



# LG Digital Signage (MONITOR SIGNAGE)

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

55XF2B

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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*.

# **Important Precautions**

Please read these safety precautions carefully before using the product.



#### **WARNING**

Failure to follow those warnings may result in death, serious injury or damage to the product or other property.

## **Flectrical Power Related Precautions**



#### WARNING

- · Use only the power cord supplied with the unit or another manufacturer's authorized cord.
  - Failure to do so may result in fire or electrical shock or damage to the product.
- Use only a properly grounded plug and receptacle.
  - If you do not you may be electrocuted or injured. Or the product might be damaged.
- Do not use a damaged or loose plug.
  - ▶ This may cause electrical shock or fire.
- Operate the display only from a power source (i.e. voltage) indicated in the product specification.
  - ▶ Otherwise the product can be damaged, fire can occur or you may be electrocuted. If you are not sure what type of power supply you have. consult a certified electrician.
- In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous.
  - lt 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 before plugging in the cord.
  - 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.
- Insert the power plug firmly so it cannot come loose.
  - A loose connection can cause fire.
- · Hold the plug when pulling out the power cable. Do not pull the plug out by the wire. Do not bend the power cord with excessive force or put heavy objects on the power cord.
  - The power line can be damaged, which may cause electric shock or fire.

- Do not insert metal or other conductive materials into the product openings. 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.
- Do not unplug the power cord while the product is in use.
  - ► Electrical shock can damage the product.
- · 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.

# **Precautions in installing the Product**

## **WARNING**

- · Keep away from heat sources like heaters or open flames.
- 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 on 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 where someone can trip over it.
  - The passerby can falter, which can cause electrical shock, fire, product breakdown, or injury.
- Install the product in a neat and dry place. Do not use near water.
  - Dust or moisture can cause electrical shock, fire, or product damage.
- Do not add accessories that have not been designed for this display.
- If you smell smoke or other odors or hear a strange sound from the product unplug the power cord and contact LG Customer Service.
  - 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 LG Customer Service.
- Do not drop an object on or apply impact to the product. Do not throw any toys or objects at the product.
  - It can cause injury to humans, problems to the product and damage the display.
- Keep out of reach of children and do not place toys near the product.
- Make sure the product ventilation hole is not blocked. Install the product more than 10cm 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 build-up.
- Do not cover the product with cloth or other material (e.g., plastic) while plugged in.
  - The product can be deformed or fire can break out due to internal overheating.
- Place the product on a flat and stable surface that is large enough to support the product.
  - ► If the product is dropped, you may be injured or the product may be broken.
- · Install the product where no electromagnetic interference occurs.
- · Keep the product away from direct sunlight.
  - ▶ The product can be damaged.

- Do not place the product on the floor.
  - ► Small children and others may trip over it.
- Do not install this product on a wall if it could be exposed to oil or oil mist.
  - This may damage the product and cause it to fall.
- For displays with glossy bezels the user should consider the placement of the display as the bezel may cause disturbing reflections from surrounding light and bright surfaces.

# **Precautions in Moving the Product**

# Λ

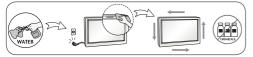
#### WARNING

- · 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.
- When lifting or moving the product, do not hold it upside down while holding only the stand.
  - This may cause the product to fall resulting in damage or injury.
- Do not shock the product when moving it.
  - You may be electrocuted or the product can be damaged.
- 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.
- Do not place the product face down.
  - ► This may damage the TFT-LCD screen.

# **Precautions in Using/Cleaning the Product**

#### WARNING

- Do not attempt to disassemble, repair or modify the product yourself.
  - Fire or electric shock can occur
  - Contact LG Customer Service for repair.
- · 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.)
- · Keep the product away from water.
  - Fire or electric shock accident can occur.
- Avoid high temperatures and humidity.
- Do not put or store flammable substances near the product.
  - ► There is a danger of explosion or fire.
- · Keep the product clean at all times.
- Take a comfortable and natural position when working with the product.
- Take a regular break when working with the product for a long time.
- Do not press on the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it.
- Keep proper distance from the product and rest from time-to-time.
  - Your vision may be impaired if you look at the product too closely or for too long.
- Set the appropriate resolution by referring to the User's Guide.
- · Keep small accessories out of the reach of children.
- · Displaying a still image for long time on the monitor may leave persistent image or stain on the monitor screen. To avoid this problem, use a screen saver and power off when this product is not used. Persistent image or screen burn caused by long time usage are not covered by the warranty on this product.
- Do not use products using high voltage around the Monitor. (e.g., a bug zapper.)
  - ► Monitor may have malfunction as its electrical shock.
- 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 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.

# **LICENSES**

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



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.



This DivX Certified® device has passed rigorous testing to ensure it plays DivX® video. To play purchased DivX movies, first register your device at vod.divx.com. Find your registration code in the DivX VOD section of your device setup menu.

DivX Certified® to play DivX® video up to HD 1080p, including premium content. DivX®, DivX Certified® and associated logos are trademarks of DivX, LLC and are used under license.

Covered by one or more of the following U.S. patents: 7,295,673; 7,460,668; 7,515,710; 7,519,274.



Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.



For DTS patents, see <a href="http://patents.dts.com">http://patents.dts.com</a>. Manufactured under license from DTS Licensing Limited. DTS, the Symbol, & DTS and the Symbol together are registered trademarks, and DTS 2.0 Channel is a trademark of DTS, Inc. © DTS, Inc. All Rights Reserved.



• The warranty will not cover any damage caused by using the product in an excessively dusty environment.

# **ASSEMBLY AND PREPARATION**

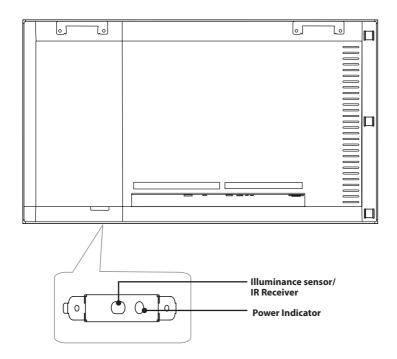


- Always use genuine components to ensure safety and product performance.
- · The product warranty will not cover damage or injury caused by the use of unauthorized components.

# 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 and Manual
  - Downloading from the LG Electronics website.
  - Visit the LG Electronics website (www.lgecommercial.com/supersign) and download the latest software for your model.

# **Parts and Buttons**



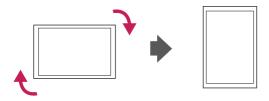
- Illuminance sensor Adjusts the screen brightness by measuring the amount of light.
- IR Receiver This is where the unit receives signals from the remote control.
- **Power Indicator** This Indicator lights up red when the display operates normally (on mode). If the display is in sleep mode (in Power Saving mode), this indicator changes color to amber.



• You can set the status of the power indicator in **Installation** -> **Signage Setup**.

# **Portrait Layout**

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



# REMOTE CONTROL

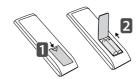
The descriptions in this manual are based on the buttons on the remote control. Please read this manual carefully to use the monitor correctly.

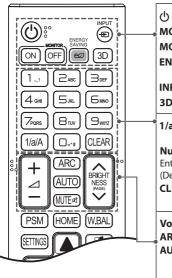
To install batteries, open the battery cover, place batteries (1.5 V AAA) matching  $\bigoplus$  and  $\bigoplus$  terminals to the labels inside the compartment, and close the battery cover.

To remove the batteries, perform the installation actions in reverse. The illustrations may differ from the actual accessories.



- 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 monitor.





(POWER) Turns the monitor on or off.

MONITOR ON Turns the monitor on.

MONITOR OFF Turns the monitor off.

**ENERGY SAVING(€**②) Reduces power consumption by adjusting peak screen brightness.

**INPUT** Selects the input mode.

**3D** This model does not support this.

1/a/A Toggles between numerical and alphabetical.

(Depending upon the model, this feature may not be supported.)

#### **Number and Alphabet buttons**

Enters numerical or alphabetical characters depending upon the setting. (Depending upon the model, this feature may not be supported.)

