LG
Life's Good

Owner's Manual

IPS LED MONITOR (LED MONITOR*)

* LG LED Monitors are LCD Monitors with LED Backlighting.

Please read the safety information carefully before using the product.

31MU97
31MU97C
31MU97Z

www.lg.com

ENGLISH

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WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. ***Wash hands after handling.***

LICENSE

Each model has different licenses. Visit *www.lg.com* for more information on the license.

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

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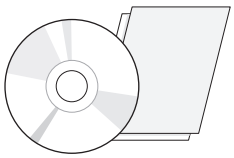
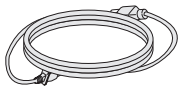
ASSEMBLING AND PREPARING

Product Composition

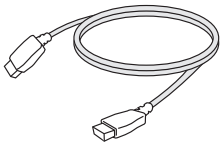
Please check whether all the components are included in the box before using the product. If there are any missing components, contact the retailer where you purchased the product. Note that the product and related components may look different from those shown here.



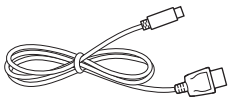
CD (Owner's Manual / Software / Guides) / Cards



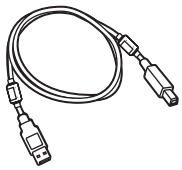
Power cord



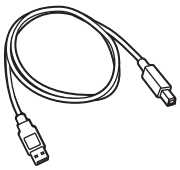
HDMI cable



Mini DisplayPort Cable

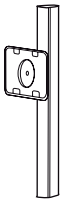


or



A-B Type USB 3.0 Cable

Stand Base



Stand Body

2 Screws (M4 x 10)

Cable Holder

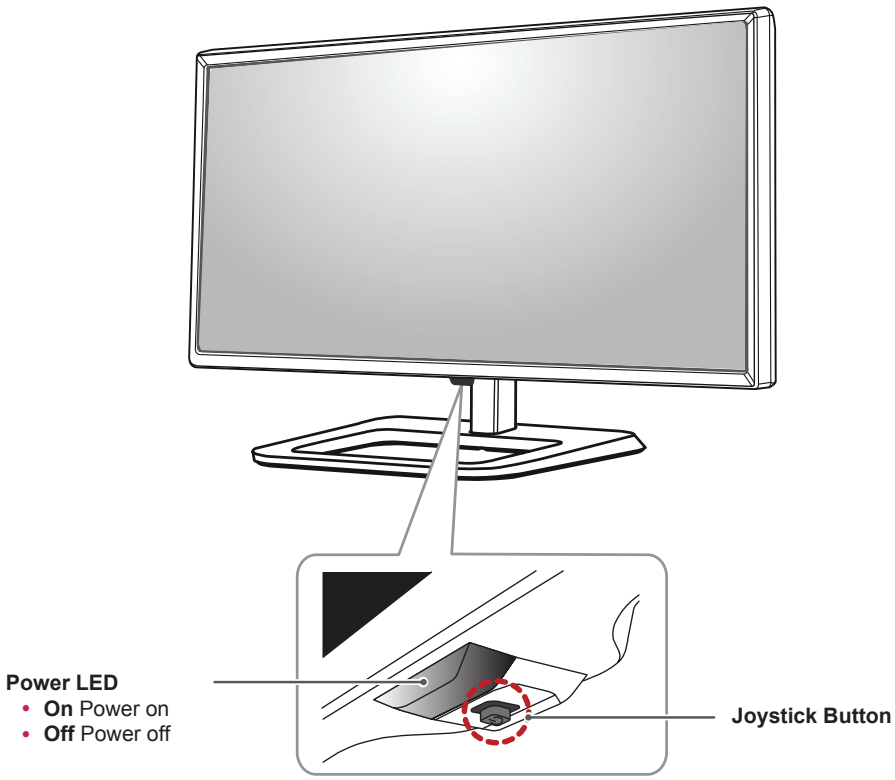
CAUTION

- Always use genuine LG components to ensure safety and product performance.
- The product warranty will not cover damage or injury caused by the use of unauthorized components.
- It is recommend that use the supplied components.
- If you use generic cables not certified by LG, the screen may not display or there may be image noises.

NOTE

- The components may look different from those illustrated here.
- Without prior notice, all product information and specifications contained in this manual are subject to change to improve the performance of the product.
- To purchase optional accessories, visit an electronics store or an online shopping site, or contact the retailer from which you purchased the product.
- The power cord provided may differ depending upon the region.

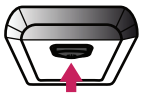
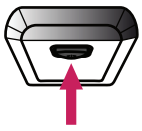
Product and Button Description



How to Use the Joystick Button

You can easily control the functions of the monitor by pressing the joystick button or moving it left/right with your finger.

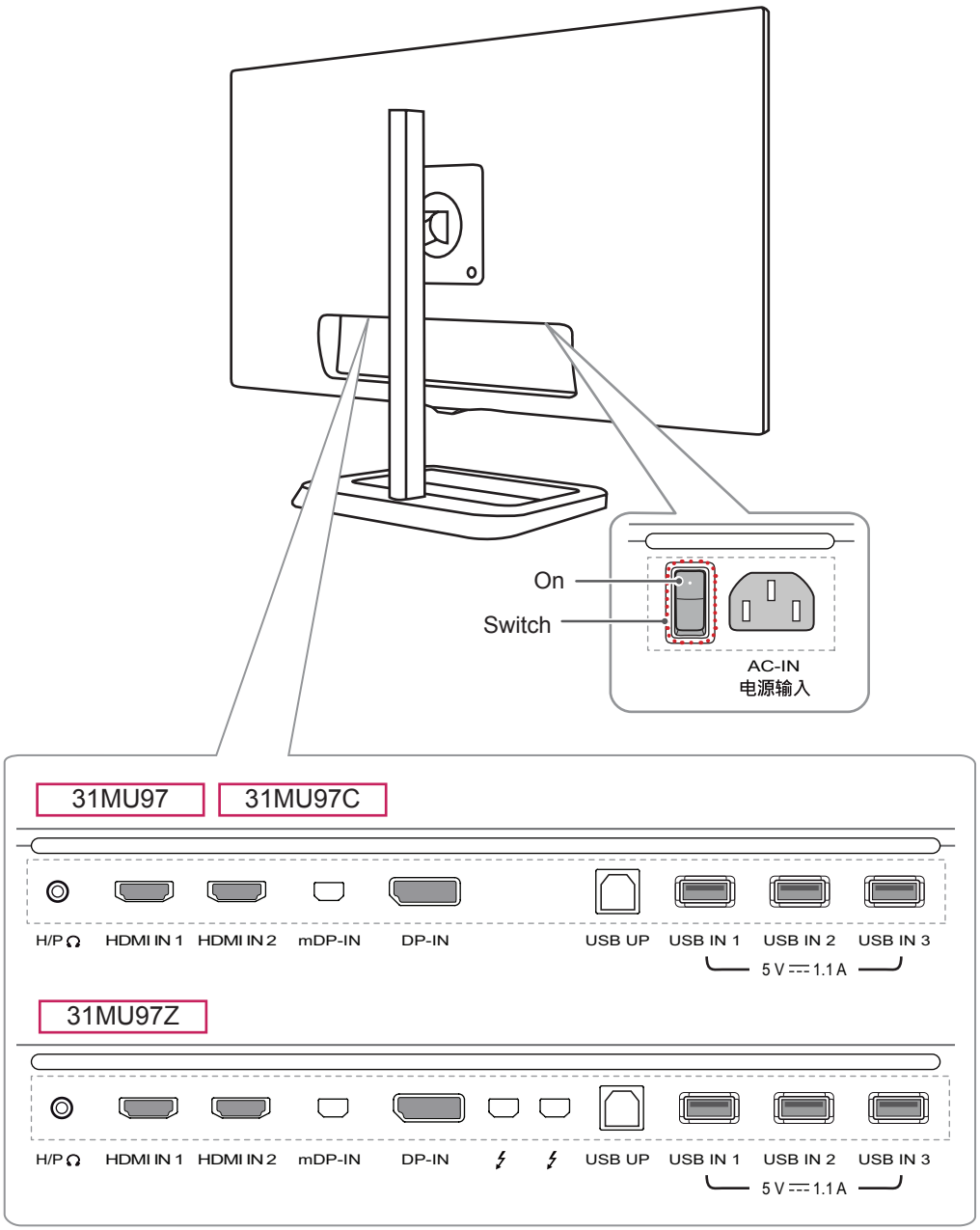
Basic Functions

		**Power on**	Press the joystick button once with your finger to turn on the monitor.
		**Power off**	Press and hold the joystick button once with your finger to turn off the monitor.
	◄/►	**Volume Control**	You can control the volume by moving the joystick button left/right.

NOTE

- The joystick button is located at the bottom of the monitor.
- Before turning on the monitor, please make sure that the switch on the rear side of product is On.

