



ENGLISH

OWNER'S MANUAL

LED LCD MONITOR

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

LED LCD MONITOR MODEL
E2290V

www.lg.com

This unit has been engineered and manufactured to ensure your personal safety, however improper use may result in potential electrical shock or fire hazards. In order to allow the proper operation of all safeguards incorporated in this display, observe the following basic rules for its installation, use, and servicing.

On Safety

Use only the power cord supplied with the unit. In case you use another power cord, make sure that it is certified by the applicable national standards if not being provided by the supplier. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.

The appliance coupler is used as the disconnect device.

Please make sure the device is installed near the wall outlet to which it is connected and that the outlet is easily accessible.

Operate the display only from a power source indicated in the specifications of this manual or listed on the display. If you are not sure what type of power supply you have in your home, consult with your dealer.

Overloaded AC outlets and extension cords are dangerous. So are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.

As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if the unit is turned off.

Do not Open the Display:

- There are no user serviceable components inside.
- There are Dangerous High Voltages inside, even when the power is OFF.
- Contact your dealer if the display is not operating properly.

To Avoid Personal Injury :

- Do not place the display on a sloping shelf unless properly secured.
- Use only a stand recommended by the manufacturer.
- Do not drop an object on or apply impact to the product. Do not throw any toys or objects on the product screen.
It can cause injury to human, problem to product and damage the display.

To Prevent Fire or Hazards:

- Always turn the display OFF if you leave the room for more than a short period of time. Never leave the display ON when leaving the house.
- Keep children from dropping or pushing objects into the display's cabinet openings. Some internal parts carry hazardous voltages.
- Do not add accessories that have not been designed for this display.
- When the display is to be left unattended for an extended period of time, unplug it from the wall outlet.
- In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous. It can cause electric shock.

On Installation

Do not allow anything to rest upon or roll over the power cord, and do not place the display where the power cord is subject to damage.

Do not use this display near water such as near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

Displays are provided with ventilation openings in the cabinet to allow the release of heat generated during operation. If these openings are blocked, built-up heat can cause failures which may result in a fire hazard. Therefore, NEVER:

- Block the bottom ventilation slots by placing the display on a bed, sofa, rug, etc.
- Place the display in a built-in enclosure unless proper ventilation is provided.
- Cover the openings with cloth or other material.
- Place the display near or over a radiator or heat source.

Do not rub or strike the Active Matrix LCD with anything hard as this may scratch, mar, or damage the Active Matrix LCD permanently.

Do not press the LCD screen with your finger for a long time as this may cause some afterimages.

Some dot defects may appear as Red, Green or Blue spots on the screen. However, this will have no impact or effect on the display performance.

If possible, use the recommended resolution to obtain the best image quality for your LCD display. If used under any mode except the recommended resolution, some scaled or processed images may appear on the screen. However, this is characteristic of the fixed-resolution LCD panel.

Leaving a fixed image on the screen for a long time may cause damage to the screen and cause image burn-in. Make sure to use a screen saver on the product. Burn-in and related problems are not covered by the warranty on this product.

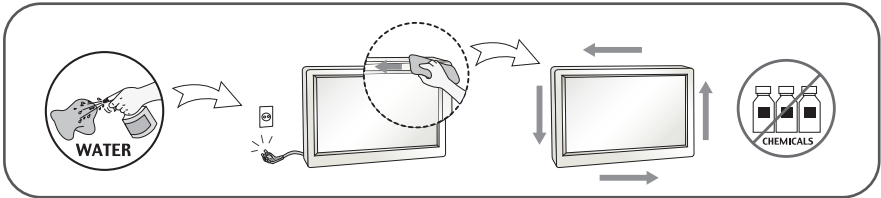
Do not shock or scratch the front and sides of the screen with metallic objects. Otherwise, it may cause damage to the screen.

Make sure the panel faces forward and hold it with both hands to move. If you drop the product, the damaged product can cause electric shock or fire. Contact an authorized the service center for repair.

Avoid high temperatures and humidity.

On Cleaning

- Unplug the display before cleaning the face of the display screen.
- Use a slightly damp (not wet) cloth. Do not use an aerosol directly on the display screen because over-spraying may cause electrical shock.
- When cleaning the product, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not clean with a wet cloth or spray water or other liquids directly onto the product. An electric shock may occur. (Do not use chemicals such as benzene, paint thinners or alcohol)
- Spray water onto a soft cloth 2 to 4 times, and use it to clean the front frame; wipe in one direction only. Too much moisture may cause staining.