**CLEAR** Deletes the entered numerical or alphabetical character.

(Depending upon the model, this feature may not be supported.)

Volume Up/Down Button Adjusts the volume.

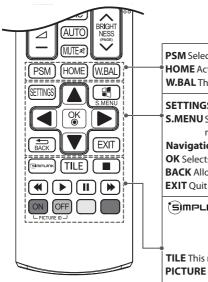
**ARC** Selects the Aspect Ratio mode.

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

model, this feature may not be supported.)

**MUTE** Mutes all sounds.

**BRIGHTNESS** Adjusts the brightness of the display. PAGE Function is not supported in the this model. (Depending upon the model, this feature may not be supported.)



PSM Selects the Picture Mode.

**HOME** Activates the Launcher.

W.BAL This model does not support this.

SETTINGS Accesses the main menus or saves your input and exit menus.

S.MENU SuperSign menu key (Depending upon the model, this feature may not be supported.)

Navigation Buttons Scrolls through menus or options.

**OK** 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.

(S)IMPLINK Allows you to control various multimedia devices to enjoy multimedia simply by using the remote control through the SimpLink menu. (Depending upon the model, this feature may not be supported.)

**TILE** This model does not support this.

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

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

# MAKING CONNECTIONS

You can connect various external devices to your monitor. Change the input mode and select the external device you want to connect.

For more information about external device connections, see the user manual provided with each device.

# **Connecting to a PC**

Some of the cables are not provided.

This monitor supports the Plug & Play\* feature.

\* Plug & Play: a feature that enables a PC to recognize devices attached by the user without device configuration or user intervention when powering up.

#### **External Device Connection**

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

Some of the cables are not provided. For the best picture and sound quality, connecting external devices to your monitor using HDMI cables is recommended.



- For the best image quality, using the monitor with HDMI connection is recommended.
- To comply with the standard specifications of the product, use a shielded interface cable with a ferrite core, such as a DVI-D cable.
- If you turn the monitor on when the set is cold, the screen may flicker. This is normal.
- Sometimes red, green, or blue spots may appear on the screen. This is normal.
- Use a High Speed HDMI<sup>®</sup>/™ cable.
- 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<sup>®</sup>/™ Cable
  - High-Speed HDMI®/™ Cable with Ethernet
- If you cannot hear any sound in HDMI mode please check your PC settings. Some PCs require you to manually change the default audio output to HDMI.
- If you want to use HDMI-PC mode, you must set your PC/DTV to PC mode.
- · You may experience compatibility issues if you use HDMI-PC mode.
- Make sure the power cable is disconnected.
- · If you connect a gaming device to the monitor, use the cable provided with the gaming device.
- It is recommended to use the speakers that are provided as optional accessories.
- High Speed HDMI<sup>®</sup>/™ cables transmit a HD signal up to 1080p and higher.

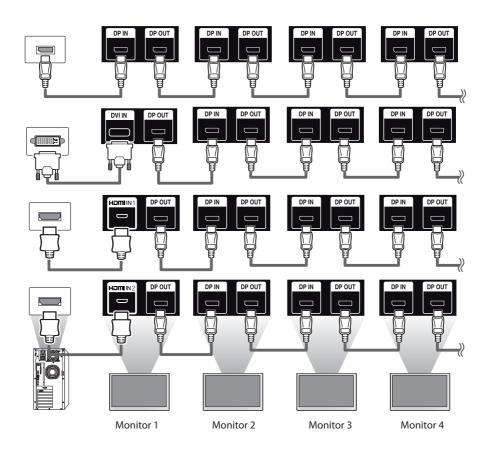


- · Connect the signal input cable and tighten it by turning the screws clockwise.
- Do not press the screen with your finger for a prolonged period as this may result in temporary distortion on the screen.
- Avoid displaying static images on the screen for a long period of time to prevent image burn. Use a screensaver if possible.
- A wireless communication device near your monitor can affect the image.

# **Daisy Chain Monitors**

To use different products connected to each other, connect one end of the signal input cable (DP Cable) to the DP Out connector of Monitor 1 and connect the other end to the DP In connector of the other product.

\* DP Cable - Use a DP cable that is certified to DP1.1a (SST), DP1.2 (MST) or higher.





# **NOTE**

- If you set the tile mode using DVI-D or HDMI, you will not be able to watch HDCP-encrypted content.
- If the signal cable between the product and your PC is too long, make sure to use the Booster or optical cable.

# **Using the Multi Display Mode Function**

The **Multi Display Mode** function displays a video signal received from DP In either in single mode (SST: Single Stream Transport) or multi-mode (MST: Multi Stream Transport) through DP Out.

- This function can be configured in the Installation Menu (For more information, refer to the Installation Menu manual.)
- If it is **On**, the image of each display is displayed in multi-mode.
- If it is **Off**, the image of each display is displayed in single mode.
- The multi-mode is available in a PC supporting DISPLAYPORT 1.2.
- Multi-mode can connect as many as four monitors. (at the recommended resolution)
- When this function is used, your monitor may not work properly depending on the video card. Reboot the PC after setting the function to Off for stable screen output when not in use.
- In case of using DVI-D/HDMI Input to DP daisy chain, please set Multi Display mode function to off.
- This feature is designed to be compatible with the MP700 Media player.

# **Using the Input List**





HDMI1 -> HDMI2 -> DISPLAYPORT -> DVI-D

# **ENTERTAINMENT**

# **Using My Media**

# **Connecting USB Storage Devices**

Connect a USB storage device such as a USB flash memory or an external hard drive to the display and use multimedia features.



#### **CAUTION**

- Do not turn off the monitor or remove a USB storage device when the My Media screen is activated. This could result in loss of files or damage to the USB storage device.
- · Back up files you have saved on a USB storage device frequently, as loss or damage to the files may be not covered by the warranty.

#### Tips for using USB storage devices

- Only a USB storage device can be recognized.
- A USB device does not work effectively when it is connected via a USB hub.
- A USB storage device using an automatic recognition program may not be recognized.
- A USB storage device using its own driver may not be recognized.
- The recognition speed of a USB storage device may depend on each device.
- Please do not turn off the display or unplug the USB storage device when the connected device is working. If the USB storage device is suddenly disconnected, the stored files or the device itself may be damaged.
- Please do not connect a USB storage device which was modified to work on a PC. The device may cause the
  monitor to malfunction or the content to fail to be played. Use only a USB storage device which contains
  normal music, image or video files.
- · A USB storage device formatted as a utility program not supported by Windows may not be recognized.
- A USB storage device (over 0.5 A) which requires an external power supply must be connected to a power supply separately. If it is not, the device may not be recognized.
- Please connect the USB storage device using the cable provided by the device manufacturer.
- Some USB storage devices may not be supported or operate smoothly.
- File alignment method of USB storage devices is similar to that of Window XP and filenames can recognize up to 100 English characters.
- Back up important files regularly as data stored on a USB storage device may be damaged. We will not be responsible for any data loss.
- If the USB HDD does not have an external power source, the USB device may not be detected. To ensure the
  device is detected, connect the external power source.
  - Use a power adapter for an external power source. We do not provide a USB cable for an external power source.
- If your USB storage device has multiple partitions, or if you use a USB multi-card reader, you can use up to four partitions or USB storage devices.
- If a USB storage device is connected to a USB multi-card reader, its volume data may not be detected.
- If the USB storage device does not work properly, disconnect and reconnect it.
- · Detection speed differs from device to device.
- If the USB storage device is connected in Standby Mode, the specific hard disk will automatically be loaded when the display is turned on.
- The recommended capacity is 1 TB or less for a USB external hard drive and 32 GB or less for USB memory stick.
- Any device with more than the recommended capacity may not work properly.
- If a USB external hard drive with an Energy Saving function does not work, try turning the hard drive off and on again.
- USB storage devices below USB 2.0 are also supported but may not function correctly in the videos.
- A maximum of 999 sub-folders or files can be recognized under one folder.

