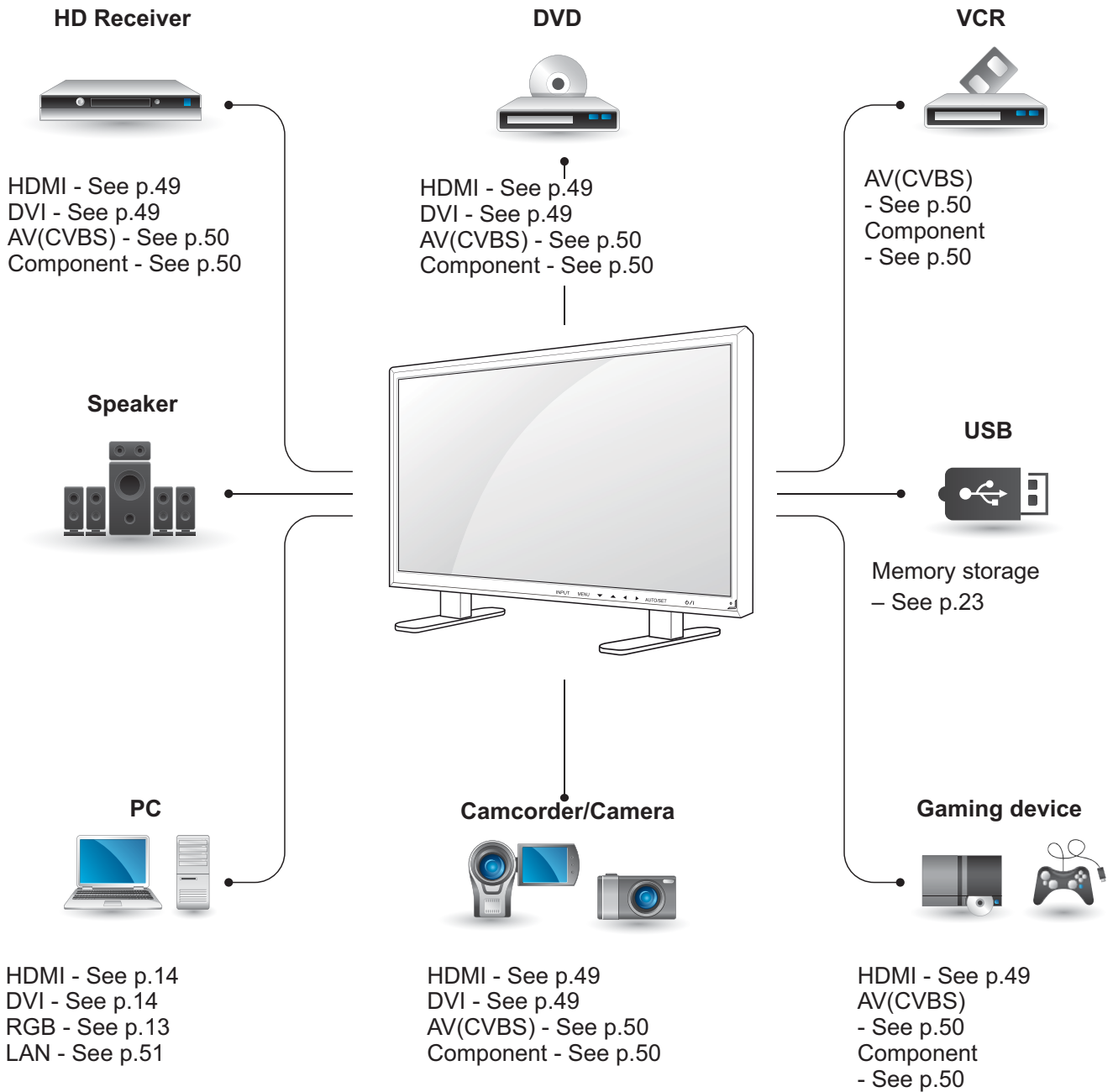
CAUTION

- When setting the Player Name, input delay may occur if you press the buttons on the remote control continuously.

MAKING CONNECTIONS

Connect various external devices to the ports on the Monitor set's back panel.

- 1 Find an external device you want to connect to your Monitor set shown on the following illustration.
- 2 Check the connection type of the external device.
- 3 Go to the appropriate illustration and check the connection details.



NOTE

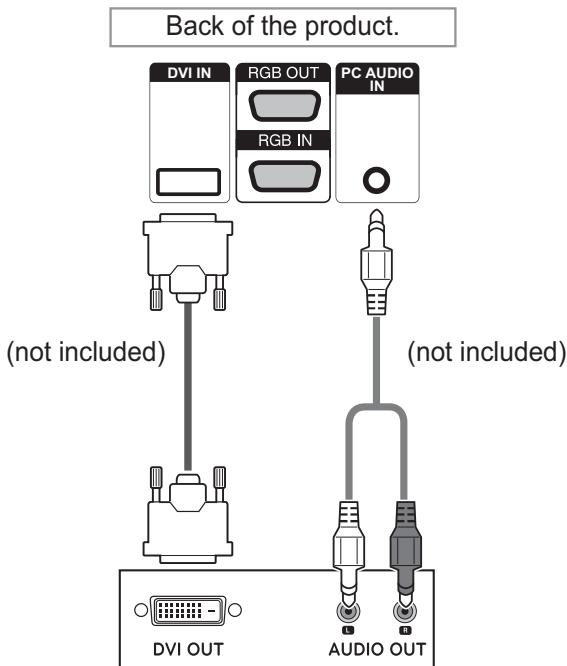
- If you connect a gaming device to the Monitor set, use the cable supplied with the gaming device.
- It is recommended you to use the optional speaker provided.

Connecting to a HD receiver, DVD, Camcorder, Camera, Gaming Device or VCR player

Connect a HD receiver, DVD, or VCR player to the Monitor set and select an appropriate input mode.

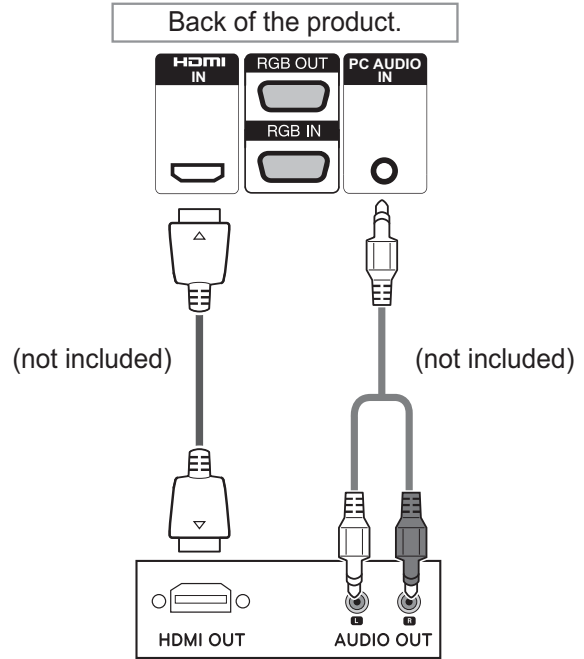
DVI connection

Transmits the digital video signal from an external device to the Monitor set. Connect the external device and the Monitor set with the DVI cable as shown in the following illustration. To transmit an audio signal, connect an optional audio cable.



HDMI connection

Transmits the digital video and audio signals from an external device to the Monitor set. Connect the external device and the Monitor set with the HDMI cable as shown on the following illustration.

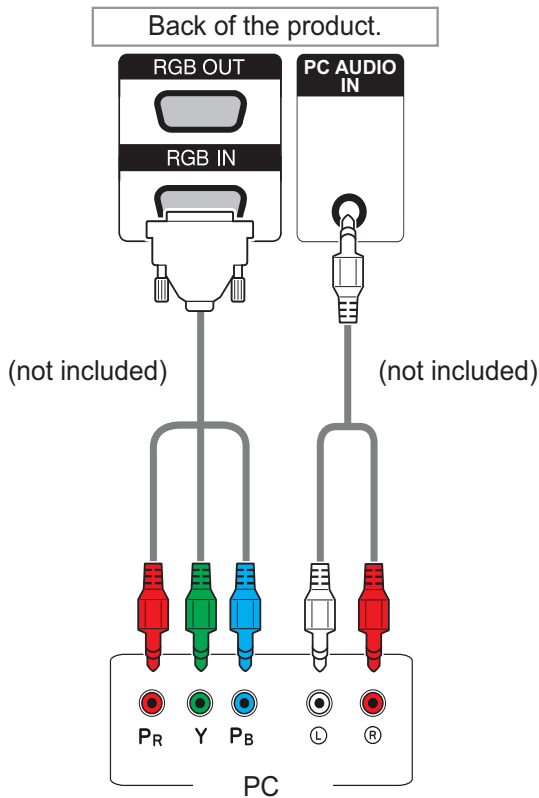


NOTE

- Use a High Speed HDMI™ Cable.
- High Speed HDMI™ Cables are tested to carry an HD signal up to 1080p and higher.

Component connection

Transmits the analog video and audio signals from an external device to the Monitor set. Connect the external device and the Monitor set with the 15 pin signal to RCA cable as shown on the following illustration. To display images by using progressive scan, make sure to use the component cable.

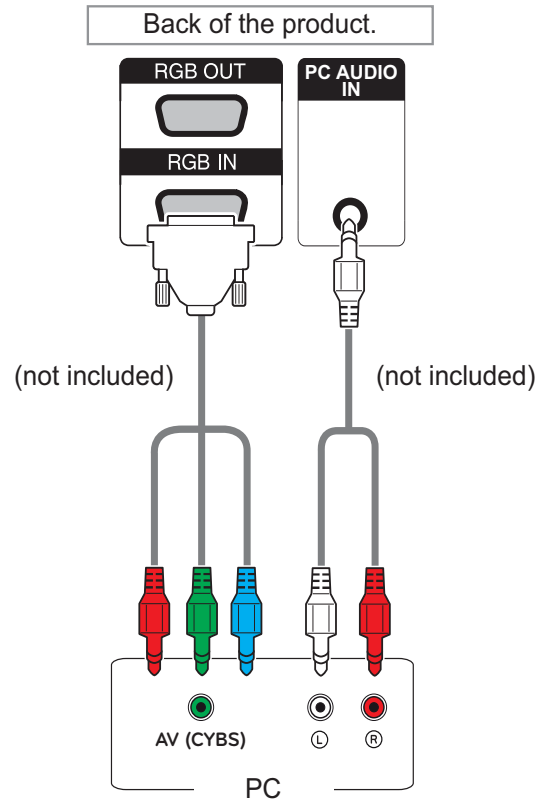


! NOTE

- When connecting to the AV or Component port using the shared interface, the port must match up to the input source. Otherwise, noise may occur.

AV(CVBS) connection

Transmits the analog video and audio signals from an external device to the Monitor set. Connect the external device and the Monitor set with the 15 pin signal to RCA cable as shown on the following illustration.



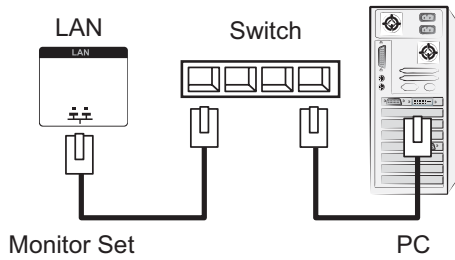
! NOTE

- For AV (CVBS) connection, the red and blue cables in a shared interface are not in use.

