# OWNER'S MANUAL

# LG Digital Signage

## (Signage webOS Box)

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

WP400

ENGLISH

# TABLE OF CONTENTS

**Warning**: This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

# SAFETY PRECAUTIONS

Please read these safety precautions carefully before using the product.

## ⚠ WARNING

If you ignore the warning message, you may be seriously injured or there is a possibility of accident or death.

## ⚠ CAUTION

If you ignore the caution message, you may be slightly injured or the product may be damaged.

## ⚠ WARNING

• Indoor Use Only.

## Precautions In Installing the Product

## ⚠ WARNING

• Keep away from heat sources like electrical heaters.
  - Electrical shock, fire, malfunction, or deformation may occur.
• Keep the packing anti-moisture material or vinyl packing out of the reach of children.
  - Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.
• Do not put heavy objects on the product or sit upon it.
  - If the product collapses or is dropped, you may be injured. Children must pay particular attention.
• Do not leave the power or signal cable unattended on the pathway.
  - The passerby can trip or fall, which can cause electrical shock, fire, product breakdown, or injury.
• Install the product in a neat and dry place.
  - Dust or moisture can cause electrical shock, fire or product damage.
• If you can smell smoke or other odors or hear a strange sound unplug the power cord and contact the service center.
  - If you continue to use without taking proper measures, electrical shock or fire can occur.
• If you dropped the product or the case is broken, turn off the product and unplug the power cord.
  - If you continue to use without taking proper measures, electrical shock or fire can occur. Contact the service center.

- 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.
- Do not let the product fall or drop when connecting it with an external device.
  - This may cause injury and/or damage to the product.
- When connecting it to a game device, keep a distance of four times the diagonal measurement of the screen from the device.
  - If the product falls because of the short cable, this may cause injury and/or damage to the product.
- Do NOT install this product on a wall where there is high risk of exposure to oil fumes or mist.
  - This may damage product and cause it to fall.

## ⚠ CAUTION

- Make sure the product ventilation holes are not blocked. Install the product in a suitably wide place (more than 100 mm from the wall).
  - If you install the product too close to the wall, it may be deformed or fire can break out due to internal heat.
- Do not block the ventilation hole of the product by a tablecloth or curtain.
  - The product can be deformed or fire can break out due to overheating inside the product.
- Install the product on a flat and stable place that has no risk of dropping the product.
  - If the product is dropped, you may be injured or the product may be broken.
- Install the product where no EMI occurs.
- Keep the product away from direct sunlight.
  - The product can be damaged.
- If you install the product in a place that does not meet the recommended conditions, this may cause serious damage to the product's picture quality, life cycle, and appearance. Please check with LG or a qualified installer before installing. This caution applies to a place where there is an abundance of fine dust or oil mist, chemical substances are used, the temperature is very high or low, the humidity is very high, or the product is likely to remain turned on for a long period of time (airport and train station), failure to do so will invalidate the warranty.
- Do not install the product in an area with poor ventilation (e.g.on a bookshelf, in a closet) or outside and avoid placing on cushions or carpets.
- In addition, do not install it where there are heating objects such as lighting equipment.

# Precautions to the AC Adapter and Electrical Power

## ⚠ WARNING

- If water or any foreign substance goes inside the product (TV, monitor, power cord, or AC adapter), disconnect the power cord immediately and contact the service center.
  - Otherwise, this may cause a fire or electric shock due to damage to the product.
- Do not touch the power plug or AC adapter with wet hands. If the pins of the plug are wet or dusty, wipe and dry them before use.
  - Otherwise, this may cause a fire or electric shock.
- Make sure to completely insert the power cord into the AC adapter.
  - If loosely connected, the poor connection may cause a fire or electric shock.
- Be sure to use power cords and AC adapters provided or approved by LG Electronics, Inc.
  - The use of non-approved products may cause a fire or electric shock.
- When unplugging the power cord, always pull it by the plug. Do not bend the power cord with excessive force.
  - The power line can be damaged, which may cause electric shock or fire.
- Be careful not to step or place heavy objects (electronic appliances, clothing, etc.) on the power cord or AC adapter. Be careful not to damage the power cord or AC adapter with sharp objects.
  - Damaged power cords may cause a fire or electric shock.
- Never disassemble, repair or modify the power cord or AC adapter.
  - This may cause a fire or electric shock.
- Make sure to connect the power cable to the grounded current.
  - You may be electrocuted or injured.
- Use the rated voltage only.
  - The product can be damaged, or you may be electrocuted.
- 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.
- Do not connect several extension cords, electrical appliances, or electrical heaters to a single outlet. Use a power strip with a grounding terminal designed for exclusive use with the computer.
  - A fire can break out due to overheating.
- Do not touch the power plug with wet hands. Additionally, if the cord pin is wet or covered with dust, dry the power plug completely or wipe dust off.
  - You may be electrocuted due to excess moisture.