# **Files Supported by My Media**

## **Supported External Subtitle Format**

• \*.smi, \*.srt, \*.sub (MicroDVD, SubViewer 1.0/2.0), \*.ass, \*.ssa, \*.txt (TMPlayer), \*.psb (PowerDivX), \*.dcs (DLP Cinema

## To use Select Play,



• Play Selection plays back selected content.

## To set Device Selection,



• **Device Selection** import contents from the selected device.

# **Supported Internal Subtitle Format**

FULL HD Video
 1920 X 1080: XSUB (Supports internal subtitles generated from DivX6)

# **Supported Video Codec**

Extension	Codec			
.asf	Videos	VC-1 Advanced Profile (excluding WMVA), VC-1 Simple and Main Profiles		
.wmv	Audio	WMA Standard (excluding WMA v1/WMA Speech), WMA 9 Professional		
.divx .avi	Videos	DivX3.11, DivX4, DivX5, DivX6, XViD (except 3 warp-point GMC), H.264/AVC, Motion Jpeg, MPEG-4		
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, Dolby Digital Plus, LPCM, ADPCM, DTS		
.mp4	Videos	H.264/AVC, MPEG-4		
.m4v .mov	Audio	AAC, MPEG-1 Layer III (MP3)		
.3gp	Videos	H.264/AVC, MPEG-4		
.3g2	Audio	AAC, AMR-NB, AMR-WB		
.mkv	Videos	MPEG-2, MPEG-4, H.264/AVC, VP8		
	Audio	Dolby Digital, PCM, DTS, MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Vorbis, AAC		
.ts .trp	Videos	H.264/AVC, MPEG-2		
.tp .mts	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, Dolby Digital Plus, AAC, PCM		
.mpg	Videos	MPEG-1, MPEG-2		
.mpeg .dat	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)		
.vob	Videos	MPEG-1, MPEG-2		
	Audio	Dolby Digital, MPEG-1 Layer I, II, DVD-LPCM		

# **Supported Audio File**

File Format	Item	Information	
.MP3	3 Bit rate 32 Kbps to 320 Kbps		
Sample freq. 16 KHz to 48 KHz Support MPEG1, MPEG2, Layer2, Layer3		16 KHz to 48 KHz	
		MPEG1, MPEG2, Layer3	
.wav	Support	PCM	
.ogg	Support	upport Vorbis	
.wma	Support	WMA	

# **Supported Photo File**

File Format	Format	ltem
2D (jpeg, jpg, jpe)	JPEG	<ul> <li>Minimum: 64 x 64</li> <li>Maximum: Normal Type: 15360 (W) x 8640 (H) / Progressive Type: 1920 (W) x 1440 (H)</li> </ul>
2D (png)	PNG	<ul> <li>Minimum: 64 x 64</li> <li>Maximum: 1920 (W) x 1080 (H)</li> </ul>
2D (bmp)	ВМР	Minimum : 64 x 64     Maximum: 1920 (W) x 1080 (H)

# **Viewing Videos**

Play video files on display. All of the saved video files are shown in your display.

#### To play video files on display

HOME → Videos

#### **Tips for Playing Video Files**

- · Some user-created subtitles may not work properly.
- Some special characters in subtitles are not rendered.
- · HTML tags are not supported in subtitles.
- Subtitles in languages other than the supported languages are not available.
- The screen may suffer temporary interruptions (image stoppage, faster playback, etc.) when the audio language is changed.
- A damaged video file may not play correctly, or some player functions may not be usable.
- Video files produced with some encoders may not be played correctly.
- If the video and audio structure of a recorded file is not interleaved, either video or audio is outputted.
- Depending on the frame, HD videos with a maximum of 1920 x 1080 @ 25/30 P or 1280 x 720 @ 50/60P are supported.
- Depending on the frame, videos with resolutions higher than 1920 x 1080 @ 25/30 P or 1280 x 720 @ 50/60 P may not play correctly.
- Video files other than the specified types and formats may not play correctly.
- Maximum bit rate of playable video file is 20 Mbps. (Motion JPEG: 10 Mbps only)
- · We cannot guarantee smooth playback of files encoded level 4.1 or higher in H.264 / AVC.
- Video files more than 30 GB in file size are not supported.
- A DivX video file and its subtitle file must be located in the same folder.
- A video file name and its subtitle file name must be identical for it to be displayed.
- Playing a video via a USB connection that does not support high-speed connection may not function correctly.
- Files encoded with GMC (Global Motion Compensation) may not be played.



- Option values changed in Videos do not affect the Photos and Music. and in turn are not affected by option values changed in Photos or Music.
- Option values changed in **Photos** and **Music** do affect each other.
- When restarting a video file after stopping it, you can play from the point at which it was stopped.
- Only 10,000 sync blocks can be supported within the subtitle file.
- When playing a video, you can adjust the picture size by pressing the **ARC** button.
- Korean subtitle is supported only when the OSD menu is in Korean.
- The code page options may be disabled depending on the language of the subtitle files.
- · Select the appropriate code page for the subtitle files.

# **Viewing Photos**

The displays on the screen may differ from the model.

Viewing image files

HOME → Photos

## **Listening to Music**

Viewing music files





- Files with unsupported extensions are not displayed.
- If a file is invalid, a broken image and the message Unrecognizable file are displayed.
- Damaged music files are displayed as 00:00 and will not be played.
- A music file downloaded from a paid service with copyright protection will not play, and incorrect information may be displayed during playback.
- You can use , , , , , w, , w buttons on the remote control also in this mode.
- You can use the button to select the next track and the button to select the previous track.
- If you press the button within 5 seconds after playing the song, you will return to the previous song; if you press the same button after 5 seconds, you will return to the start of the song.

## **Settings**

You must register your product to play a DRM-protected DivX video.

In order to register/deregister purchased or rented DivX® VOD contents

 $+OME \rightarrow \bigcirc$  Settings  $\rightarrow$  DivX $^{\circ}$  VOD

In order to play purchased or rented  $DivX^{\otimes}$  VOD contents, you should register your device with the 10-digit DivX registration code from your device at www.divx.com/vod.

- Registration view the registration code of your display.
- Deregistration cancel the registration.



- While you are checking the registration code, some buttons may not work.
- If you use the DivX registration code of another device, you cannot play rented or purchased DivX files. Use only the DivX registration code assigned to your product.
- Video or audio files that are not converted using the standard DivX codec may be corrupted or not play.
- The DivX® VOD code allows you to activate up to 6 devices under one account.
- After deregistration, you must register your device again to see DivX® VOD contents.

# SuperSign Contents

Plays stored files using the Export option in SuperSign Editor.

#### To play back the stored files using the Export option

HOME → #



Only contents distributed by SuperSign Manager are displayed and selectable.



· If there is an AutoPlay folder in the USB storage device and its files are in supported formats, they will be played back automatically when the USB storage device is connected to the monitor.

# File Manager

You can move, copy, or delete files.

#### To move, copy, or delete files

HOME -

- You can move or copy files or folders from internal to external memory.
- · You can move or copy files or folders from external to internal memory.
- · You can delete files or folders from internal or external memory.



## NOTE

- · This app is for managing files and therefore cannot play media files. To play media files, launch My Media.
- · Those files bigger than internal remaining memory aren't allowed to be copied or moved to the internal memory.

# Information

#### To check the basic information of Signage Monitor

HOME→



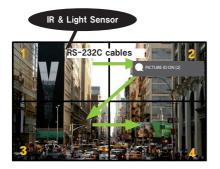
You can see the basic information on Signage Monitor.

You can also switch to Smart Energy Saving Mode or configure Fail Over settings. (You can switch to Smart Energy Saving Mode only when **Energy Saving Mode** is set to Off.)

# **PICTURE ID Settings**

PICTURE ID is used to change the settings of a specific set (display) using a single IR receiver for multi-vision. Communication is possible between a monitor with an IR receiver and other monitors using RS-232C cables. Each monitor is identified by a Set ID. If you assign the PICTURE ID using the remote control, only displays with matching PICTURE ID and Set ID can be controlled remotely.