On Repacking

- Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it in its original material.

On Disposal (Only , Hg lamp used LCD Monitor)

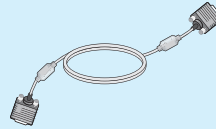
- The fluorescent lamp used in this product contains a small amount of mercury.
- Do not dispose of this product with general household waste.
- Disposal of this product must be carried out in accordance to the regulations of your local authority.

!!! Thank you for selecting LGE products !!!

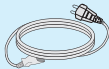
Please make sure the following items are included with your monitor. If any items are missing, contact your dealer.



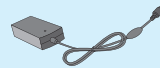
Owner's Manual/Cards



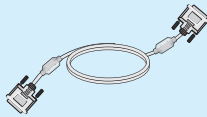
15-pin D-Sub Signal Cable



Power Cord
(Depending on the country)



AC-DC adapter



DVI-D Signal Cable
(This feature is not available in all countries.)

NOTE

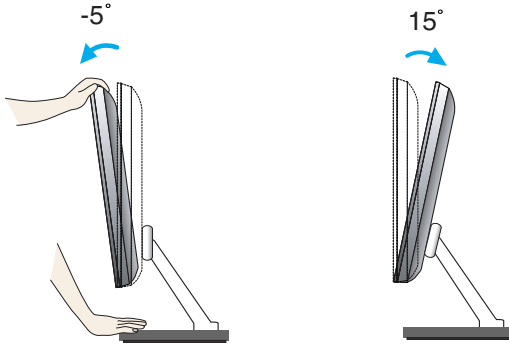
- This accessories may look different from those shown here.
- User must use shielded signal interface cables (D-sub 15 pin cable, DVI-D cable) with ferrite cores to maintain standard compliance for the product.

Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.

Positioning your display

Adjust the position of the panel in various ways for maximum comfort.

- Tilt Range : -5° to 15°



IMPORTANT

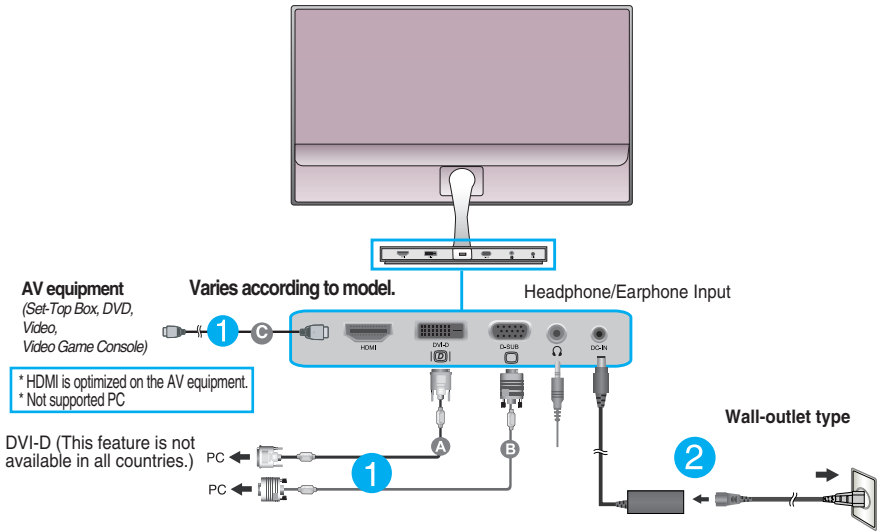
- It is recommended that in order to maintain an ergonomic and comfortable viewing position, the forward tilt angle of the monitor should not exceed 5 degrees.
- Do not touch or press the screen when adjusting the angle of the monitor.

Connecting with the PC

1. Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.
2. Connect signal input cable **1** and power cord **2** in order, then tighten the screw of the signal cable.
 - A Connect DVI-D(Digital signal) Cable
 - B Connect D-sub(Analog signal) Cable
 - C Connect HDMI Cable

NOTE

- This is a simplified representation of the rear view.
- This rear view represents a general model; your display may differ from the view as shown.