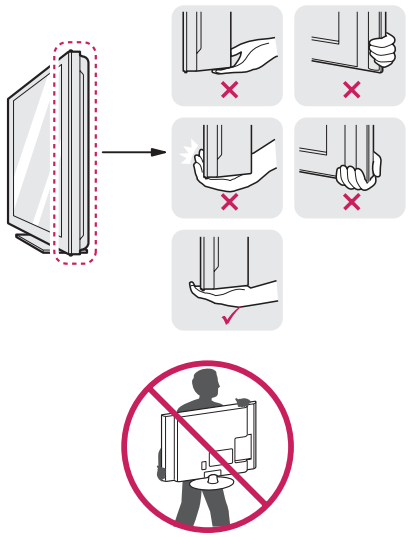
Input Connector



Moving and Lifting the Monitor

When moving or lifting the monitor, follow these instructions to prevent the monitor from being scratched or damaged and to ensure safe transportation, regardless of its shape or size.

- Place the monitor in the original box or packing material before attempting to move it.
- Before moving or lifting the monitor, disconnect the power cord and all other cables.
- Hold the bottom and side of the monitor frame firmly. Do not hold the panel itself.

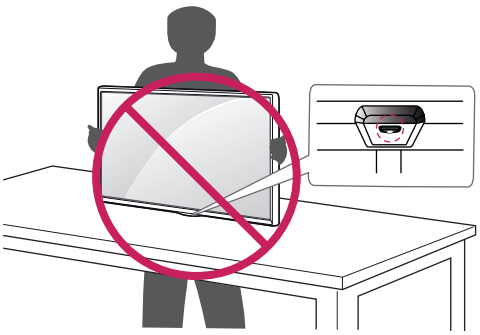


- When holding the monitor, the screen should face toward you to prevent it from being scratched.
- When transporting the monitor, do not expose the monitor to shock or excessive vibration.
- When moving the monitor, keep it upright and never turn the monitor on its side or tilt it sideways.

CAUTION

- Avoid touching the monitor screen as much as possible.
  - This may result in damage to the screen or some of the pixels used to create images.

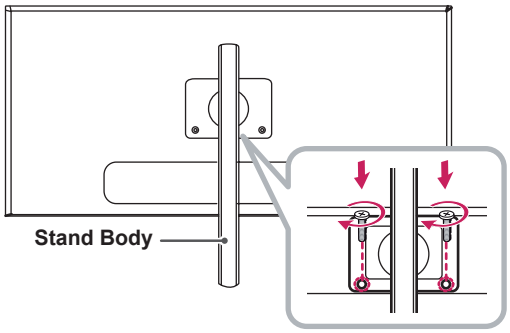
- If you use the monitor panel without the stand base, its joystick button may cause the monitor to become unstable and fall, resulting in damage to the monitor or human injury. In addition, this may cause the joystick button to malfunction.



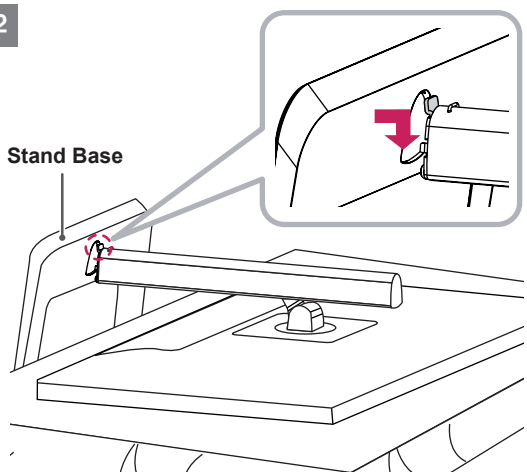
Installing the Monitor

Assembling the Stand

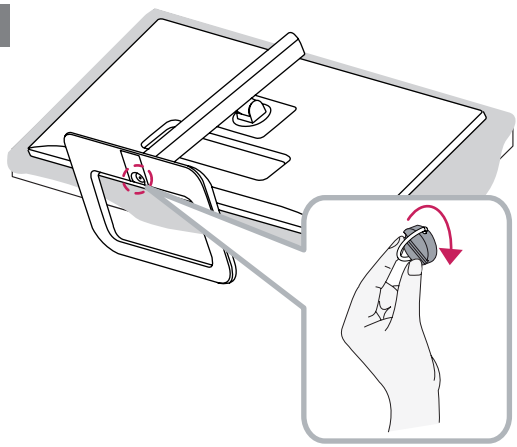
1



2



3



CAUTION

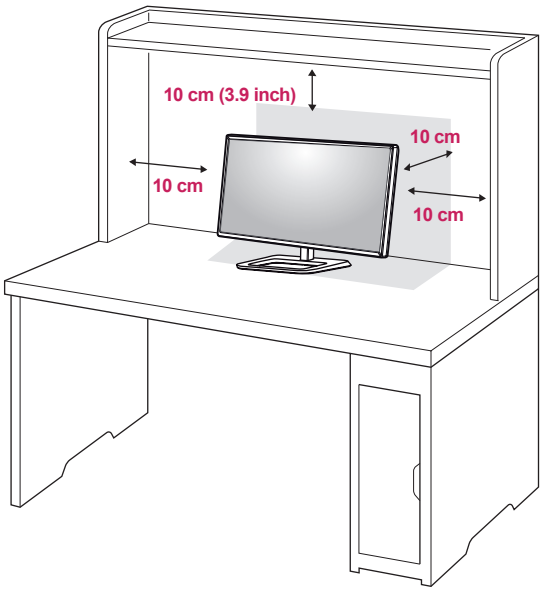
- To protect the screen from scratches, cover the surface with a soft cloth.
- Illustrations in this document represent typical procedures, so they may look different from the actual product.
- Applying excessive force when tightening screws may cause damage to the monitor. Damage caused in this way will not be covered by the product warranty.
- Do not carry the monitor upside down by just holding the base. This may cause the monitor to fall off the stand and could result in personal injury.
- When lifting or moving the monitor, do not touch the monitor screen. The force applied to the monitor screen may cause damage to it.

NOTE

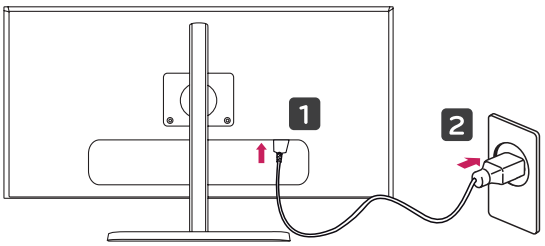
- You can disassemble the stand in the reverse order of the assembly.

Installing on a Table

1 Lift the monitor and place it on the table in an upright position. Place the monitor at least 10 cm (3.9 inch) away from the wall to ensure sufficient ventilation.



2 Connect the power cord to the product before connecting it to the wall outlet.



3 Press the joystick button on the bottom of the monitor to turn on the monitor.

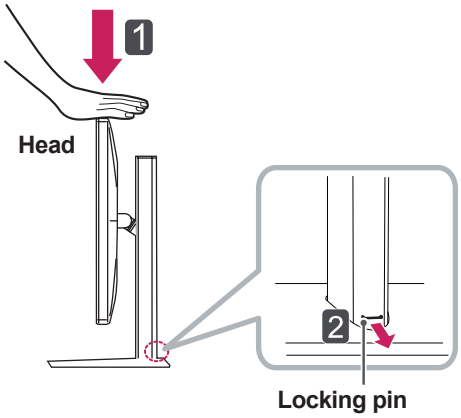
CAUTION

- Unplug the power cord before moving or installing the monitor. There is risk of electric shock.

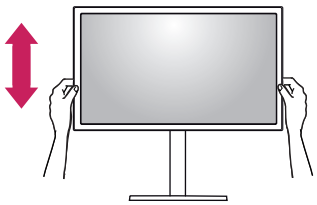
Adjusting the Stand Height

1 Place the monitor mounted on the stand base in an upright position.

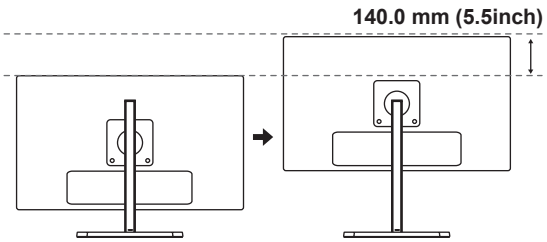
2 Push the head downward and pull out the locking pin.



3 Handle the monitor with both hands for safety.



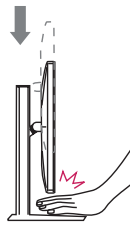
4 The height can be adjusted up to **140.0 mm (5.5 inch)**.



CAUTION

- Once the pin is removed, it is not necessary to re-insert it to adjust the height.

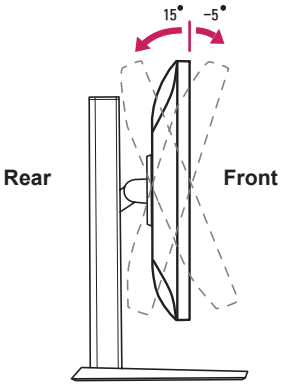
WARNING



- Do not put your fingers or hand between the screen and the base (chassis) when adjusting the screen's height.

