## User's Guide

## W1946SM W2246SM

Make sure to read the **Important Precautions** before using the product. Keep the User's Guide(CD) in an accessible place for future reference.

 $S_{\text{ee}}$  the label attached on the product and give the information to your dealer when you ask for service.



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 power supply cord is used as the main disconnection device. Ensure that the socket-outlet is easily accessible after installation.

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.

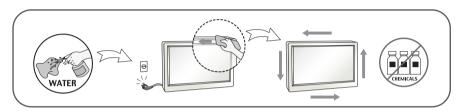
Do not shock or scratch the front and sides of the screen with metallic objects. Otherwise, it may cause damage to the screen.

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.

#### NOTE

• THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTRERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT.SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

#### NOTE

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

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and the receiver.

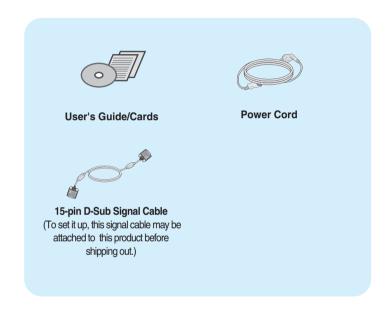
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

### Accessories

## !!! Thank for selecting LGE products !!!

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



#### 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.

## Connecting the stand

1. Place the monitor with its front facing downward on a soft cloth.



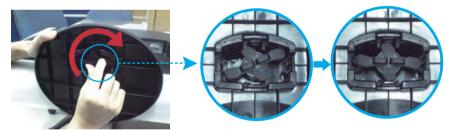
2. Assemble the Stand Body into the product in the correct direction as shown in the picture. Make sure you push it until you hear it "click".



**3.** Assemble the Stand Base(Front, Rear) into the Stand Body in the correct direction.



4. Tie down the base lock to perpendicularity direction.



5. Once assembled take the monitor up carefully and face the front side.

#### Important

- This illustration depicts the general model of connection. Your monitor may differ from the items shown in the picture.
- Do not carry the product upside down holding only the stand base. The product may fall and get damaged or injure your foot.

## Disassembling the stand

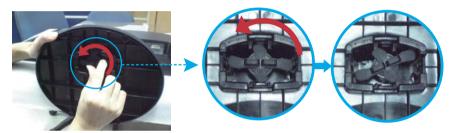
1. Put a cushion or soft cloth on aflat surface.



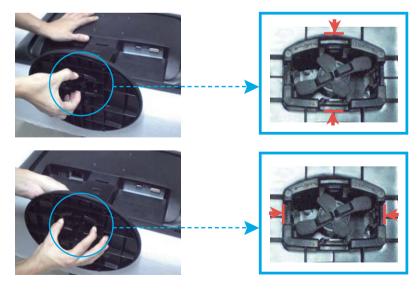
2. Place the monitor face Down on the cushion or soft cloth.



3. Change your lock on the product as it follows and turn it in the arrow direction.



If you can't release the stand base even the locking knob is at a release position, Please push the indicated knob down and retry it.



4. Pull out the Stand to remove.



 ${\bf 5.}\,$  Pushing the PUSH button, Take the stand body from hinge body.

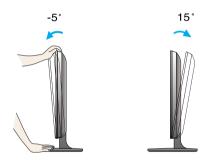


Warning: You can hurt your finger.  Before setting up the monitor, ensure that the power to the monitor, the computer system, and other attached devices is turned off.

## Positioning your display

#### -After installation, adjust the angle as shown below.

- 1. Adjust the position of the panel in various ways for maximum comfort.
  - Tilt Range : -5°~15°



- Do not touch or press the screen when adjusting the angle of the monitor.
  - When adjusting the angle of the screen, do not put your finger(s) in between the head of the monitor and the stand body. You can hurt your finger(s).



#### ERGONOMIC

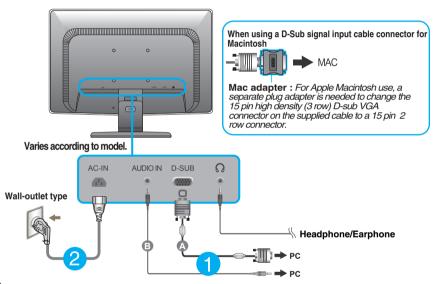
It is recommended that in order to maintain an ergonomic and comfortable viewing position, the forward tilt angle of the monitor should not exceed 5 degrees.

## 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.
  - Connect D-sub(Analog signal) Cable
  - B Connect Audio 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.