1 Assign the **Set ID** to the installed monitors as shown below.



- 2 Press the red **ON** button on the remote control to assign the **PICTURE ID**.
- 3 Assign the Set ID to the selection of your choice.
- A set with a different Set ID from the PICTURE ID cannot be controlled by IR signals.



- If PICTURE ID is set to 2, only the upper right monitor, which has a Set ID of 2, can be controlled by IR signals.
- If you press the green OFF button for PICTURE ID, the PICTURE IDs for all monitors are turned off. If you then press any button on the remote control, all monitors can be controlled by IR signals regardless of Set ID.
- With **PICTURE ID ON**, you can only increase the **PICTURE ID** by 1. You cannot decrease it.

# **User Settings**

# **Main Menu Settings**

# **Quick Settings**

Configures frequently used settings menus.

#### To turn your monitor on or off automatically

#### SETTINGS → Quick → On Timer/Off Timer

You can set the On/Off Timer for your monitor. If you do not want to set the On/Off Timer, select Off in Repeat.

#### To set the backlight and contrast automatically

#### SETTINGS → Quick → Smart Energy Saving

According to picture brightness, the brightness of the monitor will be adjusted automatically to save energy.

- Off disables the Smart Energy Saving function.
- On enables the Smart Energy Saving function.

# **Picture Settings**

#### **To Select Picture Mode**

#### SETTINGS → Picture → Picture Mode

Select the picture mode that is best suited to the video type.

- Vivid adjusts the video image for a retail environment by enhancing the contrast, brightness, and sharpness.
- Standard adjusts the video image for a normal environment.
- APS APS (Auto power saving ) mode reduces power consumption by dimming control.
- Cinema optimizes the video image for watching movies.
- **Sports** optimizes the video image for watching sports. Even fast actions such as kicking or throwing a ball are rendered clearly on the screen.
- **Game** optimizes the video image for playing videogames.
- Expert 1/Expert 2 allows an expert, or anyone interested in high quality pictures, to manually tune the picture for the best picture quality.



- Depending on the input signal, the available picture modes may differ.
- Expert is an option that allows a picture quality expert to fine-tune the picture quality using a specific image. Thus, it may not be effective for a normal picture.

#### To fine-tune the picture mode

#### SETTINGS → Picture → Picture Adjust

- **Backlight** adjusts the brightness of the screen by controlling the LCD backlight. The closer the value is to 100, the brighter the screen is.
- **Contrast** adjusts the difference between the light and dark areas of the picture. The closer the value is to 100, the greater the difference is.
- **Brightness** adjusts the overall brightness of the screen. The closer the value is to 100, the brighter the screen is.
- **Sharpness** adjusts the sharpness of the edges of objects. The closer the value is 50, the clearer and the sharper the edge becomes.
- H Sharpness adjusts the sharpness of the contrast edges on the screen from a horizontal point of view.
- V Sharpness adjusts the sharpness of the contrast edges on the screen from a vertical point of view.
- Color softens or deepens the tints on the screen. The closer the value is 100, the deeper the colors become.
- Tint adjusts the balance between red and green levels displayed on the screen. The closer the value is to
  Red 50, the deeper the color red becomes, and the closer the value is to Green 50, the deeper the color
  green becomes.
- Color Temperature adjusts the tints of the screen to evoke feelings of warmth or coolness.
- Advanced Control/Expert Control customizes the advanced options.
  - Dynamic Contrast Optimizes the difference between the light and dark parts of the screen according to the brightness of the image.
  - **Super Resolution** Sharpens the blurry or indistinguishable parts of the picture.
  - Color Gamut Selects the range of colors to display.
  - Dynamic Color Adjusts the tint and saturation of the image for a more vivid and lively display.
  - Edge Enhancer Provides much sharper and clearer edges to the picture.
  - Color Filter Accurately adjusts color and tint by filtering a specific color area of RGB space.
  - Preferred Color Adjusts the skin tint, grass tint, and sky tint to your preference.
  - Gamma Adjusts the medium brightness of the image.
  - White Balance Adjusts the overall tint of the picture to your preference. In Expert mode, you can fine-tune the
    picture using the Method/Pattern options.
  - Color Management System Experts use the color management system when they adjust the colors by using
    the test pattern. The color management system allows you to make an adjustment
    by selecting from among 6 different color spaces (Red/Yellow/Blue/Cyan/Magenta/
    Green) without affecting other colors. You may not see tints change in a normal
    picture even after adjustment.

- Picture Options customizes the picture options.
  - Noise Reduction Removes irregularly generated tiny dots for a clear picture.
  - MPEG Noise Reduction Reduces the noise produced while creating digital video signals.
  - Black Level Adjusts the black level of the picture to correct the brightness and contrast of the picture.
  - Real Cinema Optimizes the video image for a cinematic look.
  - LED Local Dimming Makes the light areas of the screen lighter and the dark areas darker for maximum contrast.
    - Off Disables the LED Local Dimming feature.
    - Low/Medium/High Adjusts the contrast of the screen.
  - **TruMotion** Optimizes the video image for a cinematic look.
    - Off Turns off the TruMotion.
    - Smooth displays fast-moving pictures smoothly.
    - Clear displays fast-moving pictures clearly.
    - User set de-judder manually.
    - \*De-judder adjusts judder on the screen.
- · Reset resets the picture settings.



- · You can adjust advanced settings only in the User mode.
- · Depending upon the input signal or the selected picture mode, the available options may differ.

#### To set the aspect ratio,

#### SETTINGS → Picture → Aspect Ratio

Changes the aspect ratio to view the image in its optimal size.

- 16:9 displays the image with a 16:9 aspect ratio.
- Just Scan displays the image in the original size without cutting off the edges.
   Original is available in HDMI (720p or higher) mode.
- Set By Program automatically changes the aspect ratio to 4:3 or 16:9 depending on the input video signal.
- 4:3 displays the image with a 4:3 aspect ratio.
- Zoom expands the image to fit to the width of the screen. The top and bottom of the image may be cropped.
- Cinema Zoom enlarges the image to have a cinemascope ratio of 2.35:1 without distortion.



# CAUTION

- If a fixed image is displayed on the screen for a long period of time, it will be imprinted and become a
  permanent disfigurement on the screen. This image burn or burn-in is not covered by the warranty.
- If the aspect ratio is set to **4:3** for a long period of time, image burn may occur on the letterboxed area of the screen.
- The options may differ depending on the model.
- Depending on the input signal, the available aspect ratio may differ.
- You can select only 4:3 and 16:9 aspect ratios in HDMI1-PC/ HDMI2-PC/ DISPLAYPORT-PC/ DVI-D(PC) input mode.

#### To use the Energy Saving function

#### SETTINGS → Picture → Energy Saving

Reduces power consumption by adjusting peak screen brightness.

- Auto adjusts the brightness of the monitor according to ambient light. (This feature is available only with certain models.)
- Off disables the Energy Saving mode.
- Minimum/Medium/Maximum uses the Energy Saving according to the Energy Saving level specified for your monitor.
- Screen Off turns off the screen. You will hear audio only. You can turn on the screen again by pressing any button on the remote control except the power button.

#### To use the Smart Energy Saving function

#### SETTINGS → Picture → Smart Energy Saving

According to picture brightness, the brightness of the monitor will be adjusted automatically to save energy.

- Off disables the Smart Energy Saving function.
- On enables the Smart Energy Saving function.

#### To use The Easy Brightness Control

#### SETTINGS → Picture → Easy Brightness Control

The backlight is adjusted according to your schedule.

- Off disables the Easy Brightness Control function.
- On enables the Easy Brightness Control function.



- When Easy Brightness Control is **On**, the **backlight** feature in **Picture Adjust** is disabled.
- When Energy Saving is set to Maximum or Auto, Easy Brightness Control is disabled.
- You can add up to six schedules, and they are sorted by time in ascending order.
- · You can delete added items individually.
- Duplicate schedules are not added. However, the backlight value is updated.
- This feature may not be supported in certain models.