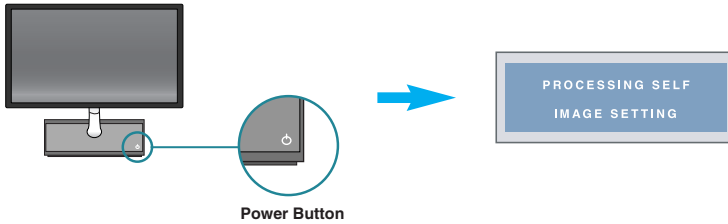
Connect the signal input cable and tighten it up by turning in the direction of the arrow as shown in the figure.

When using a D-Sub signal input cable connector for Macintosh

Mac adapter : For Apple Macintosh use, a separate plug adapter is needed to change the 15 pin high density (3 row) D-sub VGA connector on the supplied cable to a 15 pin 2 row connector.

Connecting the Display

3. Press the power button on the stand base to turn the power on. When monitor power is turned on, the **'Self Image Setting Function'** is executed automatically. (Only Analog Mode)

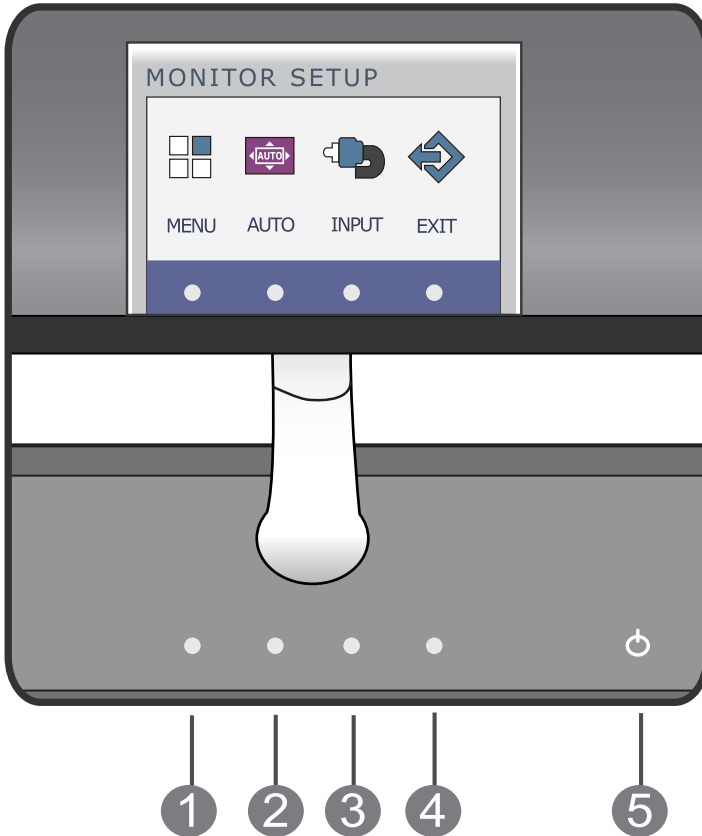


NOTE

'Self Image Setting Function'? This function provides the user with optimal display settings. When the user connects the monitor for the first time, this function automatically adjusts the display to optimal settings for individual input signals.

'AUTO' Function? When you encounter problems such as blurry screen, blurred letters, screen flicker or tilted screen while using the device or after changing screen resolution, press the AUTO function button to improve resolution.

Front Panel Controls



1 MENU Button

Use this button to enter or exit from the On Screen Display.

OSD LOCKED/UNLOCKED

This function allows you to lock the current control settings, so that they cannot be inadvertently changed. Press and hold the **MENU button** for several seconds. The message "OSD LOCKED" should appear.

You can unlock the OSD controls at any time by pushing the **MENU button** for several seconds. The message "OSD UNLOCKED" should appear.



2 AUTO Button



AUTO IMAGE ADJUSTMENT

When adjusting your display settings, always press the **AUTO** button before entering the On Screen Display(OSD). (Only Analog Mode)

This will automatically adjust your display image to the ideal settings for the current screen resolution size (display mode).

The best display mode is
1920 x 1080

3 INPUT Button (SOURCE Hot key)

When two input signals at least are connected, you can select the input signal (D-SUB/DVI/HDMI) you want. When only one signal is connected, it is automatically detected. The default setting is D-Sub.

4 EXIT Button

Exit the OSD(On Screen Display).

5 Power Button & Power Indicator

Use this button to turn the display on or off.