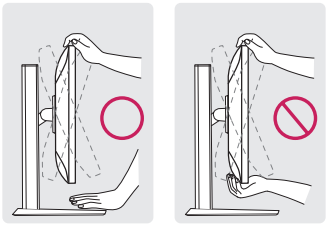
Adjusting the Angle

1. Place the monitor mounted on the stand base in an upright position.
2. Adjust the angle of the screen. The angle of the screen can be adjusted forward or backward from -5° to 15° for a comfortable viewing experience.

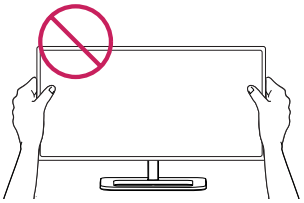


WARNING

- To avoid injury to the fingers when adjusting the screen, do not hold the lower part of the monitor's frame as illustrated below.

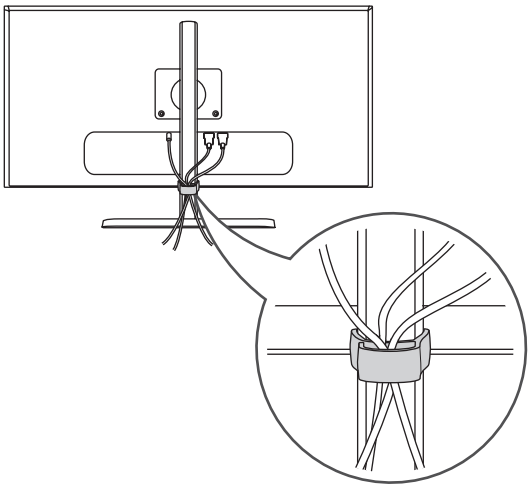


- Be careful not to touch or press the screen area when adjusting the angle of the monitor.



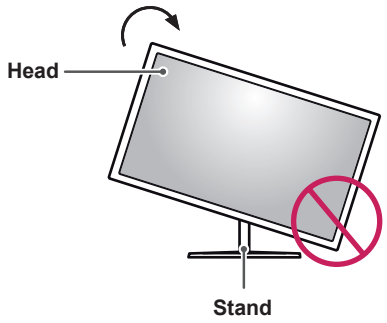
Tidying up Cables

Arrange the cables using the cable holder as shown in the illustration.



Pivot Feature

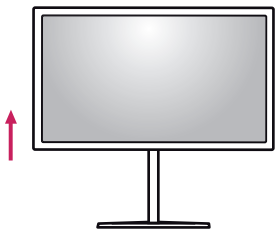
The pivot feature allows the monitor to rotate 90° clockwise.



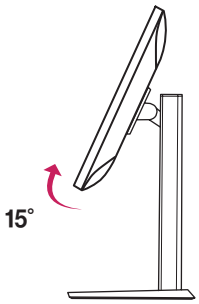
WARNING

- To avoid scratching the stand base, make sure that when rotating the monitor using the pivot feature, the stand does not make contact with the monitor.

1 Raise the monitor to the maximum height.



2 Adjust the angle of the monitor in the direction of the arrow as shown in the figure.



3 Rotate the monitor clockwise as shown in the figure.

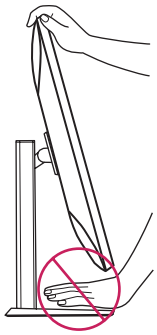
4 Complete the installation by rotating the monitor 90° as shown below.

NOTE

- Auto Pivot feature of the display is not supported.
- The screen can be rotated easily using the screen pivot shortcut key provided with your Windows operating system. Note that some Windows versions and some graphics card drivers may use different settings for the screen pivot key or may not support the pivot key at all.
- Supported Windows versions: Windows 7 and Windows 8.1
- Windows screen pivot shortcut keys
  - 0°: Ctrl + Alt + Up arrow key (↑)
  - 90°: Ctrl + Alt + Left arrow key (←)
  - 180°: Ctrl + Alt + Down arrow key (↓)
  - 270°: Ctrl + Alt + Right arrow key (→)

WARNING

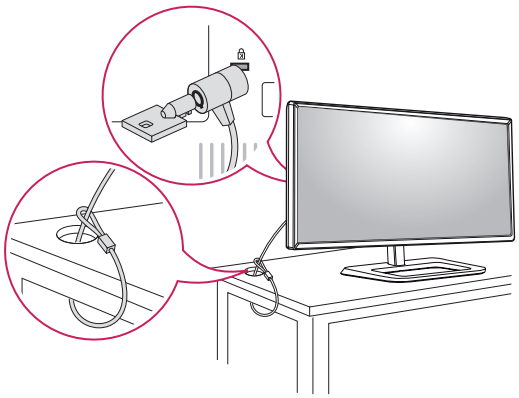
- Take care when rotating the monitor if the cable is connected.
- To avoid injury when rotating the display, do not place your fingers between the display and the stand base.



Using the Kensington Lock

The Kensington security system connector is located at the back of the Monitor set.
For more information on installation and usage, refer to the Kensington lock owner's manual or visit the website at *http://www.kensington.com*.

Connect the monitor to a table using the Kensington security system cable.



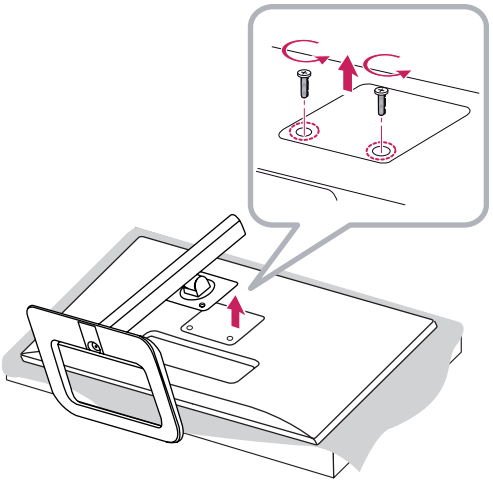
NOTE

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

Detaching the Stand Body

1 Place the monitor's screen face down. To protect the screen from scratches, cover the surface with a soft cloth.

2 Using a screwdriver, remove the 2 screws and detach the stand from the monitor.

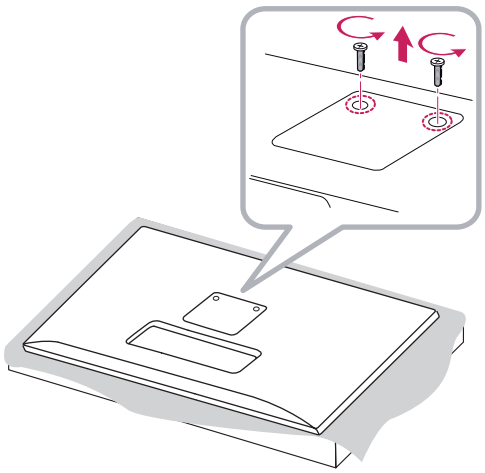


Installing the Wall Mount Plate

This monitor meets the specifications for the wall mount plate or other compatible devices.

1 Place the screen face down. To protect the screen from scratches, cover the surface with a soft cloth.

2 Using a screwdriver, remove the 2 screws and detach the stand from the monitor.



3 Place the wall mount plate onto the monitor and align it with the screw holes.

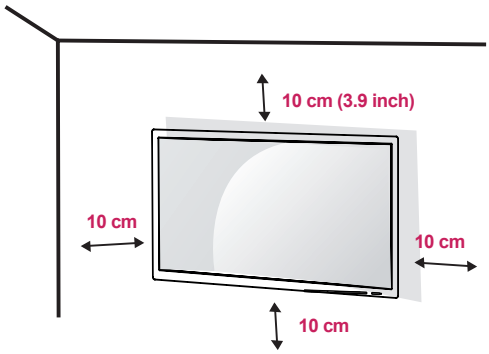
4 Tighten the four screws to fix the plate to the monitor using a screwdriver.

NOTE

- The wall mount plate is sold separately.
- For more information on installation, refer to the wall mount plate's installation guide.
- Be careful not to apply too much force while mounting the wall mount plate as it may cause damage to the screen.

Installing on the Wall

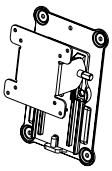
Install the monitor at least 10 cm (3.9 inch) away from the wall and leave about 10 cm (3.9 inch) of space at each side of the monitor to ensure sufficient ventilation. Detailed installation instructions can be obtained from your local retail store. Alternatively, please refer to the manual for how to install and set up a tilting wall mounting bracket.



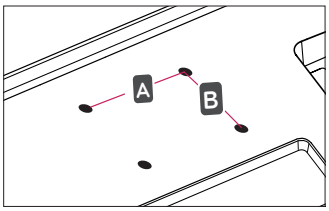
To install the monitor to a wall, attach a wall mounting bracket (optional) to the back of the monitor. Make sure that the wall mounting bracket is securely fixed to the monitor and to the wall.

1 If you use screws longer than the standard length, it may damage the inside of the product.

2 A non-VESA standard screw may damage the product and cause the monitor to fall. LG Electronics is not liable for any accidents relating to the use of non-standard screws.