- If you don't intend to use the product for a long time, unplug the power cable from the product.
  - Covering dust can cause a fire, or insulation deterioration can cause electric leakage, electric shock or fire.
- Fix the power cable completely.
  - If the power cable is not fixed completely, a fire can break out.
- Do not insert a conductor (like a metal chopstick) into one end of the power cable while the other end is connected to the input terminal on the wall. Additionally, do not touch the power cable right after plugging into the wall input terminal.
  - You may be electrocuted.
- 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.
- 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.

## ⚠ CAUTION

- Be sure to keep the outlet, AC adapter, and pins of the power plug clean from dust and etc.
  - This may cause a fire.
- Do not unplug the power cord while the product is in use.
  - Electrical shock can damage the product.
- Use only the power cord supplied with the unit. If you use another power cord, make sure that it is certified by the applicable national standards when not 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.

# Precautions In Moving the Product

## ⚠ WARNING

- Make sure to turn off the product.
  - You may be electrocuted or the product can be damaged.
- Make sure to remove all cables before moving the product.
  - You may be electrocuted or the product can be damaged.
- If you drop the product, the damaged product can cause electric shock or fire. Contact an authorized the service center for repair.
- Make sure the product is turned off, unplugged, and all cables have been removed.

## ⚠ CAUTION

- Do not shock the product when moving it.
  - You may be electrocuted or the product can be damaged.
- Do not dispose the product-packing box. Use it when you move.

# Precautions In Using the Product

## ⚠ WARNING

- Do not disassemble, repair or modify the product at your own discretion.
  - Fire or electric shock accident can occur.
  - Contact the service center for check, calibration or repair.
- When the display is to be left unattended for an extended period of time, unplug it from the wall outlet.
- Keep the product away from water.
  - Fire or electric shock accident can occur.
- Avoid high temperatures and humidity.

## ⚠ CAUTION

- Do not put or store inflammable substances near the product.
  - There is a danger of explosion or fire due to careless handling of the inflammable substances.
- 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.)
- Take a rest from time to time to protect your vision.
- Keep the product clean at all times.
- Take a comfortable and natural position when working with a product to relax the muscles.
- Take a regular break when working with a product for a long time.
- Keep the proper distance from the product.
  - Your vision may be impaired if you look at the product too closely.
- Set the appropriate resolution and clock by referring to the User's Guide.
  - Your vision can be impaired.
- Use authorized detergent only when cleaning the product. (Do not use benzene, thinner, or alcohol.)
  - Product can be deformed.
- Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).
- Batteries should not be exposed to excessive heat. For example, keep away from direct sunlight, open fireplace, and electric heaters.
- Do NOT place non-rechargeable batteries in charging device.
- Using headsets (earphones) for a long time or listening loudly can cause damage to your hearing.

# Mounting on a Wall

- Do NOT install this product by yourself as you may injure yourself or cause damage to product. Please contact service personnel authorised by manufacturer.

# LICENSES

Supported licenses may differ by model. For more information of the licenses, visit *www.lg.com*.