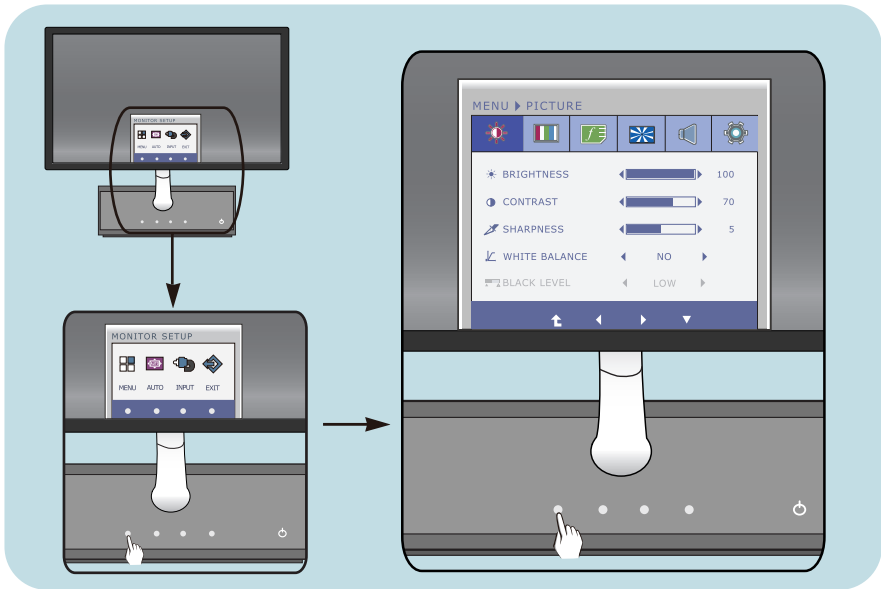
The power indicator stays white if the display is running properly (On Mode). If the display is in Sleep Mode (Energy Saving), the power indicator is red.

Screen Adjustment

Making adjustments to the image size, position and operating parameters of the display is quick and easy with the On Screen Display Control system.

A short example is given below to familiarize you with the use of the controls. The following section is an outline of the available adjustments and selections you can make using the OSD.

To make adjustments in the On Screen Display, follow these steps:



- 1 Press the discretionary button, then the main menu of the OSD appears.
- 2 To access a control, use the corresponding buttons.
- 3 Use the ◀/▶ buttons to adjust the image to the desired level.
Use the ▼ button to select other sub-menu items.
- 4 Press the **EXIT Button** to exit from the OSD.

On Screen Display(OSD) Selection and Adjustment

The following table indicates all the On Screen Display control, adjustment, and setting menus.