Wall Mount (A x B)	100 x 100
Stand Screw	M4 x L10
Required Screws	4
Wall Mount Plate (Optional)	RW120 

- Wall Mount (A x B)

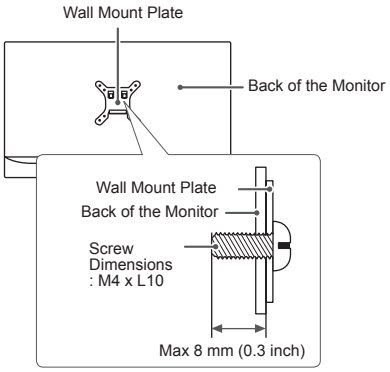


NOTE

- Use the screws specified by VESA standards.
- The wall mount kit includes the installation guide and all necessary parts.
- The wall mounting bracket is optional. You can obtain optional accessories from your local dealer.
- The length of the screw may differ for each wall mounting bracket. Be sure to use the proper length.
- For more information, please refer to the user manual for the wall mounting bracket.

CAUTION

- Unplug the power cord before moving or installing the monitor to avoid electric shock.
- Installing the monitor on the ceiling or on a slanted wall may result in the monitor falling off, which could lead to injury. Use an authorized LG wall mount and contact the local dealer or qualified personnel.
- Applying excessive force when tightening screws may cause damage to the monitor. Damage caused in this way will not be covered by the product warranty.
- Use the wall mounting bracket and screws that conform to VESA standards. Damage caused by the use or misuse of inappropriate components will not be covered by the product warranty.
- When measured from the back of the monitor, the length of each installed screw must be 8 mm (0.3 inch) or less.



USING THE MONITOR

- The following instructions are based on the 31MU97Z model. Illustrations in this manual may differ from the actual product.

Press the joystick button, go to Menu → Easy control → Input, and then select the input option.

CAUTION

- Do not press the screen for a prolonged time. This may cause image distortion.
- Do not display a still image on the screen for a prolonged time. This may cause image retention. Use a screensaver if possible.

NOTE

- When connecting the power cord to the outlet, use a grounded (3-hole) power strip or a grounded power outlet.
- The monitor may flicker when turned on in an area where the temperature is low. This is normal.
- Sometimes red, green, or blue spots may appear on the screen. This is normal.

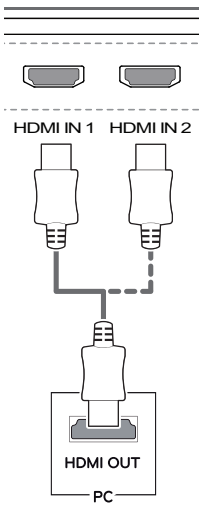
Connecting to a PC

- This monitor supports the *Plug and Play feature.

* Plug and Play: A feature that allows you to add a device to your computer without having to reconfigure anything or install any manual drivers.

HDMI Connection

Transmits digital video and audio signals from your PC to the monitor. Connect your PC to the monitor using the HDMI cable as shown in the illustration below.



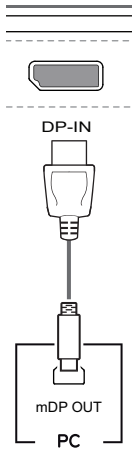
CAUTION

- Make sure to use the supplied HDMI cable of the product. Otherwise, this may cause the device to malfunction.
- Connecting your PC to the monitor using the HDMI cable may cause device compatibility issues.
- Using a DVI to HDMI / DP (DisplayPort) to HDMI cable may cause compatibility issues.
- Use a certified cable with the HDMI logo attached. If you do not use a certified HDMI cable, the screen may not display or a connection error may occur.
- Recommended HDMI cable types
  - High-Speed HDMI®/™ Cable
  - High-Speed HDMI®/™ Cable with Ethernet

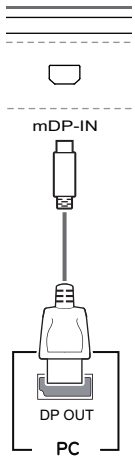
(Mini) DisplayPort Connection

Transmits digital video and audio signals from your PC to the monitor. Connect the monitor to your PC using the displayport cable as shown in the illustration below:

DisplayPort



Mini DisplayPort



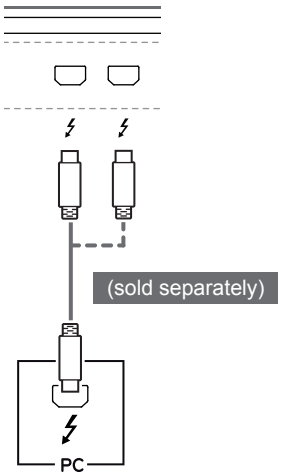
NOTE

- There may be no video or audio output depending on the DP (DisplayPort) version of the PC.
- Make sure to use the supplied Mini DisplayPort cable of the product. Otherwise, this may cause the device to malfunction.
- If you use generic cables not certified by LG, the screen may not display or there may be image noises.

Thunderbolt(⚡) Connection

You can connect your high-resolution display or high-performance data device to the monitor via a Thunderbolt port. Connect your external device to the monitor using the Thunderbolt cable as illustrated below.

31MU97Z



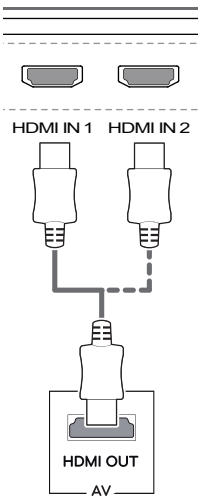
NOTE

- The maximum data transmission rate of each port is 20 Gb/s.
- Make sure to use a Thunderbolt (⚡) certified cable. Otherwise, this may cause the device to malfunction.
- Thunderbolt (⚡) is supported in such environments as Windows 7, Windows 8.1, and Mac product.
- In accordance with Mac products may not support the recommended resolution or the some features. For more information, refer to the support information card of the graphic card which is provided separately.
- The ability to set up dual monitors using the Thunderbolt (⚡) and daisy-chaining technology depends on the performance of your video card.

Connecting AV Devices

HDMI Connection

HDMI transmits digital video and audio signals from your AV device to the monitor. Connect your AV device to the monitor using the HDMI cable as shown in the illustration below.



NOTE

- Make sure to use the supplied HDMI cable of the product. Otherwise, this may cause the device to malfunction.
- Using a DVI to HDMI / DP (DisplayPort) to HDMI cable may cause compatibility issues.
- Use a certified cable with the HDMI logo attached. If you do not use a certified HDMI cable, the screen may not display or a connection error may occur.
- Recommended HDMI cable types
  - High-Speed HDMI®/™ Cable
  - High-Speed HDMI®/™ Cable with Ethernet

Connecting Peripherals

USB Cable connection - PC

The USB port on the product functions as a USB hub.

NOTE

- Make sure to install the most recent Windows OS service pack before using the product.
- Peripheral devices are sold separately.
- A keyboard, mouse, or USB device can be connected to the USB port.

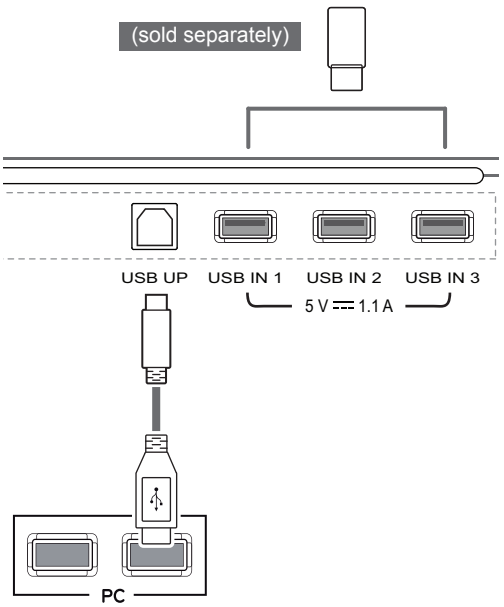
CAUTION

Cautions When Using a USB Device

- A USB device with an automatic recognition program installed, or that uses its own driver, may not be recognized.
- Some USB devices may not be supported or may not work properly.
- It is recommended to use a USB hub or hard disk drive with power supplied. (If the power supply is not adequate, the USB device may not be recognized properly.)

HDMI/ (Mini) DisplayPort connection

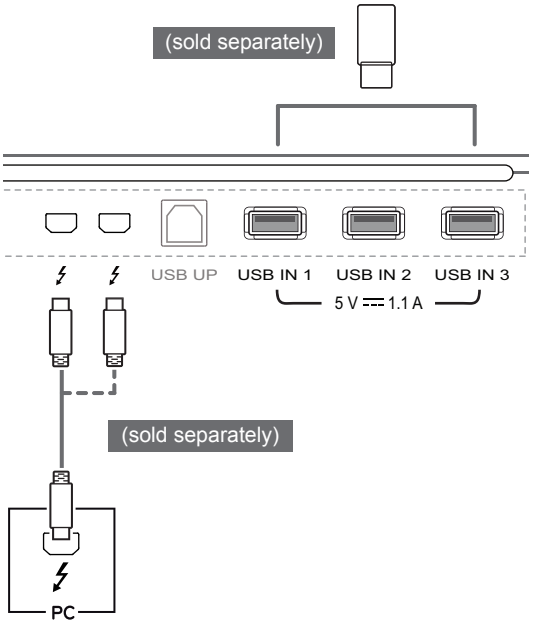
To use USB 3.0, connect the A-B type USB 3.0 cable of the product to the PC.
Peripheral devices connected to the USB IN port can be controlled from the PC.