**HDMI™**
HIGH-DEFINITION MULTIMEDIA INTERFACE

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

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# ASSEMBLY AND PREPARATION

## ⚠ CAUTION

- Do not use any pirated items to ensure the safety and product life span.
- Any damages or injuries by using pirated items are not covered by the warranty.
- Risk of explosion if battery is replaced by an incorrect type.
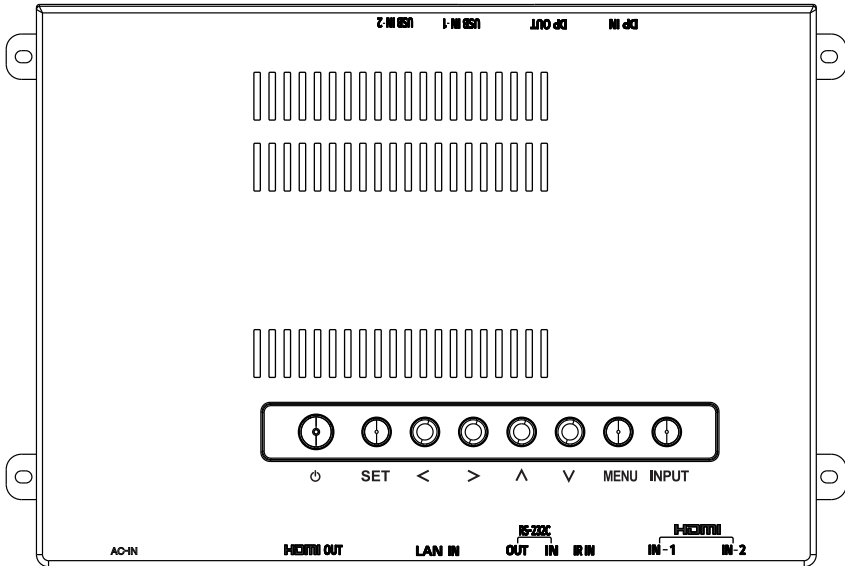- Dispose of used batteries according to the instructions.

## ❗ NOTE

- The accessories provided with your product may vary depending on the model or region.
- Product specifications or contents in this manual may be changed without prior notice due to upgrade of product functions.
- SuperSign Software & Manual
  - Downloading from the LG Electronics website.
  - Visit the LG Electronics website *http://partner.lge.com* and download the latest software for your model.

### How to use the ferrite core

1  Use the ferrite core to reduce the electromagnetic interference in the power cable. Wind the power cable on the ferrite core once.
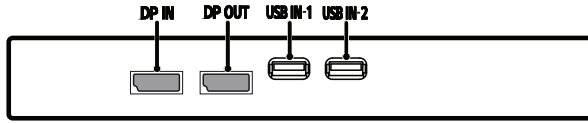2  Place the ferrite core close to the monitor.

# Parts and Buttons

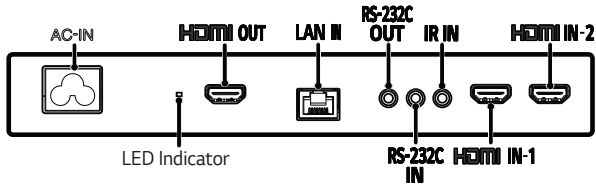The image may be different according to the model.



- ⏻ : Turns the power on or off.
- **SET** : Displays the current signal and mode.
- **< >** : Moves left and right.
- **∧ ∨** : Adjusts the up and down.
- **MENU** : Accesses the main menus, or saves your input and exits the menus.
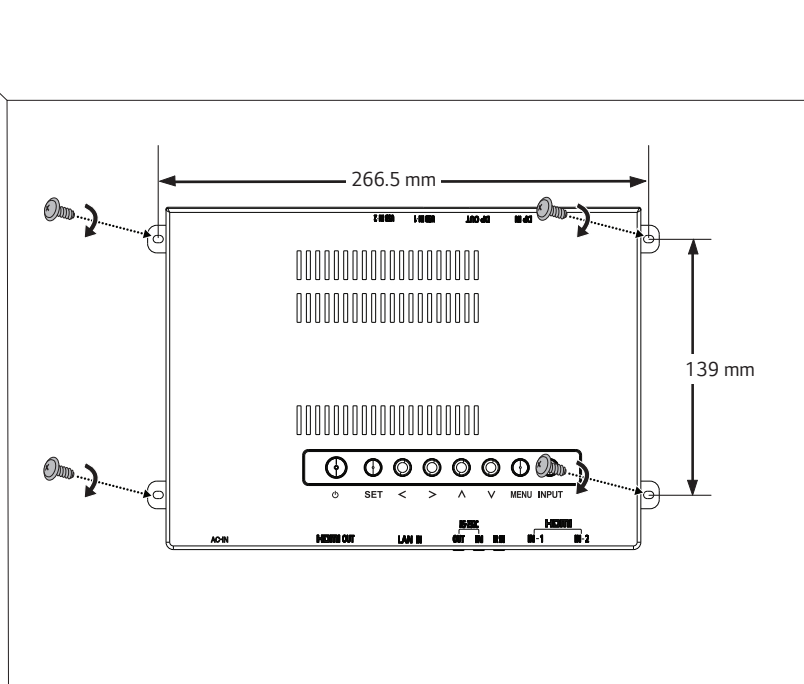- **INPUT** : Changes the input source.