#### To run a Picture Test

#### SETTINGS → Picture → Picture Test

Run a Picture Test to check that picture signals are outputted normally, then solve any problems by selecting the relevant option on the screen. If there are no problems with the Test Picture, check connected external devices.

# **Sound Settings**

#### To select a Sound Mode

#### SETTINGS → Sound → Sound Mode

The best sound quality will be selected automatically depending on the video type currently being watched.

- Standard this sound mode works well for content of all types.
- News optimizes sound for watching news.
- Music optimizes sound for listening to music.
- Cinema optimizes sound for watching movies.
- **Sports** optimizes sound for watching sports.
- Game optimizes sound for playing videogames.

#### To use the Sound Effects function

#### SETTINGS → Sound → Sound Effects

- Clear Voice II enjoy clearer sound with the three-level adjustment.
- Equalizer manually adjust sound by using the equalizer. .
- Balance adjust the output volume for the left speaker and the right speaker.
- Reset reset the sound settings.

#### To select a Volume Increase Rate,

#### SETTINGS → Sound → Volume Increase Rate

You can set the volume range by selecting any of Low/ Medium/ High.

#### To sync audio with video

#### SETTINGS → Sound → AV Sync. Adjust

- Speaker adjusts the sync between video and audio coming from external speakers, such as those
  connected to the digital audio output port, LG audio equipment, or headphones. From the default
  value, the closer the value is to -, the faster the sound output becomes, and the closer the value is
  to +, the slower the sound output becomes.
- Bypass audio coming from external devices without delay. Audio may be outputted earlier than video due
  to the processing time for video that is inputted into the monitor.

#### To Run a sound test

#### SETTINGS → Sound Test

Run a sound test to check that sound signals are outputted normally, then solve any problems by selecting the relevant option on the screen. If there are no problems with the Sound Test, check connected external devices.

# **Network Settings**

#### To Set a Signage Monitor Name

#### SETTINGS → Network → Signage Name

You can set a name for Signage Monitor that will be used on the network by using the on-screen keyboard.

#### To Set Your Network

#### SETTINGS → Network → Wired Connection (Ethernet)

Connecting to a wired network Connect your monitor to a local area network (LAN) via the LAN port,
 and configure the network settings. Only wired network connections
 are supported. After making a physical connection, a small number of
 networks may require the display network settings to be adjusted. For
 most networks, the display will automatically make a connection without
 any adjustments. For detailed information, contact your Internet provider
 or consult your router manual.

#### **Tips for Network Setting**

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



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



- Do not connect a modular telephone cable to the LAN port.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or Internet Service Provider.
- Network Setting menu will not be available until the display is connected to a physical network.

# **General Settings**

#### To configure the language

#### SETTINGS → General → Menu Language

Select one of the languages on the menu displayed on the screen.

Menu Language sets a language for Signage.

#### To set the time/date

#### SETTINGS → General → Time & Date

You can check or change the time.

- Time you can set the time manually.
- · Date you can set the date manually.

#### To apply Daylight Saving Time

#### SETTINGS → General → Daylight Saving Time

You can set the application period for Daylight Saving Time and enable or disable the function by selecting On/Off.

• Start Time / End Time You can set the time by configuring month/nth/day/time settings.



- When setting the Daylight Saving Time, configure the number of week and day of the week settings.
- For example, if the Daylight Saving Time starts on July 7th, 2014, Monday, set the time as July/1st/Mon/00:00 since it is the first Monday of July, 2014.
- Depending on the month, either the fourth or fifth week can be "Last."

#### To turn your monitor on or off automatically

#### SETTINGS → General → Timers

You can set the On/Off Timer for your monitor.

- On Timer you can set the time when your monitor turns on.
- Off Timer you can set the time when your monitor turns off.
- No Signal Power Off (15 minutes) When there is no input source, the monitor will automatically turn off after 15 minutes. If you don't want it to turn off automatically, set No Signal Power Off to Off.
- Auto Power Off When there is no key input, the monitor will automatically turn off.



- On Time/Off Time can be saved for up to seven schedules; the monitor is turned on or off at the preset time
  in the schedule list. If multiple preset times are stored in the schedule list, this function works at the nearest
  time from the current time.
- Once the on or off time is set, these functions operate daily at the preset time.
- The scheduled power-off function works properly only when the device time is set correctly.
- When the scheduled power-on and power-off times are the same, the power-off time has priority over the power-on time if the set is turned on, and vice versa if the set is turned off.

#### To reset your monitor settings

#### SETTINGS → General → Reset to Initial Settings

Resets all monitor settings.

# **TROUBLESHOOTING**

## No image is displayed

Problem	Action
Is the product power cord connected?	<ul> <li>Check if the power cord is correctly plugged into the power outlet.</li> </ul>
Does the <b>Out of range</b> message appear?	<ul> <li>The signal from the PC (video card) is out of the vertical or horizontal frequency range of the product. Adjust the frequency range by referring to the Specifications in this manual.</li> <li>* Maximum resolution: 1920 x 1080 (60Hz)</li> </ul>
Does the <b>Check signal cable</b> message appear?	<ul> <li>The signal cable between PC and product is not connected.</li> <li>Check the signal cable.</li> <li>Press the INPUT menu in the remote Control to check the input signal.</li> </ul>

# The Unknown Product message appears when the product is connected.

Problem	Action
Did you install the driver?	Check if the Plug & Play function is supported by referring
	to the video card user manual.

## The screen image looks abnormal.

Problem	Action
Is the screen position wrong?	Check if the video card resolution and frequency are supported by the product. If the frequency is out of range, set to the recommended resolution in the Control Panel Display Setting menu.
The screen is displayed abnormally.	<ul> <li>The proper input signal is not connected to the signal port.</li> <li>Connect the signal cable that matches with the source input signal.</li> </ul>

# After-image appears on the product.

Problem	Action
After-image appears when the product is turned off.	<ul> <li>If you use a fixed image for a long time, the pixels may be damaged. Use the screen-saver function.</li> </ul>
product is turned on	When a dark image is displayed on the screen after an image
	with high contrast (black and white or gray), this may cause image sticking. This is normal for LCD screen products.

## The audio function does not work.

Problem	Action
No sound?	<ul> <li>See if the audio cable is connected properly.</li> </ul>
	Adjust the volume.
	See if the sound is set properly.
Sound is too dull.	Select the appropriate equalizer sound.
Sound is too low.	Adjust the volume.

# Screen color is abnormal.

Problem	Action
Screen has poor color resolution (16 colors).	<ul> <li>Set the number of colors to more than 24 bits (true color). Select Control Panel - Display - Settings - Color Table menu in Windows.</li> </ul>
Screen color is unstable or mono-colored.	Check the connection status of the signal cable. Or, re-insert the PC video card.
Do black spots appear on the screen?	Several pixels (red, green, white, or black color) may appear on the screen, which can be attributable to the unique characteristics of the LCD panel. This is not a malfunction of the LCD.

# The operation does not work normally.

Problem	Action
The power suddenly turned off.	• Is the <b>Timer</b> set?
	Check the power control settings. Power interrupted.



# NOTE

• The software-related contents may be changed without prior notice due to upgrade of the product functions.



#### **CAUTION**

Image sticking does not occur when using constantly changing images but may occur when using a fixed
image for an extended period of time. Therefore, it is recommended that you use the instructions below
to decrease the likelihood of image sticking occurring when using a fixed image. It is recommended that
you change the screen at least once every 12 hours at the very minimum; if done more frequently, the
prevention of image sticking is more effective.

#### **Recommended operating conditions**

1 Change the background and the character colors using the same time interval.



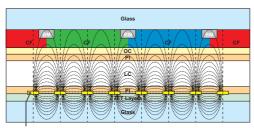
When changing colors, using complementary colors helps to prevent image sticking.

2 Change the image using the same time interval.





Make sure that the characters or images before changing the image remain in the same location after changing the image.



ITO or MoTi Pixel Layer

#### What is image sticking?

When the LCD panel displays a static image for an extended period of time, it can cause a voltage difference between the electrodes that operate the liquid crystals. When the voltage difference between the electrodes builds up over time, liquid crystals have a tendency to remain aligned in one direction. During this process, a previously displayed image remains visible. This phenomenon is referred to as image sticking.