Thunderbolt (⚡) connection

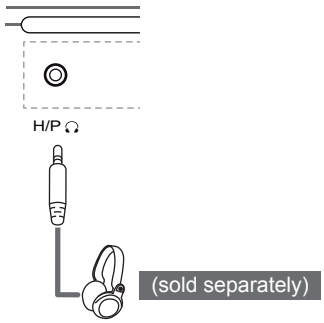
Peripheral devices connected to the USB IN port can be controlled from the PC.
If you change the input on the menu while a device is in connection via the Thunderbolt port, then the device in connection via the USB port may not work properly.

31MU97Z



Connecting Headphones

Connect peripherals to the monitor via the headphones port. Connect as illustrated.



NOTE

- Peripheral devices are sold separately.
- If you use angled earphones, it may cause a problem with connecting another external device to the monitor. Therefore, it is recommended to use straight earphones.

Angled **Straight**

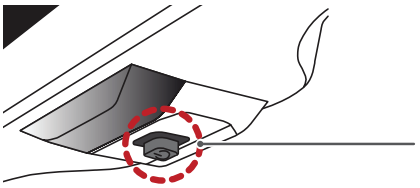
- Depending on the audio settings of the PC and external device, headphones and speaker functions may be limited.

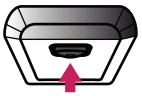
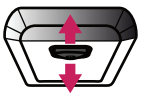
ENGLISH

USER SETTINGS

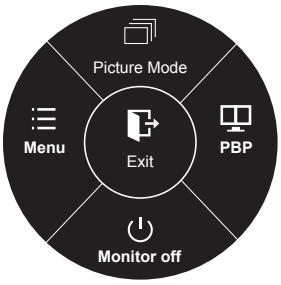
Activating the Main Menu

1 Press the joystick button on the bottom of the monitor.
2 Move the joystick up/down (▲/▼) and left/right(◄/►) to set the options.
3 Press the joystick button once more to exit the main menu.



Button	Menu Status		Description
	**Main menu disabled**		Enables the main menu.
	Main menu enabled		Exits the main menu. (Holding down the button to turn off the monitor. You can turn off the monitor this way at any time, including when the OSD is on.)
	◄	**Main menu disabled**	Adjusts the monitor volume level.
		Main menu enabled	Enters the menu features.
	►	**Main menu disabled**	Adjusts the monitor volume level.
		Main menu enabled	Enters the PBP feature.
	▲	**Main menu disabled**	Enables the main menu.
		Main menu enabled	Enters the Picture Mode feature.
	▼	**Main menu disabled**	Enables the main menu.
		Main menu enabled	Turns off the monitor.

Main Menu Features



◉ Long press: Monitor off

Main Menu	Description
Menu	Configures the screen settings.
Picture Mode	Optimizes the screen for picture mode.
PBP	Displays the screens of two input modes on one monitor.
Monitor off	Turns off the monitor.
Exit	Exits the main menu.

User Settings

Menu Settings

1 To view the **OSD menu**, press the **joystick button** at the bottom of the monitor and then enter the **Menu**.
2 Configure the options by moving the joystick up/down/left/right.
3 To return to the upper menu or set other menu items, move the joystick to ◄ or pressing (◉ / OK) it.
4 If you want to exit the OSD menu, move the joystick to ◄ until you exit.

- When you enter the menu, instructions on how to use the button will appear in the bottom right corner of the screen.

Easy control

Function

PBP

Screen

Settings

Reset

Each option is described below.

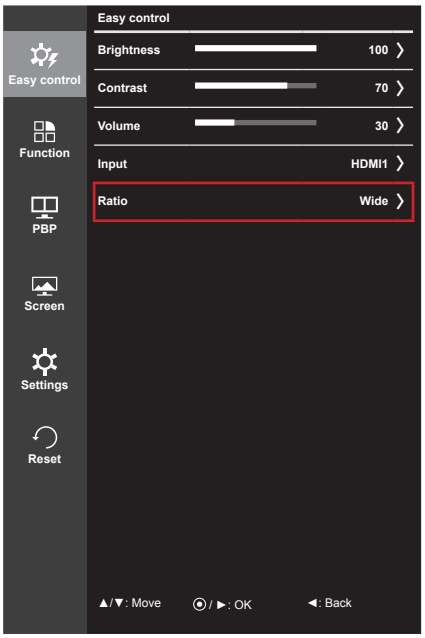
Menu		Description
Easy control	**Brightness**	Adjusts the color contrast and brightness of the screen.
	Contrast	
	Volume	Adjusts the volume level. **NOTE** • You can adjust Mute/ Unmute by moving the joystick button to ▼ in the Volume menu.
	Input	Selects the input mode.
	Ratio	Adjusts the aspect ratio of the screen.
Function		Adjusts MaxxAudio, Picture Mode, Dual Color Space, and SUPER ENERGY SAVING.
PBP	**PBP**	Displays the screens of two input modes on one monitor.
Screen	**Picture**	Adjusts the Sharpness, Black level, and Response Time of the screen.
	Color	Adjusts Gamma, Color Temperature, Red, Green, Blue, and Six Color.
Settings		Adjusts Language, Power LED, Automatic Standby, DisplayPort 1.2, DisplayPort EQ, and OSD Lock.
Reset		Restores the default settings.
◄	**Exit**	Exits the OSD menu.

CAUTION

- Your monitor's OSD (On Screen Display) may differ slightly from that shown in this manual.

Ratio

1 To view the **OSD menu**, press the **joystick button** at the bottom of the monitor and then enter the **Menu**.
2 Go to **Easy control > Ratio** by moving the joystick.
3 Configure the options following the instructions that appear in the bottom right corner.
4 To return to the upper menu or set other menu items, move the joystick to ◄ or pressing (◉ / OK) it.
5 If you want to exit the OSD menu, move the joystick to ◄ until you exit.



Each option is described below.

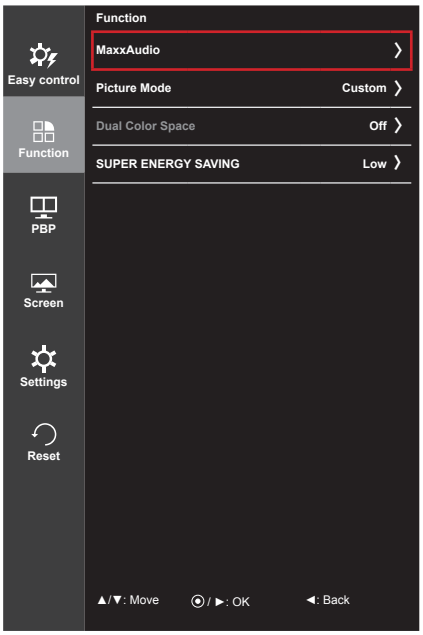
Menu > Easy control > Ratio	Description
Wide	Displays the video in widescreen, regardless of the video signal input.
Original	Displays video according to the aspect ratio of the video signal input.
1:1	The aspect ratio is not adjusted from the original.

NOTE

- The display may look the same for Wide, Original, and 1:1 options at the recommended resolution.
  - Recommended resolution for mDP (Mini DisplayPort), DP (DisplayPort), and Thunderbolt(⚡) 4096 x 2160
  - Recommended resolution for HDMI 3840 x 2160
- The ratio is disabled in the interlaced signal.

Function

1 To view the **OSD menu**, press the **joystick button** at the bottom of the monitor and then enter the **Menu**.
2 Go to **Function** by moving the joystick.
3 Configure the options following the instructions that appear in the bottom right corner.
4 To return to the upper menu or set other menu items, move the joystick to ◄ or pressing (◉ / OK) it.
5 If you want to exit the OSD menu, move the joystick to ◄ until you exit.



Each option is described below.

Menu > Function	Description		
MaxxAudio	**MaxxAudio**	**On**	MaxxAudio® by Waves, recipient of a Technical GRAMMY Award® is a suite of studio-quality sound tools for a superior listening experience.
		Off	Disables the MaxxAudio function.
	MaxxAudio Settings	The user can set the sound quality manually.	
		MaxxBass	Bass Enhancement.
		MaxxTreble	Treble Enhancement.
		MaxxDialog	Dialog Enhancement.
		Maxx3D	Enhances the three dimensional effect of the sound.
		Reset	Returns the sound quality to the default settings.
	Midnight Mode	Lets you enjoy rich and full sound at a low volume.	