## Front Panel

DP IN    DP OUT    USB IN-1    USB IN-2

## Rear Panel

AC-IN    HDMI OUT    LAN IN    RS-232C OUT    IR IN    HDMI IN-2

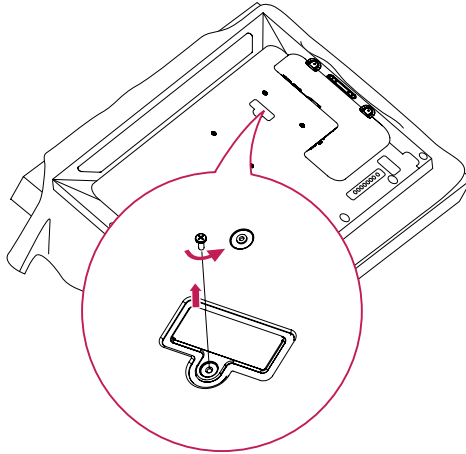LED Indicator    RS-232C IN    HDMI IN-1

# Installation

Install the set using the screws supplied as accessories.
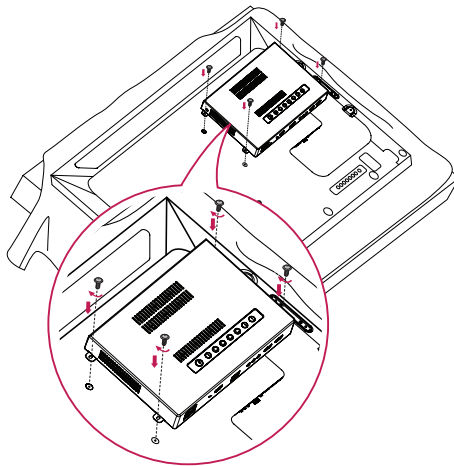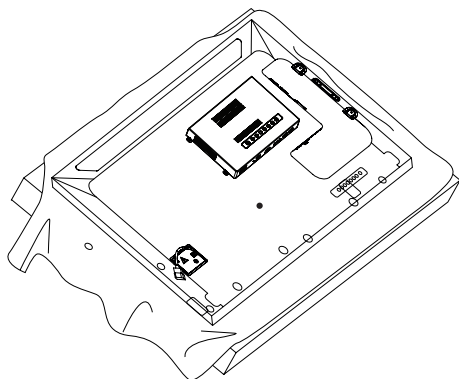
## Mounting on a wall

## Installing on a monitor

• For some monitors only. Depending on the monitor, installation may not be possible.
• The image may be different according to the model.

1 Lay a clean cloth on the floor, put the monitor on it with the screen facing downward, and then remove the screws from the hole cover on the rear of the monitor with a screwdriver.