# **PRODUCT SPECIFICATIONS**

LCD screen	Screen type	Thin Film Transistor (TFT)
		Liquid Crystal Display (LCD) Screen
	Pixel pitch	0.210 mm (H) x 0.630 mm (V)
Video signal	Maximum resolution	1920 x 1080 @ 60 Hz
		- This may not be supported on some OS or graphic card types.
	Recommended	1920 x 1080 @ 60 Hz
	resolution	- This may not be supported on some OS or graphic card types.
	Horizontal frequency	HDMI / DVI-D / DISPLAYPORT 30 kHz to 83 kHz
	Vertical frequency	HDMI / DVI-D / DISPLAYPORT 56 Hz to 60 Hz
	Synchronization	Digital
Input ports		USB IN, DP IN, HDMI IN 1, HDMI IN 2, DVI-D IN, AUDIO IN, LAN, PIXEL SENSOR, RS-232C IN, EXT IR IN
Output ports		DP OUT, SPEAKER OUT, RS-232C OUT
Embedded battery		Applied
Power	Rated power	AC 100-240 V~ 50/60 Hz 2.9 A
	Power consumption	On Mode 230 W Typ
		Sleep Mode (DVI-D , HDMI) ≤ 1.0 W
		Sleep Mode(DISPLAYPORT) ≤ 0.7 W
		Off Mode: ≤ 0.5W
Environmental	Operating Temperature	0 °C to 50 °C
Conditions	Operating Humidity	10 % to 80 %
	Storage Temperature	-20 °C to 60 °C
	Storage Humidity	5 % to 95 %
Dimensions (Width x Height x Depth) / Weight		1235.4 mm x 709.4 mm x 106 mm / 27 kg

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

11		
Audio/AUDIO	RMS Audio Output	10 W + 10 W (R + L)
	Input Sensitivity	0.7 Vrms
	Speaker Impedance	8 Ω

The specifications shown above may be changed without prior notice to improve quality.

 $<sup>\</sup>sim$  refers to alternating current (AC), and == refers to direct current (DC).

# HDMI / DVI-D / DISPLAYPORT (PC) Support Mode

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

## DTV mode

Resolution	HDMI / DISPLAYPORT (DTV)
480i	x
576i	х
480p	0
576p	0
720p (50 / 60 Hz)	0
1080i (50 / 60 Hz)	0
1080p (50 / 60 Hz)	0



## NOTE

- PC resolutions available for the Input Label option in HDMI / DVI-D / DISPLAYPORT input modes: 640 x 480/60 Hz, 1280 x 720/60 Hz, 1920 x 1080/60 Hz; 480p, 720p, and 1080p DTV resolutions.
- 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.

# **IR CODES**

All models do not support the HDMI/USB function.

Some key codes may not be supported depending on the model.

Code (Hex)	Function	Remarks
08	<b>O</b> POWER	Remote control button
C4	MONITOR ON	Remote control button
C5	MONITOR OFF	Remote control button
95	Energy Saving	Remote control button
ОВ	INPUT	Remote control button
10	Number Key 0	Remote control button
11	Number Key 1	Remote control button
12	Number Key 2	Remote control button
13	Number Key 3	Remote control button
14	Number Key 4	Remote control button
15	Number Key 5	Remote control button
16	Number Key 6	Remote control button
17	Number Key 7	Remote control button
18	Number Key 8	Remote control button
19	Number Key 9	Remote control button
02	Volume( + )	Remote control button
03	Volume( - )	Remote control button
EO	BRIGHTNESS ^ (Page Up)	Remote control button
E1	BRIGHTNESS <b>∨</b> (Page Down)	Remote control button
DC	3D	Remote control button
32	1/a/A	Remote control button
2F	CLEAR	Remote control button
7E	SIMPLINK	Remote control button
79	ARC(MARK) (Aspect Ratio)	Remote control button
4D	PSM (Picture Mode)	Remote control button
09	MUTE	Remote control button
43	SETTINGS (Menu)	Remote control button
99	Auto Config.	Remote control button
40	Up ▲	Remote control button
41	Down ▼	Remote control button
06	Right ►	Remote control button
07	Left <b>◄</b>	Remote control button
44	ОК	Remote control button
28	BACK	Remote control button

Code (Hex)	Function	Remarks
7B	TILE	Remote control button
5B	EXIT	Remote control button
72	ID ON (RED)	Remote control button
71	ID OFF (GREEN)	Remote control button
63	YELLOW	Remote control Button
61	BLUE	Remote control button
B1		Remote control button
ВО	<b>&gt;</b>	Remote control button
BA	II	Remote control button
8F	₩	Remote control button
8E	<b>&gt;</b>	Remote control button
5F	W.BAL	Remote control button
3F	S.MENU	Remote control button
7C	HOME	Remote control button

<sup>\*</sup> Some key codes are not supported depending on the model.

## TO CONTROL MULTIPLE PRODUCTS

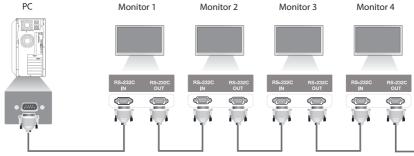
Use this method to connect several products to a single PC. You can control several products at a time by connecting them to a single PC.

In the Option menu, the Set ID must be between 1 and 1000 without being duplicated.

## **Connecting the Cable**

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

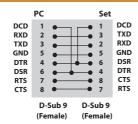
The RS-232C protocol is used for communication between the PC and product. You can turn the product on or off, select an input source or adjust the OSD menu from your PC.



RS-232C Cable (sold separately)

## **RS-232C Configurations**





## **Communication Parameter**

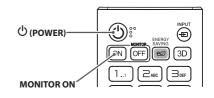
Baud Rate: 9600 BPS
Data Length: 8 bit
Parity Bit: None
Stop Bit: 1 bit
Flow Control: None

Communication Code: ASCII code
Use a crossed (reverse) cable



## NOTE

- When using three-wire connections (non-standard), an IR daisy chain cannot be used.
- When monitors connected via Daisy Chain (that controls multiple monitors) are turned off and on successively, some monitors may not turn on. In this case, you can turn those monitors on by pressing the MONITOR ON button, not the POWER button.