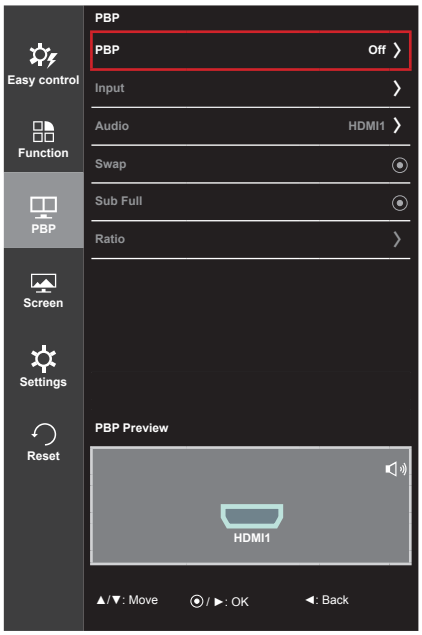
Menu > Function	Description	
Picture Mode	**Custom**	Allows the user to adjust each element. The color mode of the main menu can be adjusted.
	sRGB	A standard RGB color space for the monitor and printer.
	AdobeRGB	A much larger color space than sRGB. This option is suitable for printing pictures.
	DCM Sim.	Optimizes the screen for viewing X-ray images. You can brighten the screen in the OSD menu. **NOTE** • This product has been approved as an IT device and not as a medical device. It is intended for office use only. (It may be used for education and reference purposes but not for medical diagnosis.)
	DCI-P3 Sim.	Suitable for watching digital videos.
	Reader	Optimizes the screen for viewing documents.You can brighten the screen in the OSD menu.
	Calibration 1	Adjusts to the last calibrated screen.
	Calibration 2	Adjusts to the previously calibrated screen.
Dual Color Space	**Off**	Disables the Dual Color Space function.
	sRGB	Sets the sRGB Picture Mode on the left of the screen.
	AdobeRGB	Sets the Adobe Picture Mode on the left of the screen.
	DCI-P3 Sim.	Sets the DCI-P3 Sim. Picture Mode on the left of the screen.
	Calibration 1	Sets the Calibration 1 Picture Mode on the left of the screen.
	Calibration 2	Sets the Calibration 2 Picture Mode on the left of the screen.
SUPER ENERGY SAVING	Conserve energy by using luminance compensation algorithm	
	High	Saves energy using the high-efficiency SUPER ENERGY SAVING feature.
	Low	Saves energy using the low-efficiency SUPER ENERGY SAVING feature.
	Off	Disables the SUPER ENERGY SAVING feature.

NOTE

- Saving Data depends on the Panel. These values vary by panel and vendor. If option of SUPER ENERGY SAVING is High or Low, monitor luminance become higher or lower depend upon source.

PBP

1 To view the **OSD menu**, press the **joystick button** at the bottom of the monitor and then enter the **Menu**.
2 Go to **PBP** by moving the joystick.
3 Configure the options following the instructions that appear in the bottom right corner.
4 To return to the upper menu or set other menu items, move the joystick to ◄ or pressing (◉ / OK) it.
5 If you want to exit the OSD menu, move the joystick to ◄ until you exit.



Each option is described below.

Menu > PBP	Description					
PBP	Displays the screens of two input modes on one monitor.					
	PBP Connection		**Sub Screen (Right)**			
			HDMI 1	**HDMI 2**	**(Mini) DisplayPort**	**Thunderbolt(⚡) (31MU97Z model only)**
	Main Screen (Left)	**HDMI 1**	-	O	X	X
		HDMI 2	O	-	X	X
		(Mini) DisplayPort	O	O	-	X
		Thunderbolt(⚡) (31MU97Z model only)	O	O	X	-
Input	**Main**	Selects the video signal input of the main screen.				
	Sub	Selects the video signal input of the sub screen.				
Audio	Changes the audio output in PBP mode.					
Swap	Toggles between the main screen and sub screen in PBP mode.					
Sub Full	Converts the sub screen in PBP mode to wide screen.					

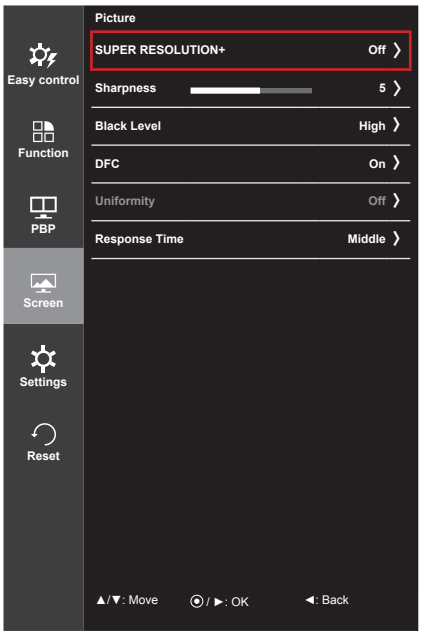
Menu > PBP	Description		
Ratio	Adjusts the aspect ratio of the main screen or sub screen.		
	Main	**Wide**	Displays the video to fit the PBP screen, regardless of the video signal input.
		Original	Displays the video in the aspect ratio of the video signal input on the PBP screen.
	Sub	**Wide**	Displays the video to fit the PBP screen, regardless of the video signal input.
		Original	Displays the video in the aspect ratio of the video signal input on the PBP screen.

NOTE

- When the PBP mode is Off, Input, Audio, Swap, Sub Full, and Ratio menus become disabled. The Main/Sub options for Ratio become disabled if there is no signal.
- The optimal resolution for PBP mode is set automatically when PBP mode is set.

Picture

1 To view the **OSD menu**, press the **joystick button** at the bottom of the monitor and then enter the **Menu**.
2 Go to **Screen > Picture** by moving the joystick.
3 Configure the options following the instructions that appear in the bottom right corner.
4 To return to the upper menu or set other menu items, move the joystick to ◄ or pressing (◉ / OK) it.
5 If you want to exit the OSD menu, move the joystick to ◄ until you exit.



Each option is described below.

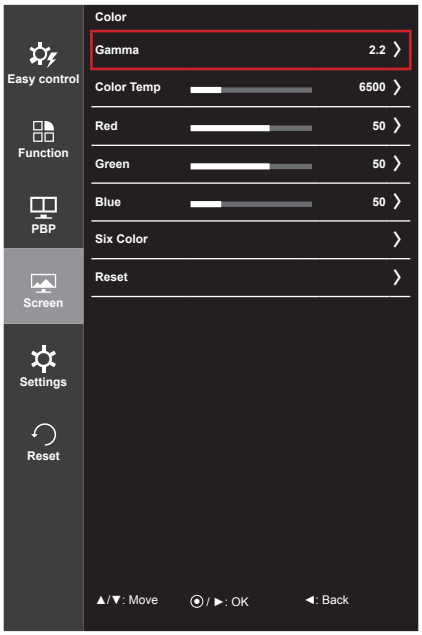
Menu > Screen > Picture	Description	
SUPER RESOLUTION+	With the picture improvement technology that minimizes the degradation of the picture quality due to enlargement (e.g. blurred focus or unsharpened edges), the resolution is not compromised, even when the images are enlarged, which guarantees a clear image. **NOTE** • Because this is a function to increase the sharpness of low resolution pictures, it is not recommended to use the function for normal text or for desktop icons. Doing so may result in unnecessarily high sharpness.	
Sharpness	Adjusts the sharpness of the screen.	
Black Level	Sets the offset level (for HDMI only). • **Offset**: as a reference for a video signal, this is the darkest color the monitor can display.	
	High	The picture of the screen gets brighter.
	Low	The picture of the screen gets darker.
DFC	Adjusts the brightness automatically according to the screen.	

<table>
<tr><th>Menu > Screen > Picture</th><th colspan="2">Description</th></tr>
<tr><td>Uniformity</td><td colspan="2">Adjusts uniformity of the image.

NOTE
• The Uniformity menu is activated only in Custom, sRGB, and Adobe RGB modes. Enabling Uniformity may reduce the overall brightness of the image.</td></tr>
<tr><td rowspan="5">Response Time</td><td colspan="2">Sets a response time for displayed pictures based on the speed of the screen.
For a normal environment, it is recommended that you use Middle. For a fast-moving picture, it is recommended that you use high.
Setting to High may cause image sticking.</td></tr>
<tr><td>High</td><td>Sets the response time to High.</td></tr>
<tr><td>Middle</td><td>Sets the response time to Middle.</td></tr>
<tr><td>Low</td><td>Sets the response time to Low.</td></tr>
<tr><td>Off</td><td>Does not use the response time improvement feature.</td></tr>
</table>

Color

1 To view the **OSD menu**, press the **joystick button** at the bottom of the monitor and then enter the **Menu**.
2 Go to **Screen > Color** by moving the joystick.
3 Configure the options following the instructions that appear in the bottom right corner.
4 To return to the upper menu or set other menu items, move the joystick to ◄ or pressing (◉ / OK) it.
5 If you want to exit the OSD menu, move the joystick to ◄ until you exit.