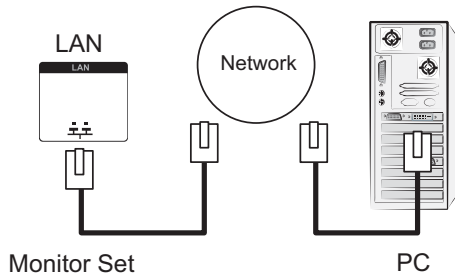
Connecting to the LAN

LAN connection

A Using a router(Switch)

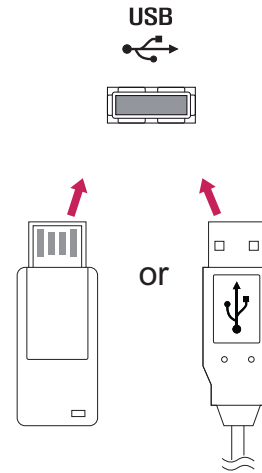


B Using the Internet.



Connecting to a USB

Connect a USB storage device such as a USB flash memory, external hard drive, MP3 player or a USB memory card reader to the Monitor set and access the USB menu to use various multimedia files.

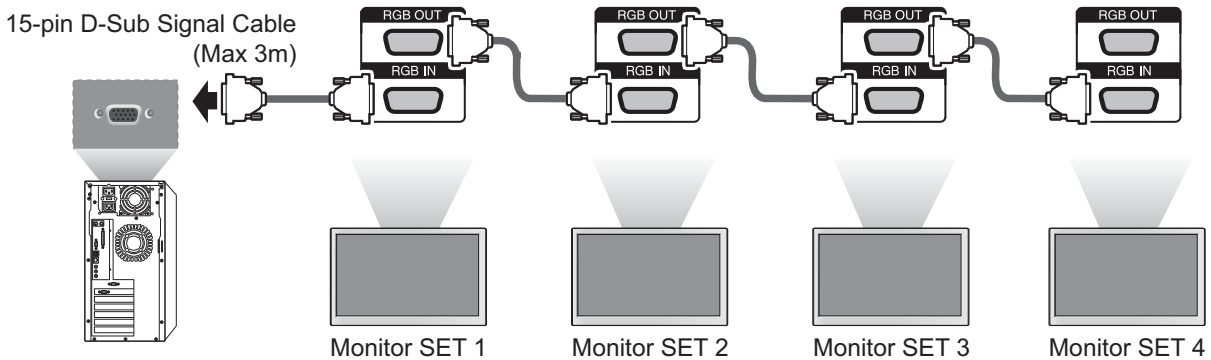


Daisy Chain Monitors

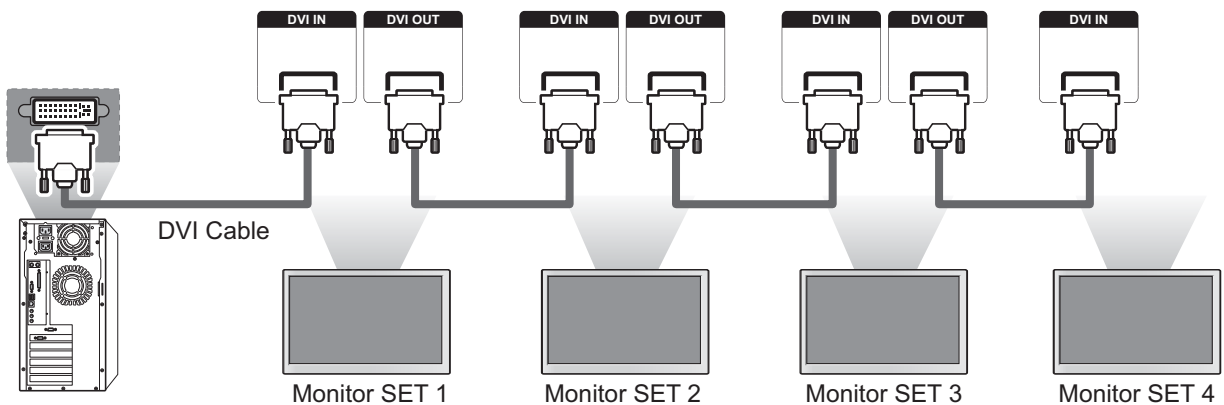
Use this function to share the RGB video signal with other monitors without having to use a separate signal splitter box.

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

RGB Cable



DVI Cable



NOTE

- The number of monitors that can be connected to one output may vary depending on signal status and cable loss. If the signal status is good, and there is no cable loss, it is possible to connect up to 9 monitors. If you want to connect more than this number of monitors, it is recommended to use a distributor.
- When multi-connecting in/out cascade format, no loss cables are recommended.
- DVI OUT does not work when connecting to a third-party product.

TROUBLESHOOTING

No image is displayed

Problem	Resolution
Is the product power cord connected?	<ul style="list-style-type: none"> • See if the power cord is properly connected to the outlet.
Is the power indicator light on?	<ul style="list-style-type: none"> • See if the power switch is turned on. • May need service.
Power is on, power indicator is blue but the screen appears extremely dark.	<ul style="list-style-type: none"> • Adjust brightness and contrast again. • Backlight may need repair.
The power indicator amber?	<ul style="list-style-type: none"> • If the product is in power saving mode, move the mouse or press any key. • Turn both devices off and then back on.
Does the 'Out of range' message appear?	<ul style="list-style-type: none"> • The signal from the PC (video card) is out of the vertical or horizontal frequency range of the product. Adjust the frequency range by referring to the Specifications in this manual. <p>* Maximum resolution RGB : 1920 x 1080 @ 60 Hz HDMI/DVI : 1920 x 1080 @ 60 Hz</p>
Does the 'Check signal cable' message appear?	<ul style="list-style-type: none"> • The signal cable between PC and product is not connected. Check the signal cable. • Press the 'INPUT' menu in the remote Control to check the input signal.

'Unknown Product' message appears when the product is connected.

Problem	Resolution
Did you install the driver?	<ul style="list-style-type: none"> • See if the plug&play function is supported by referring to the video card user manual.

'Key Lock On' message appears.

Problem	Resolution
The 'Key Lock On' message appears when pressing the Menu button.	<ul style="list-style-type: none"> The Lock function prevents the OSD settings from being changed inadvertently. To release the lock, go to Menu and Option and disable the Key Lock option.

The screen image looks abnormal.

Problem	Resolution
Is the screen position wrong?	<ul style="list-style-type: none"> D-Sub analog signal - Press the "AUTO" button in the remote control to automatically select the optimal screen status that fits into the current mode. If adjustment is not satisfactory, use the Position OSD menu. See if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution in the Control Panel "Display" Setting menu.
Do thin lines appear on the background screen?	<ul style="list-style-type: none"> D-Sub analog signal - Press the "AUTO" button in the remote control to automatically select an optimal screen status that fits into the current mode. If adjustment is not satisfactory, use the Clock OSD menu.
Horizontal noise appears or the characters look blurred.	<ul style="list-style-type: none"> D-Sub analog signal - Press the "AUTO" button in the remote control to automatically select an optimal screen status that fits into the current mode. If adjustment is not satisfactory, use the Phase OSD menu.
The screen is displayed abnormally.	<ul style="list-style-type: none"> The proper input signal is not connected to the signal port. Connect the signal cable that matches with the source input signal.

After-image appears on the product.

Problem	Resolution
After-image appears when the product is turned off.	<ul style="list-style-type: none"> If you use a fixed image for a long time, the pixels may be damaged quickly. Use the screen-saver function.

The audio function does not work.

Problem	Resolution
No sound?	<ul style="list-style-type: none"> • See if the audio cable is connected properly. • Adjust the volume. • See if the sound is set properly.
Sound is too dull.	<ul style="list-style-type: none"> • Select the appropriate equalize sound.
Sound is too low.	<ul style="list-style-type: none"> • Adjust the volume.

Screen color is abnormal.

Problem	Resolution
Screen has poor color resolution (16 colors).	<ul style="list-style-type: none"> • Set the number of colors to more than 24 bits (true color) Select Control Panel - Display - Settings - Color Table menu in Windows.
Screen color is unstable or mono-colored.	<ul style="list-style-type: none"> • Check the connection status of the signal cable. Or, re-insert the PC video card.
Do black spots appear on the screen?	<ul style="list-style-type: none"> • Several pixels (red, green, white or black color) may appear on the screen, which can be attributable to the unique characteristics of the LCD panel. It is not a malfunction of the LCD.

The operation does not work normally.

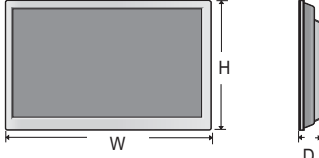
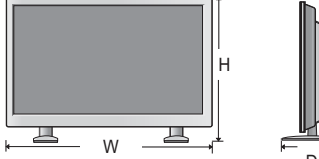
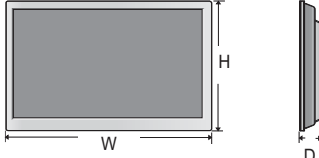
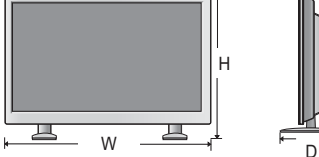
Problem	Resolution
The power suddenly turned off.	<ul style="list-style-type: none"> • Is the sleep timer set? • Check the power control settings. Power interrupted.

SPECIFICATIONS

42VS20

LCD Panel	Screen Type	1067.31 mm Wide (42 inch) TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Panel. Visible diagonal size : 1067.31 mm
	Pixel Pitch	0.4845 mm (H) x 0.4845 mm (V)
Video Signal	Max. Resolution	RGB : 1920 x 1080 @ 60 Hz HDMI/DVI : 1920 x 1080 @ 60 Hz - It may not be supported depending on the OS or video card type.
	Recommended Resolution	RGB : 1920 x 1080 @ 60 Hz HDMI/DVI : 1920 x 1080 @ 60 Hz - It may not be supported depending on the OS or video card type.
	Horizontal Frequency	RGB : 30 kHz to 83 kHz HDMI/DVI : 30 kHz to 83 kHz
	Vertical Frequency	RGB : 56 Hz to 75 Hz HDMI/DVI : 56 Hz to 60 Hz
	Synchronization Type	Separate Sync, Composite Sync, Digital
Input Connector	15-pin D-Sub type, HDMI (digital), RS-232C, LAN, DVI, Display port, USB	
Power	Rated Voltage	AC 100-240 V~ 50/60 Hz 2.2 A
	Power Consumption	On Mode : 220 W Typ. Sleep Mode : ≤ 1 W Off Mode : ≤ 0.5 W
Environmental conditions	Operating Temperature	0 °C to 40 °C
	Operating Humidity	10 % to 80 %
	Storage Temperature	-20 °C to 60 °C
	Storage Humidity	5 % to 95 %

Product specifications shown above may be changed without prior notice due to upgrade of product functions.