**3.** Press the power button on the front panel to turn the power on. When monitor power is turned on, the 'Self Image Setting Function' is executed automatically.

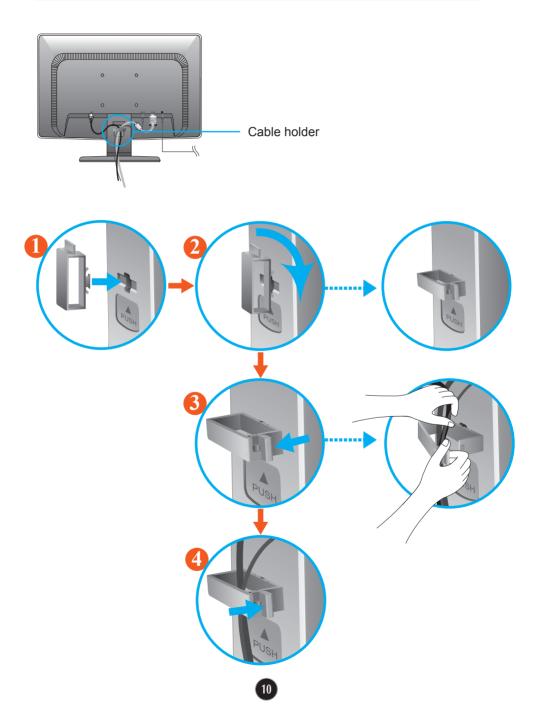


#### NOTE

**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.

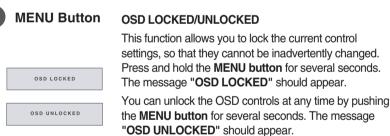
**AUTO' Function?** When you encounter problems such as blurry screen, blurred letters, screen flicker or tilted screen while using the device or after changing screen resolution, press the AUTO function button to improve resolution.

Using the cable holder (This feature is not available in all models.)



## **Front Panel Controls**

MONITOR SETUP							
MENU	MODE	AUTO	VOLUME	EXIT			
		•	•	•			
Ģ	Q	Ģ	Ģ	Ģ			



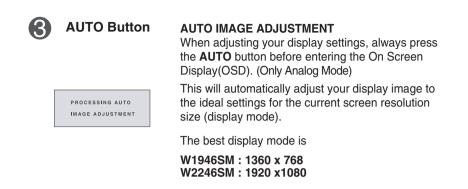


MODE Button

Use this button to enter **F-ENGINE**, **ORIGINAL RATIO** menus.

For more information, refer to page 19.







VOLUME Button

To adjust the volume of headphone/Earphone.





Exit the OSD(On Screen Display).



 Power Button &
 Use this button to turn the display on or off.

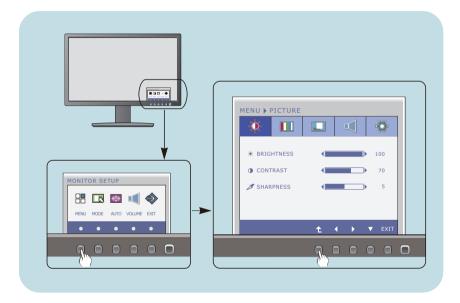
 Power Indicator
 The power indicator stays white if the display is running properly (On Mode). If the display is in Sleep Mode (Energy Saving), the power indicator is blinking white.

## 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.
- 7 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.

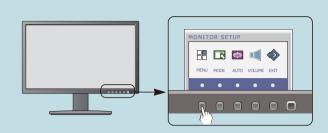
The following table indicates all the On Screen Display control, adjustment, and setting menus.

Main menu	Sub-menu	Description
PICTURE	BRIGHTNESS CONTRAST SHARPNESS	To adjust the brightness, contrast and sharpness of the screen
COLOR	COLOR TEMP (PRESET / USER) GAMMA	To customize the color of the screen
DISPLAY	HORIZONTAL VERTICAL CLOCK PHASE	To adjust the position of the screen To improve the clarity and stability of the screen
VOLUME		To adjust the volume
OTHERS	LANGUAGE POWER INDICATOR WHITE BALANCE FACTORY RESET	To customize the screen status for a user's operating environment
F-ENGINE	NORMAL MOVIE INTERNET DEMO	To select or customize desired image settings
ORIGINAL RATIO	WIDE ORIGINAL	To adjust the image size

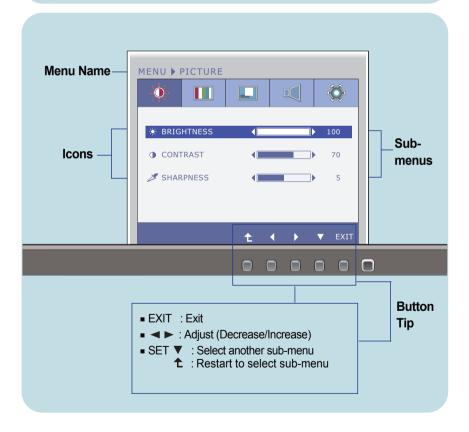
#### NOTE

■ The order of icons may differ depending on the model (14~21).