D-SUB : D-SUB(Analog signal) input

DVI-D : DVI-D(Digital signal) input

HDMI : HDMI signal

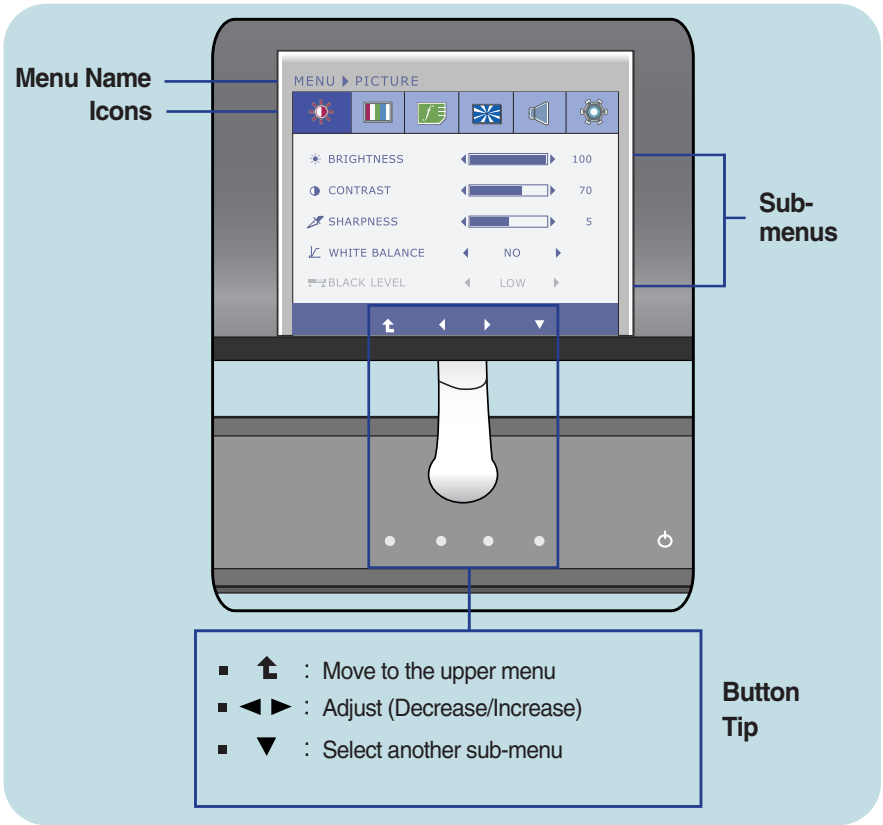
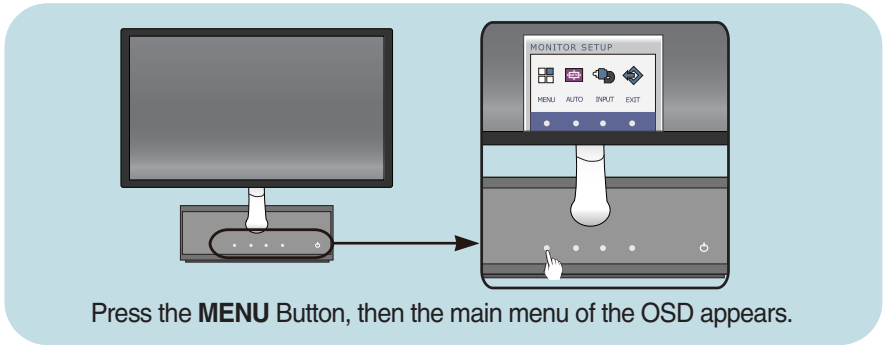
Main menu	Sub-menu	Supported input	Description
PICTURE	BRIGHTNESS CONTRAST SHARPNESS	D-SUB DVI-D HDMI	To adjust the brightness, contrast, sharpness, white balance and black level of the screen
	WHITE BALANCE	D-SUB	
	BLACK LEVEL	HDMI	
	COLOR	COLOR TEMP (PRESET) sRGB 6500K 7500K 8500K 9300K (USER) RED GREEN BLUE GAMMA	
F-ENGINE	NORMAL MOVIE INTERNET	DSUB DVI-D	To select or customize desired image settings
	STANDARD MOVIE GAME SPORTS	HDMI	
PHOTO EFFECT	NORMAL GAUSSIAN BLUR SEPIA MONOCHROME	DSUB DVI-D HDMI	To adjust the screen color mode
VOLUME	VOLUME	HDMI	To adjust the headphone/earphone volume
OTHERS	LANGUAGE ORIGINAL RATIO RTC SOUND POWER INDICATOR BUTTON INDICATOR FACTORY RESET	D-SUB DVI-D HDMI	To customize the screen status for a user's operating environment

NOTE

- The order of icons may differ depending on the model (11 to 19).

On Screen Display(OSD) Selection and Adjustment

You were introduced to the procedure of selecting and adjusting an item using the OSD system. Listed below are the icons, icon names, and icon descriptions of the all items shown on the Menu.



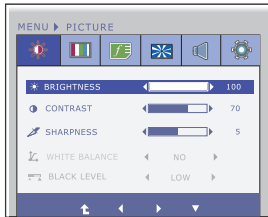
NOTE

- OSD (On Screen Display) menu languages on the monitor may differ from the manual.

Main menu	Sub menu	Description
-----------	----------	-------------



PICTURE



- : Move to the upper menu
- : Decrease
- : Increase
- : Select another sub-menu

- BRIGHTNESS** To adjust the brightness of the screen.
- CONTRAST** To adjust the contrast of the screen.
- SHARPNESS** To adjust the clearness of the screen.

WHITE BALANCE

If the output of the video card is different from the required specifications, the color level may deteriorate due to video signal distortion. Using this function, the signal level is adjusted to fit into the standard output level of the video card in order to provide the optimal image.
Activate this function when white and black colors are present in the screen.
(only for D-SUB input)

- BLACK LEVEL** You can set the offset level. If you select '**HIGH**', the screen will be bright and if you select '**LOW**', the screen will be dark.
(only for HDMI input)

* Offset?