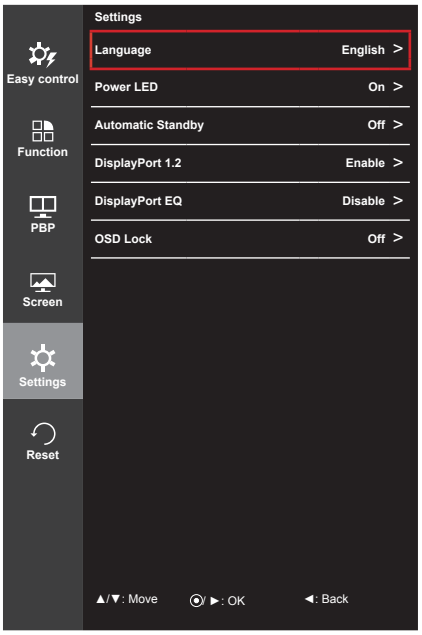


Each option is described below.

Menu > Screen > Color	Description	
Gamma	Gamma settings: When using 2.0, 2.2, 2.4 and 2.6 monitor settings, higher gamma settings mean a brighter image is displayed and vice versa.	
Color Temp	**Manual**	Adjusts the color temperature in 500K increments. (Note that 9300K is supported instead of 9500K.)
	Custom	The user can adjust it to red, green, or blue by customization.
Red	You can customize the picture color using Red, Green, and Blue colors.	
Green		
Blue		
Six Color	Meets the user requirements for colors by adjusting the hue and saturation of the six colors (red, green, blue, cyan, magenta, and yellow) and then saving the settings.	
	Hue	Adjusts the tone of the screen colors.
	Saturation	Adjusts the saturation of the screen colors. The lower the value, the less saturated and brighter the colors become. The higher the value, the more saturated and darker the colors become.
Reset	Returns color to the default settings.	

Settings

1 To view the **OSD menu**, press the **joystick button** at the bottom of the monitor and then enter the **Menu**.
2 Go to **Settings** by moving the joystick.
3 Configure the options following the instructions that appear in the bottom right corner.
4 To return to the upper menu or set other menu items, move the joystick to ◄ or pressing (◉ / OK) it.
5 If you want to exit the OSD menu, move the joystick to ◄ until you exit.



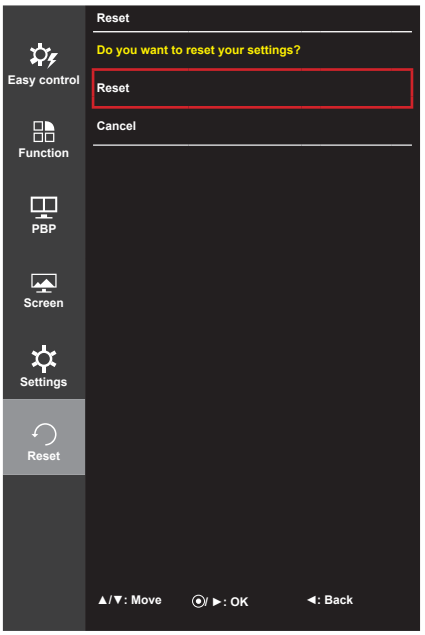
Each option is described below.

Menu > Settings	Description	
Language	Sets the menu screen to the desired language.	
Power LED	Turns the power LED on the front of the monitor on or off.	
	On	The power LED turns on automatically.
	Off	The power LED turns off.
Automatic Standby	Feature that automatically turns off the monitor when there is no movement on the screen for a period of time. You can set a timer for the auto-off function. (OFF, 4 hours, 6 hours, and 8 hours)	
DisplayPort 1.2	Enables or disables DisplayPort 1.2. **NOTE** • Be sure to configure this option according to the DisplayPort version supported by your graphics card. Set this option to **Disable** if your graphics card does not support DisplayPort 1.2.	
DisplayPort EQ	Enables or disables DisplayPort EQ. **NOTE** • Depending on the graphics card, enable this feature if any screen or audio noise occurs. For some graphics cards, high-resolution output may not be available.	

<table>
<tr><th>Menu > Settings</th><th colspan="2">Description</th></tr>
<tr><td rowspan="4">OSD Lock</td><td colspan="2">Prevents incorrect key input.</td></tr>
<tr><td>On</td><td>Disables key input</td></tr>
<tr><td>Off</td><td>Enables key input</td></tr>
<tr><td colspan="2">NOTE
• All features are disabled except Brightness, Volume, Input, OSD Lock in Settings, and the Exit button.</td></tr>
</table>

Reset

1. To view the **OSD menu**, press the **joystick button** at the bottom of the monitor and then enter the **Menu**.
2. Go to **Reset** by moving the joystick.
3. Configure the options following the instructions that appear in the bottom right corner.
4. To return to the upper menu or set other menu items, move the joystick to ◄ or pressing (◉ / OK) it.
5. If you want to exit the OSD menu, move the joystick to ◄ until you exit.



Each option is described below.

Menu > Reset	Description
Do you want to reset your settings?	
Reset	Restores the default settings.
Cancel	Cancel the reset.

TROUBLESHOOTING

Nothing is displayed on the screen.	
Is the monitor's power cord plugged in?	• Check if the power cord is correctly plugged into the power outlet.
Is the power LED on?	• Check the power cable connection and press the power button.
Is the power on and the power LED displaying white?	• Check that the connected input is enabled (Menu - Input).
Is the power LED blinking?	• If the monitor is in sleep mode, move the mouse, or press any key on the keyboard, to switch the display on. • Check if the computer is turned on.
Is the **OUT OF RANGE** message being displayed?	• This occurs when signals transferred from the PC (graphics card) are out of the horizontal or vertical frequency range of the monitor. Please see the **Product Specification** section of this manual to set the appropriate frequency.
Is the **No Signal** message being displayed?	• This is displayed when the signal cable between the PC and the monitor is missing or disconnected. Check the cable and reconnect it.

The OSD Lock message is being displayed.	
Are some functions not available when you press the Menu button?	• The OSD is locked. Go to **Menu > Settings** and set **OSD Lock** to **Off**.

The screen retains an image.	
Does image sticking occur even when the monitor is turned off?	• Displaying a still image for a prolonged time may cause damage to the screen, resulting in the retention of the image. • To extend the lifetime of the monitor, use a screensaver.

Screen display is unstable and shaky / Images displayed on the monitor leave shadow trails.	
Did you select the appropriate resolution?	• If the selected resolution is HDMI 1080i 60/50 Hz (interlaced), the screen may be flickering. Change the resolution to 1080P or the recommended resolution.

NOTE

- **Vertical Frequency**: In order to display an image, the screen must be refreshed dozens of times per second, like a fluorescent lamp. The number of times the screen is refreshed per second is called vertical frequency, or refresh rate, and is represented by Hz.
- **Horizontal Frequency**: The time it takes to display one horizontal line is called the horizontal cycle. If 1 is divided by the horizontal interval, the result is the number of horizontal lines displayed per second. This is called horizontal frequency and is represented by kHz.

NOTE

- Check if the graphics card's resolution or frequency is within the range allowed by the monitor and set it to the recommended (optimal) resolution in **Control Panel > Display > Settings**.
- Not setting the graphics card to the recommended (optimal) resolution may result in blurred text, a dimmed screen, a truncated display area, or misalignment of the display.
- The setting methods may be different depending on the computer or operating system, and some resolutions may not be available depending on the performance of the graphics card. If this is the case, contact the manufacturer of the computer or graphics card for assistance.
- Some graphics cards may not support 4096 x 2160 / 3840 x 2160 resolution. If the resolution cannot be displayed, contact the manufacturer of your graphics card.

The display color is abnormal.	
Does the display appear discolored (16 colors)?	• Set the color to 24 bit (true color) or higher. In Windows, go to Control Panel > Display > Settings > Color Quality.
Does the display color appear unstable or monochrome?	• Check if the signal cable is connected properly. Reconnect the cable or reinsert the PC's graphics card.
Are there spots on the screen?	• When using the monitor, pixilated spots (red, green, blue, white, or black) may appear on the screen. This is normal for an LCD screen. It is not an error, nor is it related to the monitor's performance.

No sound from the headphone port.	
Are images displayed using (Mini) DisplayPort or HDMI input without sound?	• Make sure that the headphone port connections are made properly. • Try increasing the volume with the joystick. • Set the audio output of the PC to the monitor you are using. On Microsoft Windows, go to Control Panel > Hardware and Sound > Sound > set the monitor as default device.