## **Command Reference List**

1			COMMAND		DATA
02         Select input         x         b         See Select Input           03         Aspect Ratio         k         c         See Aspect Ratio           04         Energy Saving         j         q         See Energy Saving           05         Picture Mode         d         x         See Picture Mode           06         Contrast         k         g         00 to 64           07         Brightness         k         h         00 to 64           08         Sharpness         k         k         00 to 32           09         Color         k         i         00 to 64           10         Tint         k         j         00 to 64           11         Color temperature         x         u         00 to 64           12         Balance         k         t         00 to 64           13         Sound Mode         d         y         See Sound Mode           14         Mute         k         e         00 to 01           15         Volume Control         k         f         00 to 64           16         Time 1 (year/month/day)         f         a         See Time 1           17			1	2	(Hexadecimal)
Aspect Ratio	01	Power	k	a	00 to 01
Description	02	Select input	х	b	See Select Input
Second   S	03	Aspect Ratio	k	С	See Aspect Ratio
06         Contrast         k         g         00 to 64           07         Brightness         k         h         00 to 64           08         Sharpness         k         k         00 to 64           09         Color         k         i         00 to 64           10         Tint         k         j         00 to 64           11         Color temperature         x         u         00 to 64           12         Balance         k         t         00 to 64           13         Sound Mode         d         y         See Sound Mode           14         Mute         k         e         00 to 64           15         Volume Control         k         f         00 to 64           16         Time 1 (year/month/day)         f         a         See Time 1           17         Time 2 (hour/minute/second)         f         x         See Time 2           18         Off time schedule         f         c         00 to 01           19         On Time 2 (hour/minute/second)         f         e         See Off Timer           20         Off Timer (Repeat/Time)         f         e         See Off Timer	04	Energy Saving	j	q	See Energy Saving
07         Brightness         k         h         00 to 64           08         Sharpness         k         k         00 to 32           09         Color         k         i         00 to 64           10         Tint         k         j         00 to 64           11         Color temperature         x         u         00 to 64           12         Balance         k         t         00 to 64           13         Sound Mode         d         y         See Sound Mode           14         Mute         k         e         00 to 01           15         Volume Control         k         f         00 to 01           16         Time 1 (year/month/day)         f         a         See Time 1           17         Time 2 (hour/minute/second)         f         x         See Time 2           18         Off time schedule         f         c         00 to 01           19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer Input.     <	05	Picture Mode	d	х	See Picture Mode
08         Sharpness         k         k         00 to 32           09         Color         k         i         00 to 64           10         Tint         k         j         00 to 64           11         Color temperature         x         u         00 to 64           12         Balance         k         t         00 to 64           13         Sound Mode         d         y         See Sound Mode           14         Mute         k         e         00 to 01           15         Volume Control         k         f         00 to 64           16         Time 1 (year/month/day)         f         a         See Time 1           17         Time 2 (hour/minute/second)         f         x         See Time 2           18         Off time schedule         f         c         00 to 01           19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer Input.           23         No Signal Power Off (15Min)         f         g         00	06	Contrast	k	g	00 to 64
09         Color         k         i         00 to 64           10         Tint         k         j         00 to 64           11         Color temperature         x         u         00 to 64           12         Balance         k         t         00 to 64           13         Sound Mode         d         y         See Sound Mode           14         Mute         k         e         00 to 01           15         Volume Control         k         f         00 to 64           16         Time 1 (year/month/day)         f         a         See Time 1           17         Time 2 (hour/minute/second)         f         x         See Time 2           18         Off time schedule         f         c         00 to 01           19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (4 Hours)         m         n <td>07</td> <td>Brightness</td> <td>k</td> <td>h</td> <td>00 to 64</td>	07	Brightness	k	h	00 to 64
10	08	Sharpness	k	k	00 to 32
11	09	Color	k	i	00 to 64
12         Balance         k         t         00 to 64           13         Sound Mode         d         y         See Sound Mode           14         Mute         k         e         00 to 01           15         Volume Control         k         f         00 to 64           16         Time 1 (year/month/day)         f         a         See Time 1           17         Time 2 (hour/minute/second)         f         x         See Time 2           18         Off time schedule         f         c         00 to 01           19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f	10	Tint	k	j	00 to 64
13         Sound Mode         d         y         See Sound Mode           14         Mute         k         e         00 to 01           15         Volume Control         k         f         00 to 64           16         Time 1 (year/month/day)         f         a         See Time 1           17         Time 2 (hour/minute/second)         f         x         See Time 2           18         Off time schedule         f         c         00 to 01           19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d	11	Color temperature	х	u	00 to 64
Mute	12	Balance	k	t	00 to 64
15         Volume Control         k         f         00 to 64           16         Time 1 (year/month/day)         f         a         See Time 1           17         Time 2 (hour/minute/second)         f         x         See Time 2           18         Off time schedule         f         c         00 to 01           19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d	13	Sound Mode	d	у	See Sound Mode
16         Time 1 (year/month/day)         f         a         See Time 1           17         Time 2 (hour/minute/second)         f         x         See Time 2           18         Off time schedule         f         c         00 to 01           19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f	14	Mute	k	е	00 to 01
17         Time 2 (hour/minute/second)         f         x         See Time 2           18         Off time schedule         f         c         00 to 01           19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	15	Volume Control	k	f	00 to 64
18         Off time schedule         f         c         00 to 01           19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	16	Time 1 (year/month/day)	f	a	See Time 1
19         On Time Schedule         f         b         00 to 01           20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	17	Time 2 (hour/minute/second)	f	x	See Time 2
20         Off Timer (Repeat/Time)         f         e         See Off Timer           21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	18	Off time schedule	f	С	00 to 01
21         On Timer (Repeat/Time)         f         d         See On Timer           22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	19	On Time Schedule	f	b	00 to 01
22         On Timer Input         f         u         Refer to On Timer Input.           23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	20	Off Timer (Repeat/Time)	f	е	See Off Timer
23         No Signal Power Off (15Min)         f         g         00 to 01           24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	21	On Timer (Repeat/Time)	f	d	See On Timer
24         Auto Power Off (4 Hours)         m         n         00 to 01           25         Language         f         i         See Language           26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	22	On Timer Input	f	u	Refer to On Timer Input.
25         Language         f         i         See Language           26         Reset         f         k         00,02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	23	No Signal Power Off (15Min)	f	g	00 to 01
26         Reset         f         k         00, 02           27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	24	Auto Power Off (4 Hours)	m	n	00 to 01
27         Current Temperature         d         n         FF           28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	25	Language	f	i	See Language
28         Key         m         c         See Key           29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	26	Reset	f	k	00, 02
29         Time Elapsed         d         I         FF           30         Product Serial Number         f         y         FF	27	Current Temperature	d	n	FF
30 Product Serial Number f y FF	28	Key	m	С	See Key
,	29	Time Elapsed	d	I	FF
31 Software Version f z FF	30	Product Serial Number	f	у	FF
	31	Software Version	f	z	FF
32 White Balance Red Gain j m 00 to FE	32	White Balance Red Gain	j	m	00 to FE
33 White Balance Green Gain j n 00 to FE	33	White Balance Green Gain	j	n	00 to FE
34 White Balance Blue Gain j o 00 to FE	34	White Balance Blue Gain	j	0	00 to FE

		COMMAND		DATA
		1	2	(Hexadecimal)
35	White Balance Red Offset	S	х	00 to 7F
36	White Balance Green Offset	S	у	00 to 7F
37	White Balance Blue Offset	S	Z	00 to 7F
38	Backlight	m	g	00 to 64
39	Screen off	k	d	00 to 01
40	Tile Mode	d	d	00 to FF
41	Check Tile Mode	d	Z	FF
42	Tile ID	d	i	See Tile ID
43	Natural Mode	d	j	00 to 01
44	DPM Select	f	j	00 to 07
45	Power On Delay	f	h	00 to FA
46	Fail Over Select	m	i	00 to 02
47	Fail Over Input Select	m	j	See 'Auto Switch Input Select'
48	Remote Controller Lock	t	р	00 to 02
49	Status Check	S	V	See 'Status Check'
50	Speakers	d	v	00 to 01
51	Daylight Saving Time	S	d	See 'Daylight Saving Time'
52	Wake On Lan	f	w	00 to 01
53	Power Indicator	f	0	00 to 01
54	Fan Control	d	0	00 to 02
55	Fan Failure Check	d	w	FF
56	Luminance Value Read	m	u	00 to 01
57	BLU Maintenance	m	t	00 to 01
58	Easy Brightness Control Mode	S	m	00 to 01
59	Easy Brightness Control Schedule	S	S	See 'Easy Brightness Control Schedule'

<sup>\*</sup> Note: Only the power and key commands can be used while media files are playing from a USB device or internal/external memory. The commands other than the power and key commands will be treated as NG. Some commands may not be supported depending on the model.

## **Transmission/Reception Protocol**

## Transmission

[Command1][Command2][ ][Set ID][ ][Data][Cr]

- \* [Command1]: identifies between the factory setting and the user setting modes.
- \* [Command2]: controls monitor sets.
- \* [Set ID]: Used for selecting a set you want to control. A unique Set ID can be assigned to each set ranging from 1 to 1000(01H~3E8H) under Settings in the OSD menu.

Selecting '00H' for Set ID allows the simultaneous control of all connected monitors.

\* [Data]: Transmits command data.

Data count may increase depending on the command.

- \* [Cr]: Carriage Return. Corresponds to '0x0D' in ASCII code.
- \* []: White Space. Corresponds to '0x20' in ASCII code.