As the criteria for video signal, it is the darkest screen the monitor can show.

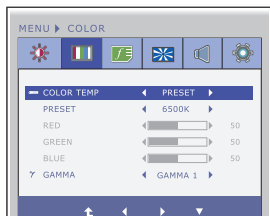
NOTE

- If this does not improve the screen image, restore the factory default settings. If necessary, execute the WHITE BALANCE function again. This function will be enabled only when the input signal is an analog signal.

Main menu	Sub menu	Description
-----------	----------	-------------

COLOR

PRESET Mode



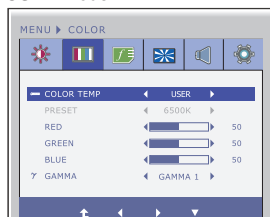
COLOR TEMP Select either **PRESET** or **USER** to adjust the screen color.

PRESET

Select the screen color.

- sRGB: Set the screen color to fit the sRGB standard color specification.
- 6500K to 7500K: Slightly reddish white.
- 8500K to 9300K: Slightly bluish white.

USER Mode



USER

RED

Set your own red color levels.

GREEN





Set your own green color levels.

BLUE




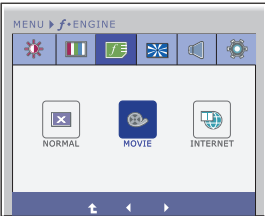
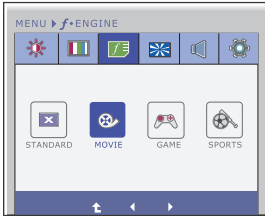


Set your own blue color levels.

GAMMA

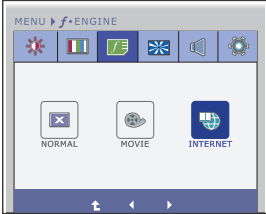
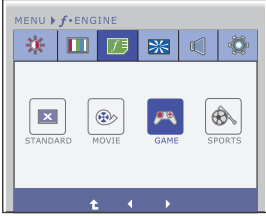
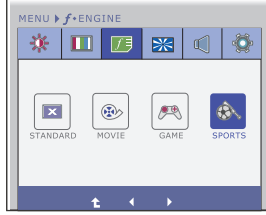
Set your own gamma value. : 0 / 1 / 2
On the monitor, high gamma values display whitish images and low gamma values display blackish images.



-  : Move to the upper menu
-  : Decrease
-  : Increase
-  : Select another sub-menu

On Screen Display(OSD) Selection and Adjustment




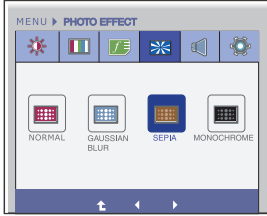

Main menu	Sub menu	Description
 f•ENGINE		
D-SUB/DVI-D input	NORMAL	Select this when you want to use the product in the most general using environment.
		
HDMI input	STANDARD	Select this when you want to use the original standard video. * In the General (Standard) mode, the f•ENGINE is turned off.
		
D-SUB/DVI-D input	MOVIE	Select this when you are watching a video or movie.
		
HDMI input		
		
<ul style="list-style-type: none">■  : Move to the upper menu■  : Move		




On Screen Display(OSD) Selection and Adjustment

Main menu	Sub menu	Description
D-SUB/DVI-D input 	INTERNET	Select this when you are working on the document (Word etc.)
HDMI input 	GAME	Select this when you are playing a game.
HDMI input 	SPORTS	Select this when you watching general sports.

-  : Move to the upper menu
-  : Move

On Screen Display(OSD) Selection and Adjustment

Main menu	Sub menu	Description
	PHOTO EFFECT	
	NORMAL	The PhotoEffect function is disabled.
	GAUSSIAN BLUR	This menu changes the screen to be more colorful and smoother.
	SEPIA	This menu changes the screen to be Sepia tone (brown color).
	MONOCHROME	This menu changed the screen to be Gray tone(black-and-white Picture) .