Dimensions (Width x Height x Depth) / Weight		967 mm x 561 mm x 125 mm / 17.5 kg
		967 mm x 633 mm x 259 mm / 18.8 kg
		967 mm x 561 mm x 126.5 mm / 18.25 kg
		967 mm x 633 mm x 126.5 mm / 19.55 kg

*** Applicable only for models that support the speakers**

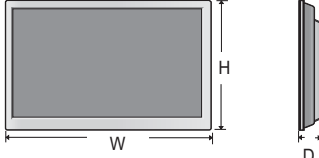
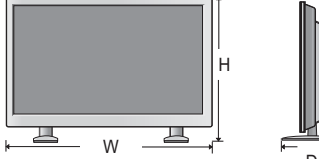
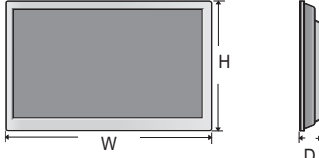
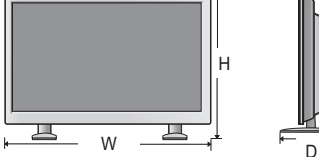
Audio	RMS Audio Output	10 W + 10 W (R + L)
	Input Sensitivity	0.7 Vrms
	Speaker Impedance	8 Ω

Product specifications shown above may be changed without prior notice due to upgrade of product functions.

47VS20

LCD Panel	Screen Type	1192.87 mm Wide (47 inch) TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Panel. Visible diagonal size : 1192.87 mm
	Pixel Pitch	0.5415 mm (H) x 0.5415 mm (V)
Video Signal	Max. Resolution	RGB : 1920 x 1080 @ 60 Hz HDMI/DVI : 1920 x 1080 @ 60 Hz - It may not be supported depending on the OS or video card type.
	Recommended Resolution	RGB : 1920 x 1080 @ 60 Hz HDMI/DVI : 1920 x 1080 @ 60 Hz - It may not be supported depending on the OS or video card type.
	Horizontal Frequency	RGB : 30 kHz to 83 kHz HDMI/DVI : 30 kHz to 83 kHz
	Vertical Frequency	RGB : 56 Hz to 75 Hz HDMI/DVI : 56 Hz to 60 Hz
	Synchronization Type	Separate Sync, Composite Sync, Digital
Input Connector	15-pin D-Sub type, HDMI (digital), RS-232C, LAN, DVI, Display port, USB	
Power	Rated Voltage	AC 100-240 V~ 50/60 Hz 2.2 A
	Power Consumption	On Mode : 260 W Typ. Sleep Mode : ≤ 1 W Off Mode : ≤ 0.5 W
Environmental conditions	Operating Temperature	0 °C to 40 °C
	Operating Humidity	10 % to 80 %
	Storage Temperature	-20 °C to 60 °C
	Storage Humidity	5 % to 95 %

Product specifications shown above may be changed without prior notice due to upgrade of product functions.

Dimensions (Width x Height x Depth) / Weight		1079.5 mm x 624.6 mm x 122.9 mm / 22.2 kg
		1079.5 mm x 697.7 mm x 298.3 mm / 23.6 kg
		1079.5 mm x 624.6 mm x 129.2 mm / 23.0 kg
		1079.5 mm x 697.7 mm x 298.3 mm / 24.4 kg

*** Applicable only for models that support the speakers**

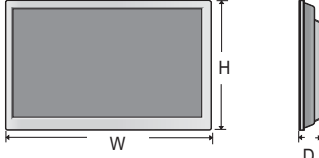
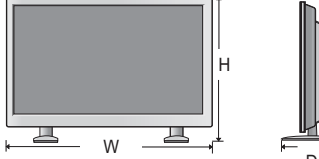
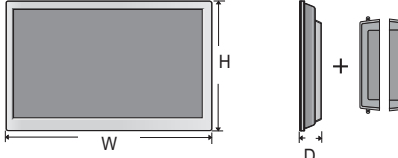
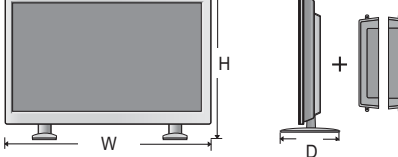
Audio	RMS Audio Output	10 W + 10 W (R + L)
	Input Sensitivity	0.7 Vrms
	Speaker Impedance	8 Ω

Product specifications shown above may be changed without prior notice due to upgrade of product functions.

55VS20

LCD Panel	Screen Type	1387.80 mm Wide (55 inch) TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Panel. Visible diagonal size : 1387.80 mm
	Pixel Pitch	0.630 mm (H) x 0.630 mm (V)
Video Signal	Max. Resolution	RGB : 1920 x 1080 @ 60 Hz HDMI/DVI : 1920 x 1080 @ 60 Hz - It may not be supported depending on the OS or video card type.
	Recommended Resolution	RGB : 1920 x 1080 @ 60 Hz HDMI/DVI : 1920 x 1080 @ 60 Hz - It may not be supported depending on the OS or video card type.
	Horizontal Frequency	RGB : 30 kHz to 83 kHz HDMI/DVI : 30 kHz to 83 kHz
	Vertical Frequency	RGB : 56 Hz to 75 Hz HDMI/DVI : 56 Hz to 60 Hz
	Synchronization Type	Separate Sync, Composite Sync, Digital
Input Connector	15-pin D-Sub type, HDMI (digital), RS-232C, LAN, DVI, Display port, USB	
Power	Rated Voltage	AC 100-240 V~ 50/60 Hz 2.2 A
	Power Consumption	On Mode : 320 W Typ. Sleep Mode : ≤ 1 W Off Mode : ≤ 0.5 W
Environmental conditions	Operating Temperature	0 °C to 40 °C
	Operating Humidity	10 % to 80 %
	Storage Temperature	-20 °C to 60 °C
	Storage Humidity	5 % to 95 %

Product specifications shown above may be changed without prior notice due to upgrade of product functions.

Dimensions (Width x Height x Depth) / Weight		
		1251 mm x 722 mm x 104 mm / 34.5 kg
		
		1251 mm x 795 mm x 298 mm / 35.9 kg
		
		1251 mm x 722 mm x 104 mm / 35.2 kg
		
		1251 mm x 795 mm x 298 mm / 36.6 kg

*** Applicable only for models that support the speakers**

Audio	RMS Audio Output	10 W + 10 W (R + L)
	Input Sensitivity	0.7 Vrms
	Speaker Impedance	8 Ω

Product specifications shown above may be changed without prior notice due to upgrade of product functions.

RGB (PC) supported mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
640 x 350	31.469	70.8
720 x 400	31.468	70.8
640 x 480	31.469	59.94
640 x 480	37.5	75
800 x 600	37.879	60.317
800 x 600	46.875	75
832 x 624	49.725	74.55
1024 x 768	48.363	60
1024 x 768	60.123	75.029
1280 x 720	44.772	59.855
1280 x 768	47.7	60
1360 x 768	47.72	59.799
1366 x 768	47.7	60
1280 x 1024	63.981	60.02
1280 x 1024	79.98	75.02
1680 x 1050	65.290	59.954
1920 x 1080	67.5	60

HDMI/DVI/Display Port(PC) supported mode

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
640 x 480	31.469	59.94
800 x 600	37.879	60.317
1024 x 768	48.363	60
1280 x 720	44.772	59.855
1280 x 768	47.7	60
1360 x 768	47.72	59.799
1366 x 768	47.7	60
1280 x 1024	63.981	60.02
1680 x 1050	65.290	59.954
1920 x 1080	67.5	60

DTV Mode

Resolution	Component	HDMI/DVI (DTV)
480i	o	x
576i	o	x
480p	o	o
576p	o	o
720p	o	o
1080i	o	o
1080p	o	o

Power Indicator

Mode	Product
On Mode	blue
Sleep Mode	Amber
Off Mode	-

! NOTE

- PC resolutions available as the input label option in RGB and HDMI/DVI input mode : 640 x 480 / 60 Hz, 1280 x 720 / 60 Hz, 1920 x 1080 / 60 Hz and DTV resolutions : 480p, 720p, 1080p.

! NOTE

- Vertical frequency: To enable the user to watch the product display, screen image should be changed tens of times every second like a fluorescent lamp. The vertical frequency or refresh rate is the times of image display per second. The unit is Hz.
- Horizontal frequency: The horizontal interval is the time to display one vertical line. When 1 is divided by the horizontal interval, the number of horizontal lines displayed every second can be tabulated as the horizontal frequency. The unit is kHz.

IR CODES

- All models do not support the HDMI/USB function.

Code (Hexa)	Function	Note
95	Energy Saving (e \emptyset)	R/C BUTTON
08	POWER	R/C BUTTON (ON/OFF)
0B	INPUT	R/C BUTTON
C4	Monitor On	R/C BUTTON
C5	Monitor Off	R/C BUTTON
43	MENU	R/C BUTTON
40	Up (^)	R/C BUTTON
41	Down (v)	R/C BUTTON
07	Left (<)	R/C BUTTON
06	Right (>)	R/C BUTTON
44	OK(⊙)	R/C BUTTON
28	BACK(↶)	R/C BUTTON
5B	EXIT	R/C BUTTON
4D	PSM	R/C BUTTON
02	Volume  (+)	R/C BUTTON
03	Volume  (-)	R/C BUTTON
09	MUTE	R/C BUTTON
E0	Bright ^ (Page UP)	R/C BUTTON
E1	Bright v (Page Down)	R/C BUTTON
10 to 19	Number Key 0 to 9	R/C BUTTON
72	Red Key (ID ON)	R/C BUTTON
71	Green Key (ID OFF)	R/C BUTTON
63	Yellow Key	R/C BUTTON
61	Blue Key	R/C BUTTON
7B	TILE	R/C BUTTON
76	ARC (4:3)	R/C BUTTON
77	ARC (16:9)	R/C BUTTON
AF	ARC (ZOOM)	R/C BUTTON
79	ARC (MARK)	R/C BUTTON
99	Auto Config.	R/C BUTTON
B1	■	R/C BUTTON
B0	▶	R/C BUTTON
BA		R/C BUTTON
8F	◀◀	R/C BUTTON
8E	▶▶	R/C BUTTON

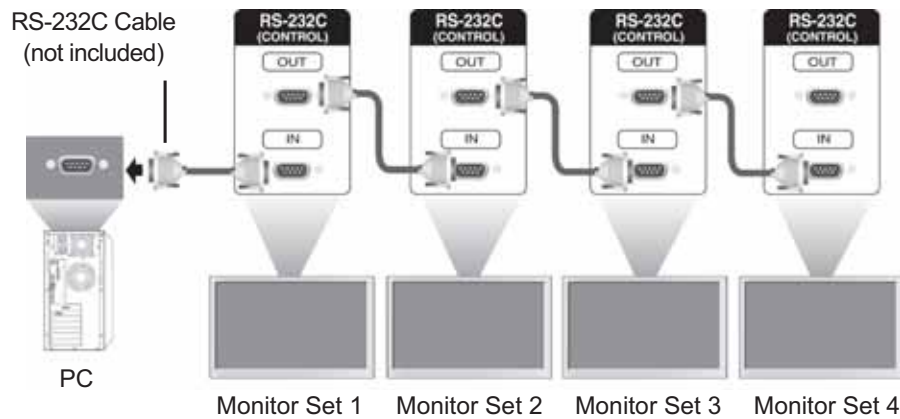
CONTROLLING THE MULTIPLE PRODUCT

- Use this method to connect several products to a single PC. You can control several products at a time by connecting them to a single PC.
- In the Option menu, Set ID must be between 1 and 99 without being duplicated.