■ ■ 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.



Press the **MENU** Button, then the main menu of the OSD appears.



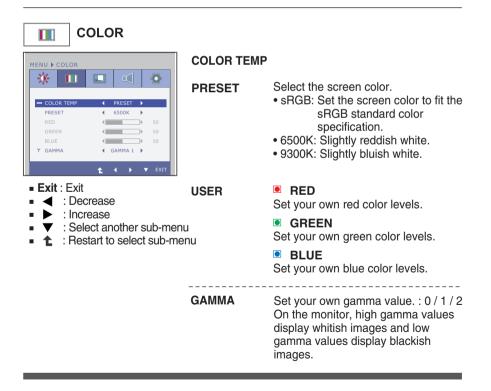
#### NOTE

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

Main menu	Sub menu	Description
PICTURE		
MENU > PICTURE	BRIGHTNESS	To adjust the brightness of the screen.
	CONTRAST	To adjust the contrast of the screen.
BRIGHTNESS     DO     CONTRAST     TO	SHARPNESS	To adjust the clearness of the screen.
SHARPNESS		
	SHARPNESS	To adjust the clearness of the screen.

- Exit : Exit
- I decrease
- Increase
- Select another sub-menu
- t : Restart to select sub-menu

🕇 📢 🕨 EXIT



Main menu	Sub menu	Description
DISPLAY		
MENU 🕨 DISPLAY	HORIZONTAL	To move image left and right.
Image: Constant state         Image: Constant state	VERTICAL	To move image up and down.
PHASE     1024X768 60Hz	CLOCK	To minimize any vertical bars or stripes visible on the screen
t ↔ ▼ EXIT		background. The horizontal screen size will also
<b>Exit</b> : Exit		change.
<ul> <li>Iccrease</li> <li>Increase</li> <li>Select another sub-men</li> <li>Restart to select sub-men</li> </ul>		To adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen the image of characters.





To adjust the volume of headphone/Earphone.

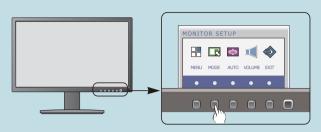
- Exit : Exit
- I decrease
- Increase : Increase
- INUTE : MUTE
- Restart to select sub-menu

Main menu	Sub menu	Description
<b>OTHERS</b>		
MENU ) OTHERS	LANGUAGE	To choose the language in which the control names are displayed.
ANGUAGE POWER INDICATOR ON > WHITE BALANCE NO > FACTORY RESET NO > Exit - Exit	POWER INDICATOR	Use this function to set the power indicator on the front side of the monitor to <b>ON</b> or <b>OFF</b> . If you set <b>OFF</b> , it will go off. If you set <b>ON</b> at any time, the power indicator will automatically be turned on.
<ul> <li>Image: Decrease</li> <li>Increase</li> <li>Select another sub-me</li> <li>Restart to select sub-me</li> </ul>		If the output of the video card is different 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.
	FACTORY RESET	Restore all factory default settings except "LANGUAGE." Press the ◀, ▶ buttons to reset immediately.

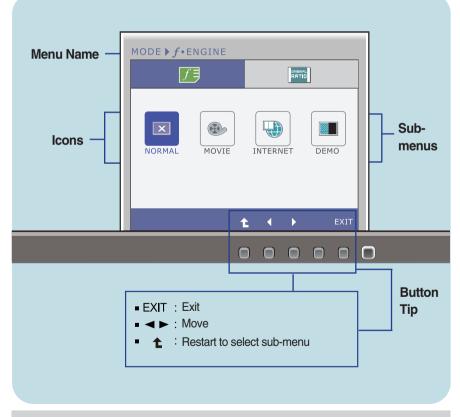
#### NOTE

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.

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.



Press the MODE Button, then the main menu of the OSD appears.