PRODUCT SPECIFICATION

31MU97	31MU97C

LCD Screen	Type	TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Screen			
	Pixel Pitch	0.1701 mm x 0.1701mm			
Resolution	HDMI	Max Resolution		4096 x 2160 @ 24 Hz	
		Recommended Resolution		3840 x 2160 @ 30 Hz	
	(Mini) DisplayPort	Max Resolution		4096 x 2160 @ 60 Hz	
		Recommended Resolution	Win	4096 x 2160 @ 60 Hz	
			Mac	4096 x 2160 @ 50 Hz	
Video Signal	Horizontal Frequency	30 kHz to 135 kHz			
	Vertical Frequency	56 Hz to 61 Hz			
Input Connector	H/P OUT, HDMI IN 1, HDMI IN 2, mDP (Mini DisplayPort) IN, DP (DisplayPort) IN, USB UP, USB IN 1, 2, 3				
Power Sources	Power Rating	AC 100-240 V~ 50 / 60 Hz, 1.4 A			
	Power Consumption (Typical)	Operating Mode: 49 W (Typical, USB excluded, Audio Output 20%) (Outgoing condition) Sleep Mode ≤ 1.2 W			
		Off Mode		Power Button	≤ 0.5 W
				Switch	0 W
Stand Angle	Forward/Backward: -5° to 15° (Head)				
Environmental Conditions	Operating Conditions	Temperature 0 °C to 40 °C (32 °F to 104 °F) Humidity Less than 80 %			
	Storing Conditions	Temperature -20 °C to 60 °C (-4 °F to 140 °F) Humidity Less than 85 %			
Audio Output	5 W + 5 W				

Dimensions	Monitor Size (Width x Height x Depth)	
	With Stand	736.7 mm x 483.5 mm x 241.4 mm (29.0 inches x 19.0 inches x 9.5 inches)
	Without Stand	736.7 mm x 407.5 mm x 52.4 mm (29.0 inches x 16.0 inches x 2.0 inches)
Weight (Without Packaging)	With Stand	9.6 kg (21.1 lbs)
	Without Stand	7.7 kg (16.9 lbs)

Specifications are subject to change without notice.

31MU97Z

LCD Screen	Type	TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Screen			
	Pixel Pitch	0.1701 mm x 0.1701mm			
Resolution	HDMI	Max Resolution		4096 x 2160 @ 24 Hz	
		Recommended Resolution		3840 x 2160 @ 30 Hz	
	(Mini) DisplayPort	Max Resolution		4096 x 2160 @ 60 Hz	
		Recommended Resolution	Win	4096 x 2160 @ 60 Hz	
			Mac	4096 x 2160 @ 50 Hz	
	Thunderbolt (⚡)	Max Resolution		4096 x 2160 @ 50 Hz	
		Recommended Resolution	Win	4096 x 2160 @ 60 Hz	
			Mac	4096 x 2160 @ 50 Hz	
Video Signal	Horizontal Frequency	30 kHz to 135 kHz			
	Vertical Frequency	56 Hz to 61 Hz			
Input Connector	H/P OUT, HDMI IN 1, HDMI IN 2, mDP (Mini DisplayPort) IN, DP (DisplayPort) IN, Thunderbolt (⚡), USB UP, USB IN 1, 2, 3				
Power Sources	Power Rating	AC 100-240 V~ 50 / 60 Hz, 1.7 A			
	Power Consumption (Typical)	Operating Mode: 73 W (Typical, USB excluded, Audio Output 20%) (Outgoing condition) Sleep Mode ≤ 1.2 W			
		Off Mode		Power Button	≤ 0.5 W
				Switch	0 W
Stand Angle	Forward/Backward: -5° to 15° (Head)				
Environmental Conditions	Operating Conditions	Temperature 0 °C to 40 °C (32 °F to 104 °F) Humidity Less than 80 %			
	Storing Conditions	Temperature -20 °C to 60 °C (-4 °F to 140 °F) Humidity Less than 85 %			
Audio Output	5 W + 5 W				

Dimensions	Monitor Size (Width x Height x Depth)	
	With Stand	736.7 mm x 483.5 mm x 241.4 mm (29.0 inches x 19.0 inches x 9.5 inches)
	Without Stand	736.7 mm x 407.5 mm x 52.4 mm (29.0 inches x 16.0 inches x 2.0 inches)
Weight (Without Packaging)	With Stand	9.6 kg (21.1 lbs)
	Without Stand	7.7 kg (16.9 lbs)

Specifications are subject to change without notice.

Factory Support Mode

31MU97 31MU97C **(Preset Mode, HDMI/ (Mini) DisplayPort PC)**

31MU97Z **(Preset Mode, HDMI/ (Mini) DisplayPort/ Thunderbolt PC)**

Preset Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Polarity (H/V)	Remarks
640 x 480	31.469	59.94	-/-	
800 x 600	37.879	60.317	+/+	
1024 x 768	48.363	60	-/-	
1152 x 864	54.347	60.05	+/+	
1280 x 720	45	60	+/+	
1280 x 1024	63.981	60.02	+/+	
1600 x 900	60	60	+/+	
1920 x 1080	67.5	60	+/-	
2048 x 2160	133.32	60	+/-	Recommended resolution for PBP
2560 x 1440	88.79	59.95	+/-	(Mini) DIsplayPort, Thunderbolt is not supported.
3840 x 2160	133.32	60	+/-	HDMI is not supported.
3840 x 2160	67.5	30	+/-	
4096 x 2160	133.32	60	+/-	HDMI, Thunderbolt is not supported. (Mac OS)
4096 x 2160	54	24	+/-	(Mini) DIsplayPort, Thunderbolt is not supported.
4096 x 2160	111.10	50	+/-	HDMI is not supported.

HDMI Timing (Video)

Preset Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Remarks
480p	31.5	60	
720p	45	60	31MU97Z model only
1080p	67.5	60	31MU97Z model only

Power LED

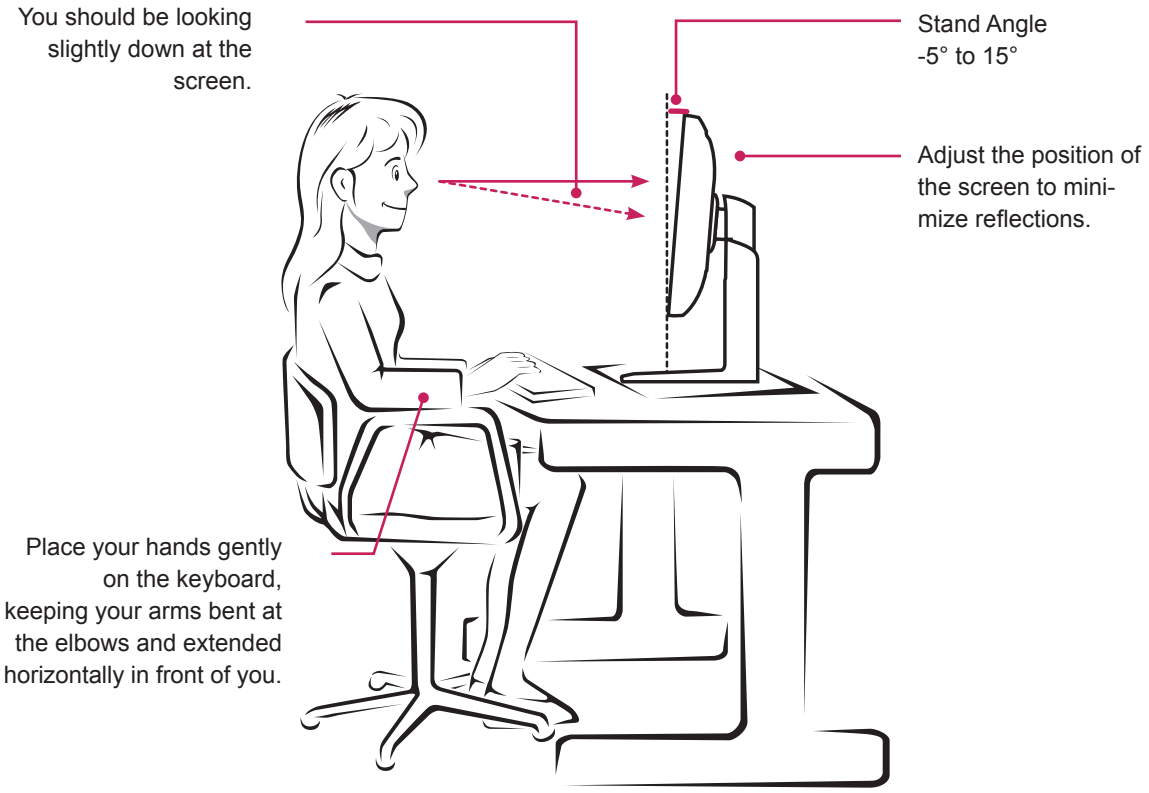
Mode	LED Color
On Mode	White
Sleep Mode	Flashing White
Off Mode	Off

PROPER POSTURE

Proper Posture for Using the Monitor

Adjust the screen so that you can comfortably look at it at a slight downward angle from your natural eye level.

- Take a break for approximately 10 minutes every hour to reduce any fatigue caused by prolonged usage.
- Adjust the stand angle from -5° to 15° to obtain the best view of the screen.



LG
Life's Good

Declaration of Conformity

Trade Name: LG
Model: 31MU97, 31MU97C, 31MU97Z
Responsible Party: LG Electronics Inc.
Address: 1000 Sylvan Ave.
Englewood Cliffs NJ 07632
U.S.A
TEL: 201-266-2534

This device meets the EMC requirements for home appliances (Class B) and is intended for home usage. This device can be used in all regions. Read the owner's manual (CD) carefully and keep it at hand. Please note that the label attached to the product provides information for technical support.

Model _____

Serial No. _____

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.

Refer to ENERGY STAR.gov for more information on the ENERGY STAR program.