Connecting the cable

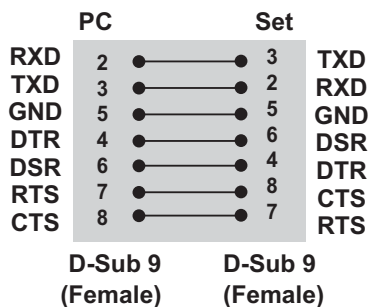
Connect the RS-232C cable as shown in the picture.

- The RS-232C protocol is used for communication between the PC and product. You can turn the product on/off, select an input source or adjust the OSD menu from your PC.

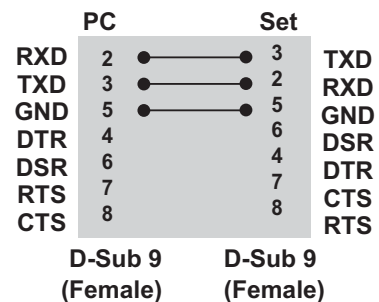


RS-232C Configurations

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



3-Wire Configurations (Not Standard)



Communication Parameter

- Baud Rate : 9600 baud Rate (UART)
- Data Length : 8 bit
- Parity Bit : None
- Stop Bit : 1bit
- Flow Control : None
- Communication Code : ASCII code
- Use a crossed (reverse) cable

Command reference list

	COMMAND		DATA (Hexadecimal)
	1	2	
01. Power	k	a	00H to 01H
02. Input Select	x	b	Refer to '02. Input Select'
03. Aspect Ratio	k	c	Refer to '03. Aspect Ratio'
04. Energy Saving	j	q	Refer to '04. Energy Saving'
05. Picture mode	d	x	00H to 04H
06. Contrast	k	g	00H to 64H
07. Brightness	k	h	00H to 64H
08. Sharpness	k	k	00H to 64H
09. Color	k	i	00H to 64H
10. Tint	k	j	00H to 64H
11. Color Temperature	x	u	00H to 64H
12. H Position	f	q	00H to 64H
13. V Position	f	r	23H to 41H
14. H Size	f	s	00H to 64H
15. Auto configuration	j	u	01H
16. Balance	k	t	00H to 64H
17. Sound mode	d	y	01H to 05H
18. Treble	k	r	00H to 64H
19. Bass	k	s	00H to 64H
20. Speaker	d	v	00H to 01H
21. Volume Mute	k	e	00H to 01H
22. Volume Control	k	f	00H to 64H
23. Time 1(Years/ Months/ Days)	f	g	Refer to '23. Time 1'
24. Time 2(Hours/ Minutes/Seconds)	f	x	Refer to '24. Time 2'
25. Off Timer(Repeat mode/ Time)	f	d	Refer to '25. Off Timer'
26. On Timer(Repeat Mode/ Time)	f	e	Refer to '26. On Timer'
27. On Timer Input	f	u	Refer to '27. On Timer Input'
28. On Timer Volume	f	v	00H to 64H
29. Sleep Time	f	f	00H to 08H
30. Power On Delay	f	h	00H to 64H
31. 4 Hours Off	m	n	00H to 01H
32. Auto Off	f	g	00H to 01H
33. Language	f	i	Refer to '33. Language'
34. Power Indicator(Standby Light)	f	o	00H to 01H
35. Power Indicator(Power Light)	f	p	00H to 01H
36. ISM mode	j	p	Refer to '36. ISM Method'
37. Reset	f	k	00H to 03H
38. Tile Mode	d	d	Refer to '38. Tile mode'
39. Tile Mode Check	d	z	FFH
40. Tile ID	d	i	Refer to '40. Tile ID'

	COMMAND		DATA (Hexadecimal)
	1	2	
41. Tile H Position	d	e	00H to 64H
42. Tile V Position	d	f	23H to 41H
43. Tile H Size	d	g	00H to 32H
44. Tile V Size	d	h	00H to 32H
45. Natural Mode (In Tile mode)	d	j	00H to 01H
46. Fail Over Select	m	l	00H to 01H
47. DPM Select	f	j	00H to 01H
48. Remote Lock/ key Lock	k	m	00H to 01H
49. Key	m	c	Refer to '49. Key'
50. OSD Select	k	l	00H to 01H
51. Elapsed time return	d	l	FFH
52. Serial No. Check	f	y	FFH
53. S/W Version	f	z	FFH

- Note : During USB operations such as Dvix or EMF, all commands except Power(ka) and Key(mc) are not executed and treated as NG.

Transmission / Receiving protocol

Transmission

[Command1][Command2][][Set ID][][Data][Cr] or
[Command1][Command2][][Set ID][][Data1][][Data2][][Data3][Cr]

- * [Command1]: First command to control the set.
- * [Command2]: Second command to control the set.
- * [Set ID]: Set ID with which you want to communicate. Etern [Set ID] = '00(0x00)' to communicate with all sets regardless of their Set ID numbers.
- * [Data]: Information passed to the set.
- * [Data1]: Information passed to the set.
- * [Data2]: Information passed to the set.
- * [Data3]: Information passed to the set.
- * [Cr]: Carriage Return. ASCII code '0x0D'.
- * []: ASCII code space '0x20'

Acknowledgement

[Command2][][Set ID][][OK/NG][Data][x] or
[Command2][][Set ID][][OK/NG][Data1][Data2][Data3][x]

- * In a like manner, if other functions transmit 'FF' data based on this format, Acknowledgement data feedback presents status about each function.
- * Note: In this mode, display will send the acknowledgement after power on processing completion.
There might be a time delay between command and acknowledgement.
- * Refer to 'Real data mapping' for hexadecimal data to decimal data.
- * No acknowledgement signal will be sent from display, if Set ID in transmission signal is set to '00'(=0x00).

01. Power (Command: k a)

To control power On/Off the display.

Transmission

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

Data 00 : Power Off

01 : Power On

FF : Check status

Acknowledgement

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

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

* Note: In this modes, display will send the acknowledgement after power on processing completion. There might be a time delay between command and acknowledgement.

* There might be some time delays between command and acknowledgement.

02. Input Select (Command: x b)

To select input source for display.

Transmission

[x][b][][Set ID][][Data][Cr]

Data 20: AV

40: Component

60: RGB PC

90: HDMI

91: DVI

92: Display Port

Acknowledgement

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

03. Aspect Ratio (Command: k c)

To adjust the screen format.

Transmission

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

Data 01: 4:3

02: 16:9

04: Zoom

09: Just scan(720p or more)

10 to 1F: Cinema Zoom 1 to 16

Acknowledgement

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

04. Energy Saving (Command: j q)

To control the energy saving function.

Transmission

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

Data 00: Off

01: Minimum

02: Medium

03: Maximum

05: Screen Off

Acknowledgement

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

05. Picture Mode (Command: d x)

To select the picture mode.

Transmission

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

Data 00: Vivid

01: Standard

02: Cinema

03: Sport

04: Game

Acknowledgement

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

06. Contrast (Command: k g)

To adjust screen contrast.

Transmission

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

Data 00 to 64: Contrast 0 to 100

Acknowledgement

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

07. Brightness (Command: k h)

To adjust screen brightness.

Transmission

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

Data 00 to 64: Brightness 0 to 100

Acknowledgement

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

08. Sharpness (Command: k k)

To adjust screen sharpness.

* Only available for AV/Component input.

Transmission

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

Data 00 to 64: Sharpness 0 to 100

Acknowledgement

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

09. Color (Command: k i)

To adjust screen color.

* Only available for AV/Component input.

Transmission

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

Data 00 to 64: Color 0 to 100

Acknowledgement

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

10. Tint (Command: k j)

To adjust screen tint.

* Only available for AV/Component input.

Transmission

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

Data 00 to 64: Tint 0 to 100(R50 to G50)

Acknowledgement

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

11. Color Temperature (Command: x u)

To adjust color temperature.

Transmission

[x][u][][Set ID][][Data][Cr]

Data 00 to 64: Warm 50 to Cool 50

Acknowledgement

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

12. H Position (Command: f q)

To set the Horizontal position.

* Only available for Tile Off mode.

Transmission

[f][q][][Set ID][][Data][Cr]

Data 00 to 64: Left 50 to Right 50

Acknowledgement

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

13. V Position (Command: f r)

To set the Vertical position.

* Only available for Tile Off mode.

Transmission

[f][r][][Set ID][][Data][Cr]

Data 23 to 41: Bottom Max(-15) to Top Max(15)

Acknowledgement

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

14. H Size (Command: f s)

To set the Horizontal size.

* Only available for Tile Off mode.

Transmission

[f][s][][Set ID][][Data][Cr]

Data 00 to 64: Size -50 to 50

Acknowledgement

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

15. Auto Configuration (Command: j u)

To adjust picture position and minimize image shaking automatically.

* Only available for RGB input.

Transmission

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

Data 01 : Set

Acknowledgement

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

16. Balance (Command: k t)

To adjust balance.

Transmission

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

Data 00 to 64: Left 50 to Right 50

Acknowledgement

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

17. Sound Mode (Command: d y)

To select the sound mode.

Transmission

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

Data 01: Standard

02: Music

03: Cinema

04: Sport

05: Game

Acknowledgement

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

18. Treble (Command: k r)

To adjust treble.

Transmission

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

Data 00 to 64: Treble 0 to 100

Acknowledgement

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

19. Bass (Command: k s)

To adjust bass.

Transmission

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

Data 00 to 64: Bass 0 to 100

Acknowledgement

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

20. Speaker (Command: d v)

To select speaker on/off.

Transmission

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

Data 00: Speaker Off
01: Speaker On

Acknowledgement

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

21. Volume Mute (Command: k e)

To select screen mute on/off.

Transmission

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

Data 00 : Volume Mute On (Volume Off)
01 : Volume Mute Off (Volume On)

Acknowledgement

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

22. Volume Control (Command: k f)

To adjust volume.

Transmission

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

Data 00 to 64: Volume 0 to 100

Acknowledgement

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

23. Time 1 (Year/ Month/ Day) (Command: f a)

To set the Time 1 (Year/ Month/ Day) values.

Transmission

[f][a][][Set ID][][Data1][][Data2][][Data3][Cr]

Data 1 00 to 14: 2010 to 2030

Data 2 01 to 0C: January to December

Data 3 01 to 1F: 1 to 31

* Enter "fa [Set ID] ff" for checking Time 1 values.

Acknowledgement

[a][][Set ID][][OK/NG][Data1][Data2][Data3][x]

24. Time 2 (Hour/ Minute/ Second) (Command: f x)

To set the Time 2 (Hour/ Minute/ Second) values.

Transmission

[f][x][][Set ID][][Data1][][Data2][][Data3][Cr]

Data1 00 to 17: 00 to 23 hours

Data2 01 to 3B: 00 to 59 minutes

Data3 01 to 3B: 00 to 59 seconds

* Enter "fx [Set ID] ff" for checking Time 2 values.

** This command won't work if Time 1 has not been set in advance.

Acknowledgement

[x][][Set ID][][OK/NG][Data1][Data2][Data3][x]

25. Off Timer(Repeat Mode/ Time) (Command: f e)

To set the Off Timer(Repeat mode/ Time) function.