2 Align the WP400 along the four screw holes on the rear of the set and attach it to the rear of the set using the four screws provided.
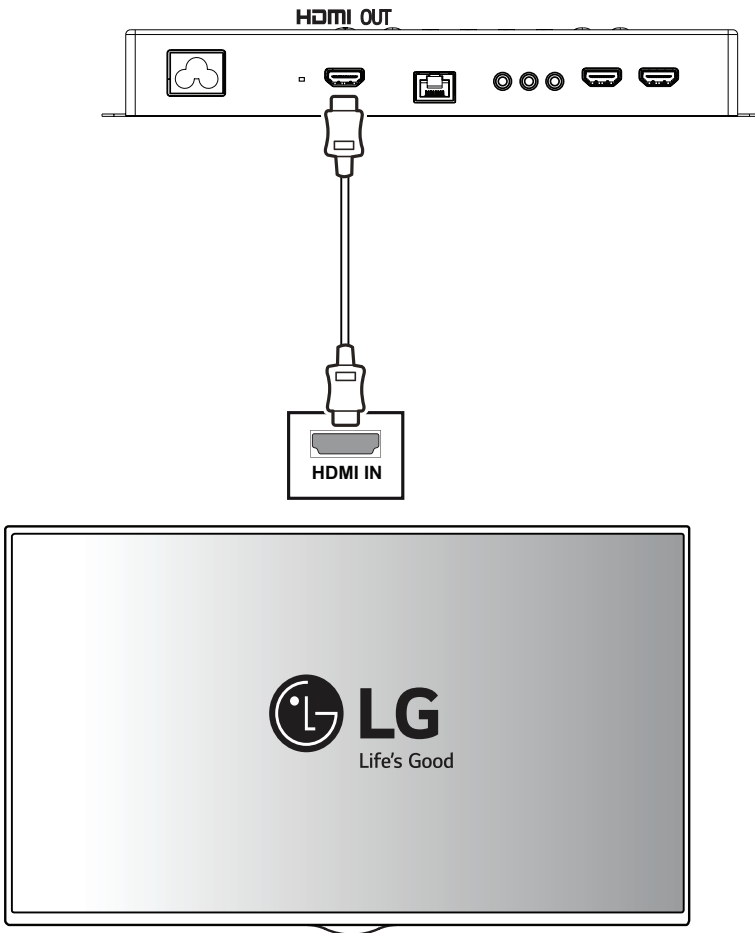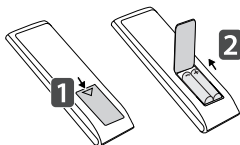
3 Installation complete

# HDMI connections

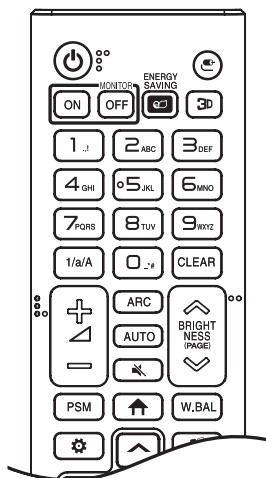Use an HDMI cable to connect to the WP400.

# REMOTE CONTROL

The descriptions in this manual are based on the buttons on the remote control. Please read this manual carefully to use the Signage webOS Box correctly. To install batteries, open the battery cover, place batteries (1.5 V AAA) matching ⊕ and ⊖ terminals to the labels inside the compartment, and close the battery cover. To remove the batteries, perform the installation actions in reverse. The illustrations may differ from the actual accessories.

⚠ **CAUTION**

• Do not mix old and new batteries, as this may damage the remote control.
• Be sure to point the remote control toward the remote control sensor on the Signage webOS Box.
• Some features of the remote control may not be supported in certain models.

**⏻ (POWER)** Turns the Signage webOS Box on or off.

**MONITOR ON** Turns the Signage webOS Box on.

**MONITOR OFF** Turns the Signage webOS Box off.

**ENERGY SAVING** 🌿 Adjusts the brightness of the picture to reduce energy consumption.

**⊙ (INPUT)** Selects the input mode.

* **3D** Used for viewing 3D videos.

**1/a/A** Toggles between numerical and alphabetical.

**Number and Alphabet buttons**

Enters numerical or alphabetical characters depending upon the setting.

**CLEAR** Deletes the entered numerical or alphabetical character.
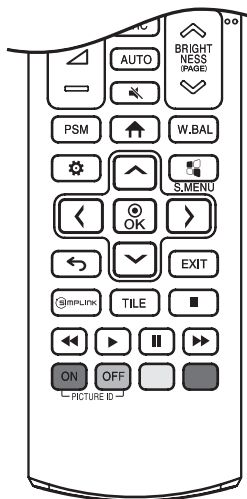
* **Volume Up/Down Button** Adjusts the volume.

**ARC** Selects the Aspect Ratio mode.

* **AUTO** Automatically adjusts picture position and minimizes image instability (available for RGB input only).

* 🔇 **(MUTE)** Mutes all sounds.

**BRIGHTNESS** Adjusts the brightness of the display. (PAGE function is not supported in this model.)

\* **PSM** Selects the Picture Mode.

⌂ **(HOME)** Activates the Launcher.

\* **W.BAL** Enters the White Balance menu.

⚙ **(SETTINGS)** Accesses the main menus or saves your input and exit menus.

\* ▧ **S.MENU** SuperSign menu key.

**Navigation Buttons** Scrolls through menus or options.

◉ Selects menus or options and confirms your input.