#### NOTE

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

Main menu	Sub men	u Description
f•ENGINE		
MODE <b>&gt; f</b> • ENGINE	NORMAL	Select this when you want to use the product in the most general using environment.
NORMAL MOVIE INTERNET DEMO		



#### MOVIE

Select this when you are watching a video or movie.



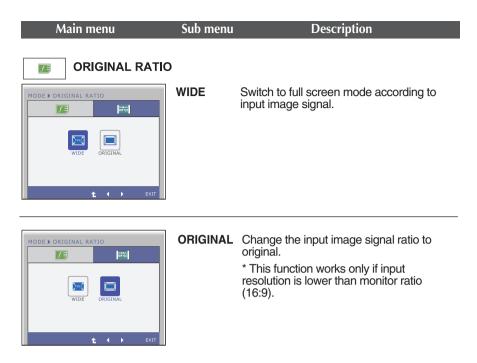
**INTERNET** Select this when you are working on the document (Word etc.)



This is used for advertising in the store. The screen will be divided to show the standard mode on the left and video mode on the right so that the consumers can check the difference after applying the video mode.

- Exit : Exit
- ◀ , ► : Move
- Select another sub-menu





- Exit : Exit
- **◀** , **▶** : Move
- Select another sub-menu

### Check the following before calling for service.

No image appears	
Is the power cord of the display connected?	<ul> <li>Check and see if the power cord is connected properly to the power outlet.</li> </ul>
Is the power indicator light on?	Press the Power button.
Is the power indicator flickering?	<ul> <li>If the display is in power saving mode, try moving the mouse or pressing any key on the keyboard to bring up the screen.</li> <li>Try to turn on the PC.</li> </ul>
Do you see an "OUT OF RANGE" message on the screen?	• 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.
Do you see a "CHECK SIGNAL CABLE" message on the screen?	<ul> <li>This message appears when the signal cable between your PC and your display is not connected. Check the signal cable and try again.</li> </ul>

Do you see a "OSD LOCKED" message on the screen?				
Do you see "OSD LOCKED" when you push MENU button?	• 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 <b>MENU</b> button for several seconds: the message " <b>OSD UNLOCKED</b> " will appear.			

Display image is incorrect			
<ul> <li>Display Position is incorrect.</li> </ul>	<ul> <li>Press the AUTO button to automatically adjust your display image to the ideal setting.</li> <li>If the results are unsatisfactory, adjust the image position using the H position and V position icon in the on screen display.</li> </ul>		
<ul> <li>On the screen background, vertical bars or stripes are visible.</li> </ul>	<ul> <li>Press the AUTO button to automatically adjust your display image to the ideal setting.</li> <li>If the results are unsatisfactory, decrease the vertical bars or stripes using the CLOCK icon in the on screen display.</li> </ul>		
<ul> <li>Any horizontal noise appearing in any image or characters are not clearly portrayed.</li> </ul>	<ul> <li>Press the AUTO button to automatically adjust your display image to the ideal setting. If the results are unsatisfactory, decrease the horizontal bars using the PHASE icon in the on screen display.</li> <li>Check Control Panel&gt; Display&gt; 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).</li> </ul>		

#### **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> <li>The screen color is mono or abnormal.</li> </ul>	<ul> <li>Check if the signal cable is properly connected and use a screwdriver to fasten if necessary.</li> <li>Make sure the video card is properly inserted in the slot.</li> <li>Set the color setting higher than 24 bits (true color) at Control Panel - Settings.</li> </ul>		
The screen blinks.	<ul> <li>Check if the screen is set to interlace mode and if yes, change it to the recommend resolution.</li> </ul>		

Do you see an "Unrecognized monitor, Plug&Play (VESA DDC) monitor found" message?			
Have you installed the display driver?	<ul> <li>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.lge.com.</li> <li>Make sure to check if the video card supports Plug&amp;Play function.</li> </ul>		