Transmission

[f][e][][Set ID][][Data1][][Data2][][Data3][Cr]

Data1 00: Repeat Off
 01: Repeat Once
 02: Repeat Daily
 03: Repeat from Monday to Friday
 04: Repeat from Monday to Saturday
 05: Repeat from Saturday to Sunday
 06: Repeat on Sunday

Data2 01 to 17: 00 to 23 Hours

Data3 01 to 3B: 00 to 59 Minutes

* Enter "fe [Set ID] ff" for checking Off Timer(Repeat mode/ Time) values.

* Check if Time1 and Time2 have been set before setting this function.

Acknowledgement

[e][][Set ID][][OK/NG][Data1][Data2][Data3][x]

26. On Timer(Repeat Mode/ Time) (Command: f d)

To set the On Timer(Repeat mode/ Time) function.

Transmission

[f][d][][Set ID][][Data1][][Data2][][Data3][Cr]

Data1 00: Repeat Off
 01: Repeat Once
 02: Repeat Daily
 03: Repeat from Monday to Friday
 04: Repeat from Monday to Saturday
 05: Repeat from Saturday to Sunday
 06: Repeat on Sunday

Data2 01 to 17: 00 to 23 Hours

Data3 01 to 3B: 00 to 59 Minutes

* Enter "fd [Set ID] ff" for checking On Timer(Repeat mode/ Time) values.

* Check if Time1 and Time2 have been set before setting this function.

Acknowledgement

[d][][Set ID][][OK/NG][Data1][Data2][Data3][x]

27. On Timer Input (Command: f u)

To set the On Timer Input function.

Transmission

[f][u][][Set ID][][Data][Cr]

Data 20: AV
 40: Component
 60: RGB
 90: HDMI
 91: DVI
 92: DISPLAY PORT

* Check if Time1 and Time2 and On Timer(Repeat Mode/Time) functions have been set before setting this function.

Acknowledgement

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

28. On Timer Volume (Command: f v)

To set the On Timer Volume function.

Transmission

[f][v][][Set ID][][Data][Cr]

Data 00 to 64: Volume 0 to 100

* Check if Time1 and Time2 and On Timer(Repeat Mode/Time) functions have been set before setting this function.

Acknowledgement

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

29. Sleep Time (Command: f f)

To set sleep time.

Transmission

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

Data 00: Off
 01: 10 min.
 02: 20 min.
 03: 30 min.
 04: 60 min.
 05: 90 min.
 06: 120 min.
 07: 180 min.
 08: 240 min.

Acknowledgement

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

30. Power On Delay (Command: f h)

To set the schedule delay when the power is turned on(unit: second).

Transmission

[f][h][][Set ID][][Data][Cr]

Data 00 to 64: 0 to 100sec.

Acknowledgement

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

31. 4 Hours Off (Command: m n)

To set the 4 Hours Off function.

Transmission

[m][n][][Set ID][][Data][Cr]

Data 00: 4 Hours Off Off
01: 4 Hours Off On

Acknowledgement

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

32. Auto Off (Command: f g)

To set the Auto Off function.

Transmission

[f][g][][Set ID][][Data][Cr]

Data 00: Auto Off Off
01: Auto Off On

Acknowledgement

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

33. Language (Command: f i)

To set language for OSD.

Transmission

[f][i][][Set ID][][Data][Cr]

Data 00: Czech
01: Danish
02: German
03: English
04: Spanish(EU)
05: Greek
06: French
07: Italian
08: Dutch
09: Norwegian
0A: Portuguese
0B: Portuguese(BR)
0C: Russian
0D: Finnish
0E: Swedish
0F: Korean
10: Chinese (Mandarin)
11: Japanese
12: Yue Chinese(Cantonese)

Acknowledgement

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

34. Power Indicator(Standby Light) (Command: f o)

To set the Power Indicator(Standby Light) function.

Transmission

[f][o][][Set ID][][Data][Cr]

Data 00: Standby Light Off
01: Standby Light On

Acknowledgement

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

35. Power Indicator(Power Light) (Command: f p)

To set the Power Indicator(Power Light) function.

Transmission

[f][p][][Set ID][][Data][Cr]

Data 00: Power Light Off
01: Power Light On

Acknowledgement

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

36. ISM mode (Command: j p)

To select ISM method for avoiding having a fixed image remain on screen.

Transmission

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

Data 04: White Wash
08: Normal
20: Color Wash

Acknowledgement

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

37. Reset (Command: f k)

To execute the Picture, Screen, Audio and Factory reset function.

Transmission

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

Data 00: Picture Reset
01: Screen Reset
02: Audio Reset
03: Factory Reset

Acknowledgement

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

38. Tile Mode (Command: d d)

To select a Tile Mode Off/ On and Tile Row/ Column size.

Transmission

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

Data 00 to FF: 1st byte - Tile Row value
2nd byte - Tile Column value
*00, 01, 10, 11 means Tile Mode Off.

Acknowledgement

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

39. Tile Mode Check (Command: d z)

To check Tile Mode status.

Transmission

[d][z][][Set ID][][Data][Cr]

Data FF: Check Tile Mode status

Acknowledgement

[z][][Set ID][][OK/NG][Data1][Data2][Data3][x]

Data1 00: Tile Mode Off
01: Tile Mode On

Data2 00 to 0F: Tile Row Value
Data3 00 to 0F: Tile Col Value

40. Tile ID (Command: d i)

To set Tile ID.

Transmission

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

Data 01 to E1: Tile ID 01 to 225**
FF: Read Tile ID

** Data could not be set over (Tile Row) x (Tile Column)

Acknowledgement

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

*NG will be return if data is over (Tile Row) x (Tile Column), except 0xFF.

41. Tile H Position (Command: d e)

To set the Tile Horizontal position.

*Only available when Tile Natural Mode is off.

Transmission

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

Data 00 to 32: Left (-50) to Right (0)

(*Left/Right values depend on Tile H size.)

Acknowledgement

```
[e][ ][Set ID][ ][OK/NG][Data][x]
```

42. Tile V Position (Command: d f)

To set the Tile Vertical position.

*Only available when Tile Natural Mode is off.

Transmission

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

Data 0 to 32: Bottom (0) to Top (50)

(*Bottom/Top values depend on Tile V size.)

Acknowledgement

```
[f][ ][Set ID][ ][OK/NG][Data][x]
```

43. Tile H Size (Command: d g)

To set the Tile Horizontal Size.

*Set Tile H Position to 0x32 (50) before setting Tile H Size.

*Only available when Tile Natural Mode is off.

Transmission

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

Data 00 to 32: 0 to 50

Acknowledgement

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

44. Tile V Size (Command: d h)

To set the Tile Vertical size.

*Set Tile V Position to 0x00 before setting Tile V Size.

*Only available when Tile Natural Mode is off.

Transmission

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

Data 00 to 32: 0 to 50

Acknowledgement

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

45. Natural Mode (In Tile Mode) (Command: d j)

To set the Tile Natural mode.

Transmission

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

Data 00: Off

01: On

Acknowledgement

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

46. Fail Over Select (Command: m i)

To set the Fail Over function.

Transmission

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

Data 00: Fail Over Off

01: Fail Over On

Acknowledgement

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

47. DPM Select (Command: f j)

To set the DPM (Display Power Management) function.

Transmission

[f][j][][Set ID][][Data][x]

Data 00: DPM Select Off
01: DPM Select On

Acknowledgement

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

48. Remote Controller Lock/ Key Lock**(Command: k m)**

To lock the remote control and the front panel control keys on the display.

Transmission

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

Data 00: Lock off
01: Lock on

* If you are intended not to use the remote controller and front panel control keys on the display for kind of reasons, use this mode. Remote controller Lock/ Key Lock will be released automatically after display is rebooted.

* Display will not be turned on by power on key of remote controller and front panel control keys, if key is locked on in standby mode.

Acknowledgement

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

49. Key (Command: m c)

To send IR remote control code.

Transmission

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

Data IR_KEY_CODE

Acknowledgement

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

When display is in the standby mode, display will turn on by Power button of remote control only.

50. OSD Select (Command: k l)

To select OSD(On Screen Display) on/off

Transmission

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

Data 00: OSD Off
01: OSD On

Acknowledgement

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

51. Elapsed time return (Command: d l)

To read the panel used time.

Transmission

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

Data FF: Data should be always ff in hexadecimal.

Acknowledgement

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

* Returned data means used hours in hexadecimal.

52. Serial No.Check (Command: f y)

To read the serial numbers.

Transmission

[f][y][][Set ID][][Data][Cr]

Data FF: Data should be always ff in hexadecimal.

Acknowledgement

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

53. S/W Version (Command: f z)

To read the software version.

Transmission

[f][z][][Set ID][][Data][Cr]

Data FF: Data should be always ff in hexadecimal.

Acknowledgement

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



Make sure to read the Safety Precautions before using the product. Keep the Owner's Manual(CD) in an accessible place for future reference. The model and serial number of the SET is located on the back and one side of the SET. Record it below should you ever need service.

MODEL _____

SERIAL _____

ENERGY STAR is a set of power-saving guidelines issued by the U.S. Environmental Protection Agency(EPA).



As an ENERGY STAR Partner LGE U. S. A.,Inc. has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

Temporary noise is normal when powering ON or OFF this device.

■■■ Regulatory Information cont.

:: FCC Compliance Statement

This equipment has been tested and found to comply within the limits of a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment on and off), the user is encouraged to try to correct the interference by using one or more of the following measures:

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

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's (or your) authority to operate the equipment. Only peripherals (digital input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this monitor. Operation with non-certified peripherals is likely to result in interference to radio and TV reception. Only shielded signal cables may be used with this System.

NOTICE

The regulations are applied only to the products with the ID LABEL indicating specific requirements.

:: Canadian DOC Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B

respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

NOTICE

The regulations are applied only to the products with the ID LABEL indicating specific requirements.

:: CE Conformity Notice (for Europe)

Products with the "CE" Marking comply with the EMC Directive(89/336/EEC) and LOW VOLTAGE Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms :

- EN 55022 ; Radio Frequency Interference
- EN 55024 ; Electromagnetic Immunity
- EN 61000-3-2 ; Power Line Harmonics
- EN 61000-3-3 ; Voltage Fluctuations
- EN 60950-1 ; Product Safety

NOTICE

The regulations are applied only to the products with the ID LABEL indicating specific requirements.

:: Low Radiation Compliance (MPR II)

This monitor meets one of the strictest guidelines available today for low radiation emissions, offering the user extra shielding and an antistatic screen coating. These guidelines, set forth by a government agency in Sweden, limit the amount of emission allowed in the Extremely Low Frequency (ELF) and Very Low Frequency (VLF) electromagnetic range.

:: TCO'99 (TCO'99 applied model only)



Congratulations!

You have just purchased a TCO'99 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

■■■ Regulatory Information cont.

Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. With the growing manufacture and usage of electronic equipment throughout the world, there is a recognized concern for the materials and substances used by electronic products with regards to their eventual recycling and disposal. By proper selection of these materials and substances, the impact on the environment can be minimized.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Electronic equipment in offices is often left running continuously, resulting in unnecessary consumption of large amounts of energy and additional power generation. From the standpoint of carbon dioxide emissions alone, it is vital to save energy.

What does labelling involve?

The product meets the requirements for the TCO'99 scheme which provides for international and environmental labelling of personal computers and/or displays.

The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration).

Approval requirements cover a wide range of issues: ecology, ergonomics, emission of electrical and magnetical fields, energy consumption and electrical safety.

Ecological criteria impose restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, and other substances. The product must be prepared for recycling and the manufacturing site(s) shall be certified according to ISO14001 or EMAS registered.