↩ **(BACK)** Allows you to move back one step in the user interaction function.

**EXIT** Quit all OSD tasks and applications.

⚲**SIMPLINK** Allows you to control various multimedia devices to enjoy multimedia simply by using the remote control through the SimpLink menu.

**TILE** Selects the TILE Mode.

**PICTURE ID ON/OFF** When the Picture ID number matches the Set ID number, you can control whichever Signage webOS Box you want in multi-display format.

**USB Menu Control Buttons** Controls media playback.

\* ▣ ◀◀ ▶ ❚❚ ▶▶ **Trick key** May not be supported on some models.

\* It is not supported in this model.

# USING THE WP400 SET

## Connecting to a PC

The WP400 does not include the monitor. You can connect WP400 to a monitor to view the picture on it.
Your WP400 set supports the Plug and Play* feature.

* Plug and Play: A PC will have a built-in driver for WP400, no extra software is needed.

## External Device Connection

Connect a HD receiver, DVD, or VCR player to the WP400 set and select an appropriate input mode.
Some of the cables are not provided. For the best picture quality, connecting external devices to your set using HDMI cables is recommended.

### 🛈 NOTE

- It is recommended to use the WP400 set with an HDMI connection for the best image quality.
- To comply with the specifications of the product, use a shielded interface cable with ferrite core, such HDMI cable provided with the product.
- To minimize the impact of electromagnetic waves, secure the cables with cable ties.
- Use a High Speed HDMI®/™ Cable.
- If you want to use HDMI-PC mode, you must set the input label to PC mode.
- When HDMI PC is used, a compatibility problem might occur.
- 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

### ⚠ CAUTION

- If using a DP to HDMI dongle, make sure to use a dongle certified by the graphics card manufacturer.
- When connecting to multi-channel ports of a graphics card, make sure to use DP to HDMI dongles of the same model.
- It may not be compatible with monitors from other companies.

## Using the Input List

⌂ (HOME) → 🔘

- HDMI1 → HDMI2 → DISPLAYPORT

# TROUBLESHOOTING

**No image is displayed.**

| Problem | Resolution |
|---|---|
| Is the product power cord connected? | • Check if the power cord is correctly plugged into the power outlet. |
| Does the 'Invalid Format' message appear? | • The signal from the PC (Graphics card) is out of the vertical or horizontal frequency range of the product. Adjust the frequency range by referring to the Specifications in this manual. |
| Does the 'No signal' message appear? | • The signal cable between PC and product is not connected. Check the signal cable.<br>• Access the input menu to check the input signal. |

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

| Problem | Resolution |
|---|---|
| Did you install the driver? | • Check if the Plug and Play function is supported by referring to the graphics card user manual. |

**The screen image looks abnormal.**

| Problem | Resolution |
|---|---|
| Is the screen position wrong? | • Check if the graphics card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution in the Control Panel "Display" Setting menu. |
| The screen is displayed abnormally. | • The proper input signal is not connected to the signal port. Connect the signal cable that matches with the source input signal. |
| The screen's image looks cut off. | • The monitor's screen size setting may cut off part of the image. Change the ARC of the connected device to use it. |

**Screen color is abnormal.**

| Problem | Resolution |
|---|---|
| Screen has poor color resolution (16 colors). | • Set the number of colors to more than 24 bits (true color). Select [Control Panel] → [Display] → [Settings] → [Color Table] in Windows. (The settings may differ depending on your operating system.) |
| Screen color is unstable or mono-colored. | • Check the connection status of the signal cable. Or, re-insert the PC graphics card. |

**The operation does not work normally.**

| Problem | Resolution |
|---|---|
| The power suddenly turned off. | • Is the sleep timer set? |
|  | • Check the power control settings. Power interrupted. |

# PRODUCT SPECIFICATIONS

The product specifications below may be changed without prior notice due to upgrade of product functions.
" ~ " refers to alternating current (AC), and " --- " refers to direct current (DC).