■  : Move to the upper menu
■   : Move

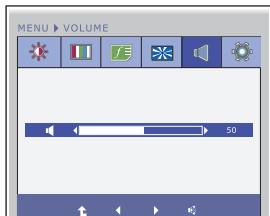
On Screen Display(OSD) Selection and Adjustment

Main menu	Sub menu	Description
-----------	----------	-------------



VOLUME

HDMI input



VOLUME

To adjust the volume of headphone/
Earphone.
(Only for HDMI input)

- : Move to the upper menu
- : Decrease
- : Increase
- : Mute

Main menu	Sub menu	Description
-----------	----------	-------------



OTHERS



- : Move to the upper menu
- : Decrease
- : Increase
- : Select another sub-menu

LANGUAGE

To choose the language in which the control names are displayed.

ORIGINAL RATIO

To adjust the image size.

RTC

If you set **ON**, you enable the Response Time Control function and reduce the afterimage of the screen. If you set **OFF**, you disable the Response Time Control function and operate at panel response time.

SOUND

To select or turn off the Buzzer sound. The Buzzer sound operates in below cases:

- DC power On/Off
- AC power On
- Monitor Setup OSD On/Off
- Menu OSD On/Off

POWER INDICATOR

Use this function to set the power indicator on the stand base of the monitor to **ON** or **OFF**.

If you set **OFF**, it will go off.

If you set **ON** at any time, the power indicator will automatically be turned on.

BUTTON INDICATOR

Use this function to set the control key indicator on the stand base of the monitor to **ON** or **OFF**.

If you set **OFF**, it will be turned off.

If you set **ON**, it will be turned on.

FACTORY RESET

Restore all factory default settings except "**LANGUAGE.**"

Press the , buttons to reset immediately.

Check the following before calling for service.

No image appears	
<ul style="list-style-type: none">● Is the power cord of the display connected?	<ul style="list-style-type: none">• Check and see if the power cord is connected properly to the power outlet.
<ul style="list-style-type: none">● Is the power indicator light on?	<ul style="list-style-type: none">• Press the Power button.
<ul style="list-style-type: none">● Is the power indicator red?	<ul style="list-style-type: none">• If the display is in power saving mode, try moving the mouse or pressing any key on the keyboard to bring up the screen.• Try to turn on the PC.
<ul style="list-style-type: none">● Do you see an "OUT OF RANGE" message on the screen?	<ul style="list-style-type: none">• This message appears when the signal from the PC (video card) is out of horizontal or vertical frequency range of the display. See the 'Specifications' section of this manual and configure your display again.
<ul style="list-style-type: none">● Do you see a "CHECK SIGNAL CABLE" message on the screen?	<ul style="list-style-type: none">• This message appears when the signal cable between your PC and your display is not connected. Check the signal cable and try again.

Do you see a "OSD LOCKED" message on the screen?	
<ul style="list-style-type: none">● Do you see "OSD LOCKED" when you push MENU button?	<ul style="list-style-type: none">• You can secure the current control settings, so that they cannot be inadvertently changed. You can unlock the OSD controls at any time by pushing the MENU button for several seconds: the message "OSD UNLOCKED" will appear.

Display image is incorrect

- | | |
|---|--|
| <ul style="list-style-type: none">● Display Position is incorrect. | <ul style="list-style-type: none">• Press the AUTO button to automatically adjust your display image to the ideal setting. |
| <ul style="list-style-type: none">● On the screen background, vertical bars or stripes are visible. | <ul style="list-style-type: none">• Press the AUTO button to automatically adjust your display image to the ideal setting. |
| <ul style="list-style-type: none">● Any horizontal noise appearing in any image or characters are not clearly portrayed. | <ul style="list-style-type: none">• Press the AUTO button to automatically adjust your display image to the ideal setting.• Check Control Panel --> Display --> Settings and adjust the display to the recommended resolution or adjust the display image to the ideal setting. Set the color setting higher than 24 bits (true color). |

IMPORTANT

- Check **Control Panel --> Display --> Settings** and see if the frequency or the resolution were changed. If yes, readjust the video card to the recommend resolution.
- If the recommended resolution (optimal resolution) is not selected, letters may be blurred and the screen may be dimmed, truncated or biased. Make sure to select the recommend resolution.
- The setting method can differ by computer and O/S (Operation System), and resolution mentioned above may not be supported by the video card performance. In this case, please ask to the computer or the video card manufacturer.