Energy requirements include a demand that the system unit and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the system unit shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electrical and magnetical fields as well as work load and

visual ergonomics.

Below you will find a brief summary of the ecological requirements met by this product. The complete ecological criteria document can be found at TCO Development's website <http://www.tcodevelopment.com> or may be ordered from:

TCO Development

SE-114 94 STOCKHOLM, Sweden

Fax: +46 8 782 92 07

Email : development@tco.se

Information regarding TCO'99 approved and labelled products may also be obtained at <http://www.tcodevelopment.com>

Ecological requirements

Flame retardants

Flame retardants may be present in printed wiring board laminates, cables, and housings. Their purpose is to prevent, or at least to delay the spread of fire. Up to 30% by weight of the plastic in a computer casing can consist of flame retardant substances. Many flame retardants contain bromine or chlorine, and these flame retardants are chemically related to PCBs (polychlorinated biphenyls). Both the flame retardants containing bromine or chlorine and the PCBs are suspected of giving rise to health effects, including reproductive damage in fish-eating birds and mammals, due to the bio-accumulative* processes when not disposed of in accordance with strict standards for disposal.

TCO'99 requires that plastic components weighing more than 25 grams shall not contain flame retardants with organically bound bromine or chlorine. Flame retardants are allowed in the printed wiring board laminates due to the lack of commercially available alternatives.

Cadmium**

Cadmium is present in rechargeable batteries and in the colour-generating layers of certain computer displays. TCO'99 requires that batteries, the colour-generating layers of display screens, and the electrical or electronics components shall not contain any cadmium.

Mercury**

Mercury is sometimes found in batteries, relays and switches. TCO'99 requires that batteries shall not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit. There is however one

■■■ Regulatory Information cont.

exception. Mercury is, for the time being, permitted in the back light system of flat panel monitors as there today is no commercially available alternative. TCO aims on removing this exception when a mercury free alternative is available.

Lead**

Lead can be found in picture tubes, display screens, solders and capacitors. TCO'99 permits the use of lead due to the lack of commercially available alternatives, but in future requirements TCO Development aims at restricting the use of lead.

* Bio-accumulative is defined as substances which accumulate in living organisms.

**Lead, Cadmium and Mercury are heavy metals which are bio-accumulative.

:: **TCO'03** (TCO'03 applied model only)



Congratulations!

The display you have just purchased carries the TCO'03 Displays label.

This means that your display is designed, manufactured and tested according to some of the strictest quality and environmental requirements in the world. This makes for a high performance product, designed with the user in focus that also minimizes the impact on our natural environment. Some of the features of the TCO'03 Display requirements:

Ergonomics

- Good visual ergonomics and image quality in order to improve the working environment for the user and to reduce sight and strain problems. Important parameters are luminance, contrast, resolution, reflectance, colour rendition and image stability.

Energy

- Energy-saving mode after a certain time – beneficial both for the user and the environment
- Electrical safety

Emissions

- Electromagnetic fields

- Noise emissions

Ecology

- The product must be prepared for recycling and the manufacturer must have a certified environmental management system such as EMAS or ISO 14 001
- Restrictions on
 - chlorinated and brominated flame retardants and polymers
 - heavy metals such as cadmium, mercury and lead.

The requirements included in this label have been developed by TCO Development in co-operation with scientists, experts, users as well as manufacturers all over the world. Since the end of the 1980s TCO has been involved in influencing the development of IT equipment in a more user-friendly direction. Our labelling system started with displays in 1992 and is now requested by users and IT-manufacturers all over the world.

For more information, please visit
www.tcodevelopment.com

English

Information for Environmental Preservation

LGE. announced the 'LG Declaration for a Cleaner Environment' in 1994, and this ideal has served as a guiding managerial principle ever since. The Declaration is a foundation that has allowed us to undertake environmentally friendly activities in careful consideration of economic, environmental, and social aspects.

We promote activities for environmental preservation, and we specifically develop our products to embrace the concept of environment-friendly.

We minimize the hazardous materials contained in our products. For example, there is no cadmium to be found in our monitors.

Information for recycling

This monitor may contain parts which could be hazardous to the environment. It is important that this monitor be recycled after use.

LGE. handles all waste monitors through an environmentally acceptable recycling method. There are several take-back and recycling systems currently in

■■■ Regulatory Information cont.

operation worldwide. Many parts will be reused and recycled, while harmful substances and heavy metals are treated by an environmentally friendly method.

If you want to find out more information about our recycling program, please contact your local LG vendor or a corporate representative of LG.

We set our vision and policies on a cleaner world by selecting the issue of the global environment as a task for corporate improvement. Please visit our website for more information about our 'green' policies.

<http://www.lge.com/about/environment/html/Recycling.jsp>

■ ■ ■ Deutsch

Informationen zur Erhaltung der Umwelt

Im Jahr 1994 verkündete LGE die 'LG Declaration for a Cleaner Environment' (LG Erklärung für eine sauberere Umwelt). Seitdem dient dieses Ideal als führendes Prinzip des Unternehmens. Diese Erklärung war die Basis für die Durchführung von

umweltfreundlichen Aktivitäten, wobei wirtschaftliche, umweltbezogene und soziale Aspekte in die Überlegungen mit einbezogen wurden.

Wir fördern Aktivitäten zum Schutz der Umwelt und die Entwicklung unserer Produkte ist darauf ausgerichtet, unserem Konzept bezüglich Umweltfreundlichkeit gerecht zu werden.

Wir sind darauf bedacht, den Anteil der in unseren Produkten enthaltenen schädlichen Materialien zu minimieren. So ist in unseren Monitoren beispielsweise kein Kadmium zu finden.

Informationen zum Thema Recycling

Dieser Monitor enthält Teile, die umweltschädlich sein können. Es ist unbedingt erforderlich, dass der Monitor recycelt wird, nachdem er außer Dienst gestellt wurde.

Bei LGE werden alle ausrangierten Monitore in einem unter umweltbezogenen Aspekten geeigneten Verfahren recycelt. Augenblicklich sind weltweit mehrere Rücknahme- und Recyclingsysteme im Einsatz. Viele Teile werden wieder verwendet und recycelt. Schädliche Substanzen und Schwermetalle werden durch umweltverträgliche Verfahren behandelt.

Falls Sie mehr über unser Recyclingprogramm erfahren möchten, wenden Sie sich bitte an Ihren lokalen LG-Händler oder einen Unternehmensvertreter von LG.

Wir richten unsere Firmenpolitik auf eine sauberere Umwelt hin aus, indem wir umweltspezifische Aspekte als wichtigen Punkt in die Weiterentwicklung unseres Unternehmens einfließen lassen. Zusätzliche Informationen über unsere 'grüne' Firmenpolitik erhalten Sie auf unserer Website.

<http://www.lge.com/about/environment/html/Recycling.jsp>

■ ■ ■ Français

Information sur la protection de l'environnement

LGE a publié sa 'Déclaration en faveur d'un environnement plus propre' en 1994 et celle-ci est restée, depuis lors, un principe directeur de notre entreprise. Cette déclaration a servi de base à notre réflexion et nous a permis de prendre en compte à la fois les aspects économiques et sociaux de nos activités, tout en respectant l'environnement.

Nous encourageons les activités en faveur de la préservation de l'environnement et c'est dans cet esprit que nous développons nos produits : nous réduisons au minimum les matières dangereuses qui entrent dans leur composition et l'on ne trouve pas de cadmium, par exemple, dans nos moniteurs.

Information sur le recyclage

Ce moniteur peut contenir des composants qui présentent un risque pour l'environnement. Il est donc important que celui-ci soit recyclé après usage.

LGE traite les moniteurs en fin de cycle conformément à une méthode de recyclage respectueuse de l'environnement. Nous reprenons nos produits et les recyclons dans plusieurs sites répartis dans le monde entier. De nombreux composants sont réutilisés et recyclés, et les matières dangereuses, ainsi que les métaux lourds, sont traités selon un procédé écologique.

Si vous souhaitez plus de renseignements sur notre programme de recyclage, veuillez contacter votre revendeur LG ou un l'un de nos représentants.

Nous voulons agir pour un monde plus propre et croyons au rôle de notre entreprise dans l'amélioration de l'environnement. Pour plus de renseignements sur notre politique "verte", rendez visite à notre site :

<http://www.lge.com/about/environment/html/Recycling.jsp>

■■■ Regulatory Information cont.

Italiano

Informazioni per la tutela dell'ambiente

La LGE. ha annunciato nel 1994 la cosiddetta 'LG Declaration for a Cleaner Environment' (Dichiarazione di LG a favore di un ambiente più pulito), un ideale che da allora funge da principio ispiratore della gestione aziendale. La dichiarazione rappresenta il fondamento che consente di intraprendere attività a favore dell'ambiente tenendo conto degli aspetti economici, ambientali e sociali. Noi della LG, promuoviamo attività a favore della tutela dell'ambiente sviluppando appositamente i nostri prodotti per cogliere il concetto del rispetto dell'ambiente riducendo i materiali dannosi presenti nei nostri prodotti. Ad esempio nei nostri monitor non è presente il cadmio.

Informazioni per il riciclaggio

Il monitor può presentare componenti che potrebbero risultare eventualmente dannosi per l'ambiente. È importante che il monitor sia riciclato al termine del suo utilizzo.

La LGE. gestisce tutti i monitor di rifiuto con un metodo di riciclaggio soddisfacente dal punto di vista ambientale. In tutto il mondo sono attualmente in funzione numerosi sistemi di riciclaggio e recupero. I diversi componenti sono riutilizzati e riciclati, mentre le sostanze dannose e i metalli pesanti vengono trattati con un metodo rispettoso dell'ambiente.

Se si desiderano maggiori informazioni in merito al programma di riciclaggio, è consigliabile rivolgersi al proprio rivenditore LG o ad un rappresentante aziendale della LG.

Noi della LG impostiamo la nostra visione e le nostre politiche a favore di un mondo più pulito ponendo la questione dell'ambiente dal punto di vista globale come una mansione rivolta al miglioramento della nostra azienda. Vi invitiamo a visitare il nostro sito internet per ulteriori informazioni sulla nostra politica "verde".
<http://www.lge.com/about/environment/html/Recycling.jsp>

Espanol

Información para la conservación medioambiental

LGE. presentó la 'Declaración para un entorno más limpio de LG' en 1994 y este ideal ha servido para guiar nuestros principios empresariales desde entonces. La Declaración es la base que nos ha permitido llevar a cabo tareas que

respetan el medio ambiente siempre teniendo en cuenta aspectos sociales, económicos y medioambientales.

Promocionamos actividades orientadas a la conservación del medio ambiente y desarrollamos nuestros productos específicamente para que se ajusten a la filosofía que protege el entorno.

Reducimos al máximo el uso de materiales de riesgo en nuestros productos. Un ejemplo de ello es la ausencia total de cadmio en nuestros monitores.

Información para el reciclaje

Este monitor puede contener piezas que entrañen riesgos medioambientales. Es importante reciclar este monitor después de su utilización.

LGE. trata todos los monitores usados siguiendo un método de reciclaje que no daña al entorno. Contamos con diversos sistemas de recuperación y reciclaje que funcionan a nivel mundial en la actualidad. Es posible reciclar y reutilizar muchas de las piezas, mientras que las sustancias dañinas y los metales pesados se tratan siguiendo un método que no perjudique al medio ambiente. Si desea obtener más información acerca del programa de reciclaje, póngase en contacto con su proveedor local de LG o con un representante empresarial de nuestra marca.