| Video signal | Maximum resolution | 3840 x 2160 @ 60 Hz |
| | | - This may not be supported on some OS or graphics card types. |
| | Recommended resolution | 3840 x 2160 @ 60 Hz |
| | | - This may not be supported on some OS or graphics card types. |
| | Horizontal frequency | HDMI1/ HDMI2/ DisplayPort : 30 kHz to 136 kHz |
| | Vertical frequency | HDMI1/ HDMI2/ DisplayPort : 58 Hz to 62 Hz |
| | Synchronization | Separate Sync / Digital |
| Input / Output ports | | LAN, USB IN 1/2, RS-232C IN/OUT, DP IN/OUT, HDMI IN 1/2, HDMI OUT, IR IN |
| Power | Rated power | AC 100-240 V ~ 50/60 Hz 0.7 A |
| | Power consumption | On Mode: 27 W (Max.)<br>Off Mode: ≤ 0.5 W |
| Embedded battery | Applied | |
| Environmental Conditions | Operating Temperature | 0 ℃ to 40 ℃ |
| | Operating Humidity | 10 % to 80 % |
| | Storage Temperature | -20 ℃ to 60 ℃ |
| | Storage Humidity | 5 % to 85 % |
| Dimensions (Width x Height x Depth) / Weight | | 258 mm x 36.5 mm x 186 mm / 870 g |

| Wireless module (LGSBWAC72) Specifications | |
|---|---|
| Wireless LAN (IEEE 802.11a/b/g/n/ac) | |
| Frequency range (MHz) | Output power (Max.) (dBm) |
| 2400 to 2483.5 | 14 |
| 5150 to 5725 | 16.5 |
| 5725 to 5850 (Not for EU) | 11.5 |

- As band channels can vary per country, the user cannot change or adjust the operating frequency. This product is configured for the regional frequency table.
- For consideration of the user, this device should be installed and operated with a minimum distance of 20 cm between the device and the body.

* "IEEE 802.11ac" is not available in all countries.

(Only Nigeria)

**Connection and use of this communications equipment is permitted by the Nigerian Communications Commission**

(Only HongKong)

| Wireless module (LGSBWAC72) Specifications | |
|---|---|
| Wireless LAN (IEEE 802.11a/b/g/n/ac) | |
| Frequency range (MHz) | Output power (Max.) (dBm) |
| 2400 to 2483.5 | 14 |
| 5150 to 5350 | 16.5 |
| 5725 to 5850 | 11.5 |

- As band channels can vary per country, the user cannot change or adjust the operating frequency. This product is configured for the regional frequency table.
- For consideration of the user, this device should be installed and operated with a minimum distance of 20 cm between the device and the body.

**HDMI/ DisplayPort (PC) Support Mode**

| Resolution | Horizontal frequency (kHz) | Vertical frequency (Hz) |
|---|---|---|
| 800 x 600 | 37.879 | 60.317 |
| 1024 x 768 | 48.363 | 60 |
| 1280 x 720 | 44.772 | 59.855 |
| 1280 x 1024 | 63.981 | 60.02 |
| 1680 x 1050 | 65.29 | 59.954 |
| 1920 x 1080 | 67.5 | 60 |
| 3840 x 2160 | 67.5 | 30 |
| | 135 | 60 |

**HDMI/ DisplayPort (DTV)  Support Mode**

| Resolution | Horizontal frequency (kHz) | Vertical frequency (Hz) |
|---|---|---|
| 480/60p | 31.5 | 60 |
| 576/50p | 31.25 | 50 |
| 720/50p | 37.5 | 50 |
| 720/60p | 45 | 60 |
| 1080/50i | 28.1 | 50 |
| 1080/60i | 33.75 | 60 |
| 1080/50p | 56.25 | 50 |
| 1080/60p | 67.432 | 59.94 |
| 1080/60p | 67.5 | 60 |
| 2160/30p | 67.5 | 30 |
| 2160/50p | 112.5 | 50 |
| 2160/60p | 135 | 60 |

**🛈 NOTE**

• Vertical frequency: The product display functions by the screen image changing dozens of times every second like a fluorescent lamp.
  The vertical frequency or refresh rate is the number of image displays per second. The unit is Hz.
• Horizontal frequency: The horizontal interval is the time taken to display one horizontal line. When 1 is divided by the horizontal interval, the number of horizontal lines displayed every second can be tabulated as the horizontal frequency. The unit is kHz.

LG

Life's Good

Make sure to read the Safety Precautions before using the product.

The model and serial numbers of the SET are located on the back and one side of the SET. Record it below should you ever need service.

MODEL _____

SERIAL _____

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