Display	18.5 inches (47.0 cm) Flat Panel Active matrix-TFT LCD Anti-Glare coating Visible diagonal size : 47.0 cm 0.300 x 0.300 mm (Pixel pitch)		
Sync Input	Horizontal Freq. Vertical Freq. Input Form	30 - 61 kHz (Automatic) 56 - 75 Hz (Automatic) Separate Sync. SOG (Sync On Green)	
Video Input	Signal Input Input Form	15 pin D-Sub Connector RGB Analog (0.7 Vp-p/ 75 ohm)	
Resolution	Max Recommend	VESA 1360 x 768 @60 Hz VESA 1360 x 768 @60 Hz	
Plug&Play	DDC 2AB		
Power Consumption	On Mode Sleep Mode Off Mode	: 25 W(Typ.) ≤ 0.5 W ≤ 0.5 W	
Dimensions & Weight	With Stand         Without Stand           Width         42.26 cm / 16.63 inches         Width         42.26 cm / 16.63 inches           Height         35.62 cm / 14.02 inches         Height         26.67 cm / 10.50 inches           Depth         16.99 cm / 6.68 inches         Depth         6.04 cm / 2.37 inches		
	Weight(excl. packing) 5.4 kg (12 lbs)		
Range	Tilt : -5°~15°		
Power Input	AC 100-240V~ 50/60Hz 0.8A		
Environment al Conditions	Operating ConditionsTemperature10°C to 35 °CHumidity10 % to 80 % non-CondensingStorage ConditionsTemperature-20°C to 60 °CHumidity5 % to 90 % non-Condensing		
Stand Base	Attached ( ), Deta	ached ( O )	
Power cord	Wall-outlet type		

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#### NOTE

Information in this document is subject to change without notice.

Display	21.5 inches (54.6 cm) Flat Panel Active matrix-TFT LCD Anti-Glare coating Visible diagonal size : 54.6 cm 0.248 x 0.248 mm (Pixel pitch)		
Sync Input	Horizontal Freq. Vertical Freq. Input Form	30 - 83 kHz (Automatic) 56 - 75 Hz (Automatic) Separate Sync. SOG (Sync On Green)	
Video Input	Signal Input Input Form	15 pin D-Sub Connector RGB Analog (0.7 Vp-p/ 75 ohm)	
Resolution	Max         VESA 1920 x 1080 @ 60 Hz           Recommend         VESA 1920 x 1080 @ 60 Hz		
Plug&Play	DDC 2AB		
Power Consumption	On Mode Sleep Mode Off Mode	: 28 W(Typ.) ≤ 0.5 W ≤ 0.5 W	
Dimensions & Weight	With StandWithout StandWidth 50.92 cm / 20.04 inchesWidth 50.92 cm / 20.04 inchesHeight 39.69 cm / 15.62 inchesHeight 30.42 cm / 11.97 inchesDepth 21.00 cm / 8.26 inchesDepth 5.98 cm / 2.35 inchesWeight(excl. packing)3.5 kg (7.77 lbs)		
Range	Tilt : -5°~15°		
Power Input	AC 100-240V~ 50/60Hz 1.0A		
Environment al Conditions	Operating ConditionsTemperature10°C to 35 °CHumidity10 % to 80 % non-CondensingStorage ConditionsTemperature-20°C to 60 °CHumidity5 % to 90 % non-Condensing		
Stand Base		5 % to 90 % non-Condensing	
Stand Base Power cord	Humidity	5 % to 90 % non-Condensing	

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#### NOTE

Information in this document is subject to change without notice.

## **Preset Modes (Resolution)**

#### W1946SM

Display	y Modes (Resolution)	Horizontal Freq. (kHz)	Vertical Freq. (Hz)
1 2 3 4 5 6 7 8 *9	720 x 400 640 x 480 640 x 480 800 x 600 800 x 600 832 x 624 1024 x 768 1024 x 768 1360 x 768	31.468 31.469 37.500 37.879 46.875 49.725 48.363 60.123 47.712	70 60 75 60 75 75 60 75 60 75 60

\*Recommend Mode

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Disp	lay 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

## Indicator

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

This monitor satisfies the specifications of the Wall mount plate or the interchange device.

1. Place the monitor with its front facing downward on a soft cloth.



2. Separate the stand by pushing the PUSH button.





Good Position

**Bad Position** 

Warning: You can hurt your finger.

#### 3. Install the Wall mount plate.

Wall mount plate(Separate purchase)

This is stand-type or wall mount type and is connectable with Wall mount plate. Please refer to the installation guide for more details, which is provided when Wall mount plate is purchased.

- Be sure to use screws and a wall mount that meet VESA standards.
- Using screws longer than those recommended might damage the product.
- Using screws that do not meet VESA standards might either damage the product or result in it coming away from the wall.We will not be held responsible for any damage resulting from failure to follow these instructions.

# 

#### <Please use VESA standard as a recommendation.>

Mounting crew: Interface pad thickness: 2.6mm Screw :  $\phi$  4mm x pitch 0.7mm x length 10mm

Kensington Security Slot

Connected to a locking cable that can be purchased separately at most computer stores.

# Digitally yours