Basamos nuestra visión y nuestras políticas en un mundo más limpio y para ellos optamos por un entorno global como tarea principal de nuestra evolución como empresa. Visite nuestra página Web para obtener más información sobre nuestras políticas ecológicas.

<http://www.lge.com/about/environment/html/Recycling.jsp>

Português

Informações relacionadas à preservação ambiental

A LGE. anunciou a 'LG Declaration for a Cleaner Environment' (Declaração da LG para um ambiente mais limpo) em 1994 e esse ideal tem servido desde então como um princípio administrativo de orientação. A Declaração é a base que nos tem permitido realizar atividades favoráveis ao ambiente com consideração atenta aos aspectos econômicos, ambientais e sociais.

Promovemos atividades de preservação ambiental e desenvolvemos nossos produtos para englobar

■■■ Regulatory Information cont.

especificamente o conceito de favorável ao ambiente.

Reduzimos os materiais perigosos contidos em nossos produtos. Por exemplo, não há cádmio em nossos monitores.

Informações relacionadas à reciclagem

Este monitor pode conter peças que podem representar riscos ao ambiente. É importante que ele seja reciclado após o uso.

A LGE, cuida de todos os monitores descartados através de um método de reciclagem agradável ao ambiente. Há vários sistemas de devolução e reciclagem atualmente em operação no mundo. Muitas peças serão reutilizadas e recicladas e as substâncias nocivas e os metais pesados passarão por tratamento através de um método favorável ao ambiente.

Para obter mais informações sobre nosso programa de reciclagem, entre em contato com seu fornecedor LG local ou com um representante corporativo da LG.

Definimos nossa visão e nossas políticas relacionadas a um mundo mais limpo selecionando a questão do ambiente global como uma tarefa de aprimoramento corporativo. Visite nosso site para obter mais informações sobre nossas políticas de meio ambiente.

<http://www.lge.com/about/environment/html/Recycling.jsp>

■ ■ ■ Nederlands

Informatie met betrekking tot het behoud van het milieu

LGE publiceerde in 1994 de 'LG Declaration for a Cleaner Environment' (de LG-verklaring met betrekking tot een schoner milieu). Deze verklaring en het ideaal van een schoner milieu fungeren sindsdien als een bestuurlijke leidraad voor onze onderneming. Op basis van deze verklaring ontplooiën wij milieuvriendelijke activiteiten, waarbij er zowel met sociale en economische aspecten, als met milieuaspecten zorgvuldig rekening wordt gehouden.

Wij ondersteunen activiteiten die zijn gericht op het behoud van het milieu en wij houden bij het ontwikkelen onze producten specifiek rekening met de milieuvriendelijkheid van onze producten.

Wij minimaliseren het gebruik van schadelijke stoffen in onze producten. Er wordt bijvoorbeeld geen cadmium verwerkt in onze monitoren.

Informatie met betrekking tot recycling

Deze monitor bevat materialen die schadelijk zouden kunnen zijn voor het milieu. Het is belangrijk dat deze monitor aan het einde van zijn levensduur wordt gerecycled.

LGE verwerkt alle afvalmonitoren via een milieuvriendelijke recyclingmethode. Hiervoor worden er momenteel wereldwijd verscheidene inname- en recyclingsystemen gehanteerd. Een groot aantal onderdelen wordt opnieuw gebruikt en gerecycled, waarbij schadelijke stoffen en zware metalen volgens een milieuvriendelijke methode worden verwerkt.

Voor meer informatie over ons recyclingprogramma kunt u contact opnemen met uw plaatselijke LG-vertegenwoordiger of een LG-vestiging.

Onze visie en ons beleid met betrekking tot een schonere wereld vloeien voort uit het feit dat wij het milieu hebben aangemerkt als een onderwerp dat speciale aandacht verdient binnen onze onderneming. Bezoek onze website voor meer informatie over ons 'groene' beleid.

<http://www.lge.com/about/environment/html/Recycling.jsp>

■ ■ ■ Russian

Информация по охране окружающей среды

В 1994 году корпорация LGE опубликовала 'Декларацию LG по охране окружающей среды', которая с тех пор служит основным принципом управления. На основе этой декларации мы смогли предпринять действия, обеспечивающие безопасность окружающей среды, уделяя при этом должное внимание экономическим, экологическим и социальным аспектам.

Мы стимулируем деятельность по охране окружающей среды, уделяя особое внимание разработке нашей продукции в соответствии с концепцией экологической безопасности.

Мы сводим к минимуму содержание опасных веществ в нашей продукции. Например, в наших мониторах вы не найдете кадмия.

Информация по утилизации отходов

Этот монитор может содержать компоненты, которые могут нанести ущерб окружающей среде.

■■■ Regulatory Information cont.

Необходимо утилизировать монитор после использования.

Корпорация LGE перерабатывает все бракованные мониторы с помощью экологически приемлемого метода утилизации отходов. По всему миру действуют системы утилизации отходов и возврата использованной продукции. Многие компоненты будут вторично использованы и утилизированы, в то время как вредные вещества и тяжелые металлы будут обработаны с помощью экологически приемлемого метода.

За более подробной информацией по нашей программе утилизации отходов обращайтесь к местному поставщику или представителю корпорации LG.

Мы ориентируемся на обеспечение экологической безопасности, ставя себе целью глобальную защиту окружающей среды. Дополнительную информацию о нашей политике по охране окружающей среды вы можете найти на нашем сайте:
<http://www.lge.com/about/environment/html/Recycling.jsp>

한국어

환경 보존 정보

LG 전자는 1994년 'LG 환경 선언문'을 발표한 후 현재까지 이를 기업 경영의 이념으로 삼아왔습니다. 이 선언문을 바탕으로 LG 전자는 모든 경영 활동에서 경제성뿐만 아니라 환경성 및 사회성을 주요 의사 결정의 기준으로 삼음으로써 지속적으로 환경 친화적인 경영을 전개하고 있습니다.

본사는 보다 활발한 환경 보존 활동과 더불어 환경 친화적 제품 개발에 주력해 왔습니다.

또한 제품에 포함되는 환경 위해 요소를 최소화하는 데에도 노력을 기울이지 않고 있습니다. LG 전자 모니터의 경우 카드뮴을 전혀 사용하지 않는 것에서도 이러한 노력을 알 수 있습니다.

재활용 정보

본 모니터에는 환경에 위해를 주는 부품이 포함되어 있을 수도 있습니다. 따라서 사용이 끝난 모니터는 재활용하는 것이 좋습니다.

폐모니터는 모두 환경 친화적 방식으로 처리됩니다. 현재 세계적으로 운영되고 있는 회수 및 재활용 시스템에는

여러 가지가 있습니다. 대부분의 부품의 경우 재사용 또는 재활용되지만 환경 위해 물질과 중금속은 환경 친화적 방법으로 처리됩니다.

본사의 재활용 프로그램에 대한 자세한 정보는 각 지역의 LG 공급업체나 LG 기업 대표부에 문의하시기 바랍니다.

LG 전자는 기업 개선 정책의 하나로 지구 환경 문제를 채택함으로써 보다 나은 환경을 만들어 나가기 위한 비전과 정책을 수립했습니다. 본사의 친환경 정책에 대한 자세한 정보를 보시려면 아래의 웹 사이트를 방문하십시오.

http://www.lge.co.kr/cckr/about/environ/purity_02.jsp

∴EPA (EPA applied model only)

ENERGY STAR is a set of power-saving guidelines issued by the U.S. Environmental Protection Agency(EPA).



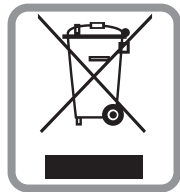
As an ENERGY STAR Partner LGE U. S. A.,Inc. has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

∴NOM MARK (Mexico only)



■■■ Regulatory Information cont.

:: WEEE (for Europe)



English

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.

French

Élimination de votre ancien appareil

1. Ce symbole, représentant une poubelle sur roulettes barrée d'une croix, signifie que le produit est couvert par la directive européenne 2002/96/EC.
2. Les éléments électriques et électroniques doivent être jetés séparément, dans les vide-ordures prévus à cet effet par votre municipalité.
3. Une élimination conforme aux instructions aidera à réduire les conséquences négatives et risques éventuels pour l'environnement et la santé humaine.
4. Pour plus d'information concernant l'élimination de votre ancien appareil, veuillez contacter votre mairie, le service des ordures ménagères ou encore la magasin où vous avez acheté ce produit.

Italian

Smaltimento delle apparecchiature obsolete

1. Quando su un prodotto è riportato il simbolo di

un bidone della spazzatura barrato da una croce significa che il prodotto è coperto dalla direttiva europea 2002/96/EC.

2. Tutti i prodotti elettrici ed elettronici dovrebbero essere smaltiti separatamente rispetto alla raccolta differenziata municipale, mediante impianti di raccolta specifici designati dal governo o dalle autorità locali.
3. Il corretto smaltimento delle apparecchiature obsolete contribuisce a prevenire possibili conseguenze negative sulla salute umana e sull'ambiente.
4. Per informazioni più dettagliate sullo smaltimento delle apparecchiature obsolete, contattare il comune, il servizio di smaltimento rifiuti o il negozio in cui è stato acquistato il prodotto.

Swedish

Kassering av din gamla apparat

1. När den här symbolen med en överkryssad soptunna på hjul sitter på en produkt innebär det att den regleras av European Directive 2002/96/EC.
2. Alla elektriska och elektroniska produkter bör kasseras via andra vägar än de som finns för hushållsavfall, helst via för ändamålet avsedda uppsamlingsanläggningar som myndigheterna utser.
3. Om du kasserar din gamla apparat på rätt sätt så bidrar du till att förhindra negativa konsekvenser för miljön och människors hälsa.
4. Mer detaljerad information om kassering av din gamla apparat kan fås av kommunen, renhållningsverket eller den butik där du köpte produkten.

Dutch

Uw oude toestel wegdoen

1. Als het symbool met de doorgekruiste verrijdbare afvalbak op een product staat, betekent dit dat het product valt onder de Europese Richtlijn 2002/96/EC.
2. Elektrische en elektronische producten mogen niet worden meegegeven met het huishoudelijk afval, maar moeten worden ingeleverd bij speciale inzamelingspunten die door de lokale of landelijke overheid zijn aangewezen.
3. De correcte verwijdering van uw oude toestel helpt negatieve gevolgen voor het milieu en de menselijke gezondheid voorkomen.

Regulatory Information cont.

4. Wilt u meer informatie over de verwijdering van uw oude toestel? Neem dan contact op met uw gemeente, de afvalophaaldienst of de winkel waar u het product hebt gekocht.

Finnish

Vanhonjen laitteiden hävittäminen

1. Tämä merkki tuotteessa tarkoittaa, että tuote kuuluu sähkö- ja elektroniikkalaiteromusta annetun EU-direktiivin 2002/96/EY soveltamisalaan.
2. Kaikki elektroniset laitteet ovat ongelmajätettä, joten ne on toimitettava paikalliseen keräyspisteeseen.
3. Vanhan laitteen asianmukainen hävittäminen ehkäisee mahdollisia ympäristöön ja terveyteen kohdistuvia haittavaikutuksia.
4. Lisätietoa vanhan laitteen hävittämisestä saat ottamalla yhteyden paikallisiin viranomaisiin, kierrätyskeskukseen tai myymälään, josta ostit laitteen.