Display image is incorrect

- | | |
|---|--|
| <ul style="list-style-type: none">● The screen color is mono or abnormal.
● The screen blinks. | <ul style="list-style-type: none">• Check if the signal cable is properly connected and use a screwdriver to fasten if necessary.• Make sure the video card is properly inserted in the slot.• Set the color setting higher than 24 bits (true color) at Control Panel - Settings.
• Check if the screen is set to interlace mode and if yes, change it to the recommend resolution. |
|---|--|

Do you see an "Unrecognized monitor, Plug&Play (VESA DDC) monitor found" message?

- | | |
|---|--|
| <ul style="list-style-type: none">● Have you installed the display driver? | <ul style="list-style-type: none">• Be sure to install the display driver from the display driver CD (or diskette) that comes with your display. Or, you can also download the driver from our web site: http://www.lg.com.
• Make sure to check if the video card supports Plug&Play function. |
|---|--|

The Audio function is not working

- | | |
|---|--|
| <ul style="list-style-type: none">● Picture OK & No sound. | <ul style="list-style-type: none">• Check whether volume is "0".• Check sound muted.• HDMI cable installed properly.• Head phone cable installed properly.• Check sound format. Not supply to compressed sound format. |
|---|--|

Specifications

Display	54.6 cm (21.5 inch) Flat Panel Active matrix-TFT LCD Anti-Glare coating Visible diagonal size : 54.6 cm 0.248 mm x 0.248 mm (Pixel pitch)	
Sync Input	Horizontal Freq.	Analog,Digital: 30 kHz to 83 kHz (Automatic) HDMI : 30 kHz to 83 kHz (Automatic)
	Vertical Freq.	Analog,Digital : 56 Hz to 75 Hz (Automatic) HDMI : 56 Hz to 61 Hz (Automatic)
	Input Form	Separate Sync., Digital
Video Input	Signal Input	15 pin D-Sub Connector DVI-D connector (Digital) 19 pin HDMI Connector
	Input Form	Analog (0.7 Vp-p/ 75 ohm), Digital, HDMI
Resolution	Max	VESA 1920 x 1080 @ 60 Hz
	Recommend	VESA 1920 x 1080 @ 60 Hz
Plug&Play	DDC 2B (Analog, Digital, HDMI)	
Power Consumption	On Mode	: 26 W (Typ.)
	Sleep Mode	≤ 0.5 W
	Off Mode	≤ 0.5 W
Dimensions & Weight	With Stand Width 51.14 cm (20.13 inch) Height 39.93 cm (15.72 inch) Depth 13.5 cm (5.31 inch)	
	Weight(excl. packing)	2.8 kg (6.17 lb)
Range	Tilt : -5° to 15°	
Power Input	19 V $\overline{=}$ 2.1 A	
AC-DC Adapter	Type SHA1010L, manufactured by Sungho Electronics	
Environmental Conditions	Operating Conditions Temperature 10 °C to 35 °C Humidity 10 % to 80 % non-Condensing	
	Storage Conditions Temperature -20 °C to 60 °C Humidity 5 % to 90 % non-Condensing	
Stand Base	Attached (O), Detached ()	
Power cord	Wall-outlet type	

NOTE

- Information in this document is subject to change without notice.

Preset Modes (Resolution) - D-sub(Analog) / DVI-D(Digital) INPUT

Display Modes (Resolution)		Horizontal Freq. (kHz)	Vertical Freq. (Hz)
1	720 x 400	31.468	70
2	640 x 480	31.469	60
3	640 x 480	37.500	75
4	800 x 600	37.879	60
5	800 x 600	46.875	75
6	1024 x 768	48.363	60
7	1024 x 768	60.123	75
8	1152 x 864	67.500	75
9	1280 x 1024	63.981	60
10	1280 x 1024	79.976	75
11	1680 x 1050	65.290	60
*12	1920 x 1080	67.500	60

*Recommend Mode

HDMI Video Input

Display Modes (Resolution)		Horizontal Freq. (kHz)	Vertical Freq. (Hz)
1	480p	31.50	60
2	576p	31.25	50
3	720p	37.50	50
4	720p	45.00	60
5	1080i	28.12	50
6	1080i	33.75	60
7	1080p	56.25	50
8	1080p	67.50	60

Indicator

MODE	LED Color
On Mode	White
Sleep Mode	Red
Off Mode	Off



Make sure to read the Important 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.