German

Entsorgung von Altgeräten

1. Wenn dieses Symbol eines durchgestrichenen Abfalleimers auf einem Produkt angebracht ist, unterliegt dieses Produkt der europäischen Richtlinie 2002/96/EC.
2. Alle Elektro- und Elektronik-Altgeräte müssen getrennt vom Hausmüll über dafür staatlich vorgesehenen Stellen entsorgt werden.
3. Mit der ordnungsgemäßen Entsorgung des alten Geräts vermeiden Sie Umweltschäden und eine Gefährdung der persönlichen Gesundheit.
4. Weitere Informationen zur Entsorgung des alten Geräts erhalten Sie bei der Stadtverwaltung, beim Entsorgungsamt oder in dem Geschäft, wo Sie das Produkt erworben haben.

Danish

Sådan smider du dit gamle apparat ud

1. Når der er et tegn med et kryds over en skraldespand, betyder det, at produktet er omfattet af EU-direktiv 2002/96/EC.
2. Alle elektriske og elektroniske produkter skal smides ud et andet sted end gennem den kommunale affaldsordning ved hjælp af specielle indsamlingsfaciliteter, der er organiseret af staten

eller de lokale myndigheder.

3. Korrekt bortskaffelse af dit gamle apparat er med til at forhindre mulige skadevirkninger på miljøet og menneskelig sundhed.
4. Mere detaljerede oplysninger om bortskaffelse af dit gamle apparat kan fås ved at kontakte dit lokale kommunekontor, renovationselskab eller den butik, hvor du købte produktet.

Greek

Απόρριψη της παλιάς σας συσκευής

1. Όταν ένα προϊόν διαθέτει το σύμβολο ενός διαγραμμένου κάλαθου απορριμμάτων, τότε το προϊόν καλύπτεται από την Ευρωπαϊκή Οδηγία 2002/96/ΕΟΚ.
2. Η απόρριψη όλων των ηλεκτρικών και ηλεκτρονικών προϊόντων πρέπει να γίνεται χωριστά από τα γενικά οικιακά απορρίμματα μέσω καθορισμένων εγκαταστάσεων συλλογής απορριμμάτων, οι οποίες έχουν δημιουργηθεί είτε από την κυβέρνηση ή από τις τοπικές αρχές.
3. Η σωστή απόρριψη της παλιάς σας συσκευής θα βοηθήσει στην αποτροπή πιθανών αρνητικών συνπειών ως προς το περιβάλλον και την υγεία του ανθρώπου.
4. Για πιο λεπτομερείς πληροφορίες σχετικά με την απόρριψη της παλιάς σας συσκευής, επικοινωνήστε με το αρμόδιο τοπικό γραφείο, υπηρεσία διάθεσης οικιακών απορριμμάτων ή το μαγαζί από το οποίο αγοράσατε το προϊόν.

Spanish

Cómo deshacerse de aparatos eléctricos y electrónicos viejos

1. Si en un producto aparece el símbolo de un contenedor de basura tachado, significa que éste se acoge a la Directiva 2002/96/CE.
2. Todos los aparatos eléctricos o electrónicos se deben desechar de forma distinta del servicio municipal de recogida de basura, a través de puntos de recogida designados por el gobierno o las autoridades locales.
3. La correcta recogida y tratamiento de los dispositivos inservibles contribuye a evitar riesgos potenciales para el medio ambiente y la salud pública.
4. Para obtener más información sobre cómo deshacerse de sus aparatos eléctricos y electrónicos viejos, póngase en contacto con su ayuntamiento, el servicio de recogida de basuras o el establecimiento donde adquirió el producto.

Regulatory Information cont.

Portuguese

Eliminação do seu antigo aparelho

1. Quando este símbolo de latão cruzado estiver afixado a um produto, significa que o produto é abrangido pela Directiva Europeia 2002/96/EC.
2. Todos os produtos eléctricos e electrónicos devem ser eliminados separadamente do lixo doméstico através de pontos de recolha designados, facilitados pelo governo ou autoridades locais.
3. A eliminação correcta do seu aparelho antigo ajuda a evitar potenciais consequências negativas para o ambiente e para a saúde humana.
4. Para obter informações mais detalhadas acerca da eliminação do seu aparelho antigo, contacte as autoridades locais, um serviço de eliminação de resíduos ou a loja onde comprou o produto.

Slovak

Likvidácia váš ho starého prístroja

1. Keď sa na produkte nachádza tento symbol prečiarknutej smetnej nádoby s kolieskami, znamená to, že daný produkt vyhovuje európskej Smernici č. 2002/96/EC.
2. Všetky elektrické a elektronické produkty by mali byť zlikvidované oddelene od komunálneho odpadu prostredníctvom na to určených zberných zariadení, ktoré boli ustanovené vládou alebo orgánmi miestnej správy.
3. Správnu likvidáciu starých zariadení pomôžete predchádzať potenciálnym negatívnym následkom pre prostredie a ľudské zdravie.
4. Podrobnejšie informácie o likvidácii starých zariadení nájdete na miestnom úrade, v službe na likvidáciu odpadu alebo u predajcu, kde ste tento produkt zakúpili.

Czech

Likvidace starých spotřebičů

1. Pokud je u výrobku uveden symbol pojízdného kontejneru v přeškrtnutém poli, znamená to, že na výrobek se vztahuje směrnice Evropské unie číslo 2002/96/EC.
2. Všechny elektrické a elektronické výrobky by měly být likvidovány odděleně od běžného komunálního odpadu prostřednictvím sběrných zařízení zřízených za tímto účelem vládou nebo místní samosprávou.
3. Správný způsob likvidace starého elektrického spotřebiče pomáhá zamezit možným negativním dopadům na životní prostředí a zdraví.
4. Bližší informace o likvidaci starého spotřebiče získáte u místní samosprávy, ve sběrném zařízení nebo v obchodě, ve kterém jste výrobek zakoupili.

Croatian

Uklanjanje starog aparata

1. Ako se na proizvodu nalazi simbol prekrizhene kante za smeće, to znači da je proizvod pokriven europskom direk-

tivom 2002/96/EC.

2. Električni i elektronski proizvodi ne smiju se odlagati zajedno s komunalnim otpadom, već u posebna odlagališta koja je odredila vlada ili lokalne vlasti.
3. Pravilno odlaganje starog proizvoda sprečiti će potencijalne negativne posljedice po okoliš i zdravlje ljudi.
4. Podrobnije informacije o odlaganju starog proizvoda potražite u gradskom uredu, službi za odlaganje otpada ili u trgovini u kojoj ste kupili proizvod.

Hungarian

Régi eszközök ártalmatlanítása

1. A termékhez csatolt áthúzott, keresek szeméttároló jel jelöli, hogy a termék a 2002/96/EC EU-direktíva hatálya alá esik.
2. Minden elektromos és elektronikai terméket a lakossági hulladéktól elkülönítve kell begyűjteni, a kormány vagy az önkormányzatok által kijelölt begyűjtő eszközök használatával.
3. Régi eszközeinek megfelelő ártalmatlanítása segíthet megelőzni az esetleges egészségre vagy környezetre ártalmas hatásokat.
4. Ha több információra van szüksége régi eszközeinek ártalmatlanításával kapcsolatban, tanulmányozza a vonatkozó környezetvédelmi szabályokat, vagy lépjen kapcsolatba az üzlettel, ahol a terméket vásárolta.

Polish

Utylizacja starych urządzeń

1. Kiedy do produktu dołączony jest niniejszy przekreślony symbol kołowego pojemnika na śmieci, oznacza to, że produkt jest objęty dyrektywą 2002/96/EC.
2. Wszystkie elektryczne i elektroniczne produkty powinny być utylizowane niezależnie od odpadów miejskich, z wykorzystaniem przeznaczonych do tego miejsc składowania wskazanych przez rząd lub miejscowe władze.
3. Właściwy sposób utylizacji starego urządzenia pomoże zapobiec potencjalnie negatywnemu wpływowi na zdrowie i środowisko.
4. Aby uzyskać więcej informacji o sposobach utylizacji starych urządzeń, należy skontaktować się z władzami lokalnymi, przedsiębiorstwem zajmującym się utylizacją odpadów lub sklepem, w którym produkt został kupiony.

■■■ Regulatory Information cont.

■ ■ ■ Estonian

Kasutuskõlbmatu seadme käitlemise kord

1. Kui seade on märgistatud selle elektri- ja elektroonikaseadmete lahuskogumist märgistava tähisega (ratastega prügikonteineri kujutis, millele on rist peale tõmmatud), tuleb toodet käidelda vastavalt Eurodirektiivile 2002/96/EÜ.
2. Elektri- ja elektroonikaseadmeid ei tohi visata tavalise prügi hulka. Nad kuuluvad lahuskogumisele selleks määratud kogumispunktides.
3. Kasutuskõlbmatu tervikseadme käitlemine tavaprügist lahus on korraldatud selleks, et vältida negatiivseid tagajärgi, mida põhjustaksid seadme osade purunemisel vabaneda võivad ohtlikud jäätmed loodusele või inimorganismile.
4. Täpsemat informatsiooni selle kohta, kuhu ja millal saab ära anda oma kasutamiskõlbmatu elektri- ja elektroonikaseadme, küsige kohalikult omavalitsuselt, prügifirmalt või kaupluselt, kust seadme ostsite.

■ ■ ■ Latvian

Vecās elektroierīces nodošana

1. Ja uz produkta ir simbols ar pārsvītrotu atkritumu tvertni, tas nozīmē, ka produkts ir iekļauts Eiropas direktīvā 2002/96/EC.
2. Visi elektriskie un elektroniskie produkti ir jāutilizē, nododot pašvaldības īpaši noteiktās pieņemšanas vietās. Tos nedrīkst izmest parastās municipalitātes atkritumu urnās.
3. Ievērojot prasības veco elektroierīču utilizēšanā, jūs pasargāsiet apkārtējo vidi un cilvēku veselību no iespējami nelabvēlīgajām sekām, kādas varētu rasties, ierīcēm sadaloties nepiemērotā vietā.
4. Lai gūtu plašāku informāciju par veco ierīču utilizēšanas iespējām, sazinieties ar pilsētas pašvaldību, atkritumu savākšanas saimniecību vai veikalu, kurā ierīci iegādājāties.

■ ■ ■ Lithuanian

Senos įrangos atliekų tvarkymas

1. Užbrauktas konteinerio simbolis priverčia ant prekės reiškia, kad įrangą saugo Europos direktyva 2002/96/EC.
2. Visos elektros ir elektroninės įrangos atliekos turi būti renkamos atskirai ir neišmetamos į atliekų konteinerį kartu su kitomis komunalinėmis atliekomis, taikant specialią atliekų surinkimo sistemą, patvirtintą vyriausybės ar vietos valdžios.
3. Teisingas senos įrangos atliekų tvarkymas, padės išvengti neigiamų pasekmių aplinkai ir žmonių sveikatai.
4. Dėl išsamesnės informacijos apie senos įrangos tvarkymą, prašome kreiptis į miesto valdžią, atliekų perdirbimo tarnybą arba parduotuvę, kurioje pirkote įrangą.