## Acknowledgement

[Command2][][Set ID][][OK/NG][Data][x]

- \*The Product transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is FF, it indicates the present status data. If the data is in data write mode, it returns the data of the PC computer.
- \* If a command is sent with Set ID '00' (=0x00), the data is reflected to all monitor sets and each monitor set does not send an acknowledgement (ACK).
- \* If the data value 'FF' is sent in control mode via RS-232C, the current setting value of a function can be checked (only for some functions).
- \*Some commands are not supported depending on the model.

#### 01. Power (Command: k a)

Controls the power on/off of the set.

Transmission

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

Data 00: Off 01: On

Acknowledgement

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

\*The acknowledgement signal is returned properly only when the monitor is fully powered on.

\* There may be a delay between the transmission and acknowledgement signals.

## 04. Energy Saving (Command: j q)

Sets the Energy Saving.

Transmission

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

Data 00: Off

01: Minimum 02: Medium

03: Maximum 04: Automatic 05: Screen off

Acknowledgement

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

\*\* This may not be supported depending on the model.

## 02. Select Input (Command: x b)

Selects an input signal.

Transmission

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

Data 70: DVI-D (PC)

80: DVI-D (DTV) 90: HDMI1 (DTV) A0: HDMI1 (PC) 91: HDMI2 (DTV) A1: HDMI2 (PC)

C0: DISPLAYPORT (DTV)
D0: DISPLAYPORT (PC)

## Acknowledgement

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

## 05. Picture Mode (Command: d x)

Selects a picture mode.

Transmission

#### [d][x][ ][Set ID][ ][Data][Cr]

Data 00: Vivid 01: Standard 02: Cinema 03: Sports 04: Game 05: Expert 1 06: Expert 2 08: APS

## Acknowledgement

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

## 03. Aspect Ratio (Command: k c)

Adjusts the aspect ratio.

Transmission

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

Data 01: 4:3

02: 16:9 04: Zoom

06: Set by Program

09: Just Scan (720p or higher) 10 to 1F: Cinema Zoom 1 to 16

- \* Available data types differ depending on the input signal. For more information, see the aspect ratio section of the owner's manual.
- \* The aspect ratio may differ depending on the model's input configuration.

## Acknowledgement

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

## 06. Contrast (Command: kg)

Adjusts the screen contrast.

Transmission

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

Data 00 to 64: Contrast 0 to 100

Acknowledgement

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

<sup>\*</sup> Some input signals may not be supported depending on the model.

07. Brightness (Command: k h)

Adjusts the screen brightness.

Transmission

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

Data 00 to 64: Brightness 0 to 100

Acknowledgement

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

10. Tint (Command: k j)

Adjusts the screen tint.

Transmission

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

Data 00 to 64: Tint red 50 to green 50

Acknowledgement

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

## 08. Sharpness (Command: k k)

Adjusts the screen sharpness.

Transmission

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

Data 00 to 32: Sharpness 0 to 50 Acknowledgement

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

11. Color Temperature (Command: x u)

Adjusts the screen color temperature.

Transmission

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

Data 00 to 64: warm 50 to cool 50

Acknowledgement

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

#### 09. Color (Command: ki)

Adjusts the screen color.

Transmission

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

Data 00 to 64: Color 0 to 100 Acknowledgement

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

12. Balance (Command: k t)

Adjusts the sound balance.

Transmission

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

Data 00 to 64: left 50 to right 50

Acknowledgement

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

#### 13. Sound mode (Command: d y)

Selects a sound mode.

Transmission

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

Data 01: Standard

02: Music 03: Cinema

04: Sports 05. Game 07: News

Acknowledgement

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

## 14. Mute (Command: k e)

Mutes/unmutes the sound.

Transmission

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

Data 00: Mute

01: Unmute Acknowledgement

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

## 15. Volume Control (Command: k f)

Adjusts the playback volume.

Transmission

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

Data 00 to 64: Volume 0 to 100

Acknowledgement

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

#### 16. Time 1 (year/month/day) (Command: f a)

Adjusts the Time 1 (year/month/day) value.

Transmission

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

Data1 04~1B: year 2014 to 2037
Data2 01 to 0C: January to December

Data3 01 to 1F: 1st to 31st

\* Enter "fa [Set ID] ff" to view the Time 1 (year/month/day) settings.

Acknowledgement

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

#### 17. Time 2 (hour/minute/second) (Command: fx)

Adjusts the Time 2 (hour/minute/second) value.

Transmission

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

Data1 00 to 17: 00 to 23 hours
Data2 00 to 3B: 00 to 59 minutes
Data3 00 to 3B: 00 to 59 seconds

\* Enter "fx [Set ID] ff" to view the Time 2 (hour/minute/second)

\*\* This function is only available when Time 1 (year/month/day) is set.

Acknowledgement

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

#### 18. Off Time Schedule (Command: f c)

Enables/disables the Off Time Schedule.

Transmission

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

Data 00: Off

01: On Acknowledgement

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

#### 19. On Time Schedule (Command: f b)

Enables/disables the On Time schedule.

Transmission

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

Data 00: Off 01: On

Acknowledgement

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

#### 20. Off Timer (Repeat/Time) (Command: f e)

Configures Off Timer (Repeat/Time) settings.

#### Transmission

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

#### Data1

1. f1h to f7h (reading data)

F1: reads the 1st Off Timer data

F2: reads the 2nd Off Timer data

F3: reads the 3rd Off Timer data

F4: reads the 4th Off Timer data

F5: reads the 5th Off Timer data

F6: reads the 6th Off Timer data F7: reads the 7th Off Timer data

2. e1h-e7h (delete one index), e0h (delete all indexes)

E0: erases all Off Timer settings

E1: erases the 1st Off Timer setting

E2: erases the 2nd Off Timer setting

E3: erases the 3rd Off Timer setting

E4: erases the 4th Off Timer setting

E5: erases the 5th Off Timer setting

E6: erases the 6th Off Timer setting

E7: erases the 7th Off Timer setting

3. 01h to 0Ch (sets the day of the week for the Off Timer)

01: Once

02. Daily

03: Mon - Fri

04: Mon - Sat

05: Sat - Sun

06. Every Sunday

07. Every Monday

08. Every Tuesday

09. Every Wednesday

0A. Every Thursday

0B. Every Friday

OC. Every Saturday

Data2 00 to 17:00 to 23 hours

Data3 00 to 3B: 00 to 59 minutes \* To read or delete the Off Time Schedule list, [Data2][Data3]

must be set to FFH. Example 1: fe 01 f1 ff ff - reads the first index data in Off Timer. Example 2: fe 01 e1 ff ff - deletes the first index data from Off

Timer. Example 3: fe 01 04 02 03 - sets Off Timer to 02:03 from Monday

to Saturday. \* This function is only available when Time 1 (year/month/day) and Time 2 (hour/minute/second) are set.

## Acknowledgement

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

## 21. On timer (Repeat/Time) (Command: f d)

Configures On Timer (Repeat/Time) settings.

## Transmission

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

#### Data1

1. f1h to f7h (reading data)

F1: reads the 1st On Timer data

F2: reads the 2nd On Timer data

F3: reads the 3rd On Timer data

F4: reads the 4th On Timer data

F5: reads the 5th On Timer data

F6: reads the 6th On Timer data F7: reads the 7th On Timer data

2, e1h-e7h (delete one index), e0h (delete all indexes)

E0: erases all On Timer settings

E1: erases the 1st On Timer setting

E2: erases the 2nd On Timer setting

E3: erases the 3rd On Timer setting

E4: erases the 4th On Timer setting

E5: erases the 5th On Timer setting

E6: erases the 6th On Timer setting E7: erases the 7th On Timer setting

3.01h to 0Ch (sets the day of the week for the On Timer)

01: Once 02. Daily

03: Mon - Fri

04: Mon - Sat

05: Sat - Sun

06. Every Sunday

07. Every Monday 08. Every Tuesday

09. Every Wednesday

0A. Every Thursday

0B. Every Friday

OC. Every Saturday

00 to 17: 00 to 23 hours Data2

Data3 00 to 3B: 00 to 59 minutes

\* To read or delete an On Time schedule list, [Data2][Data3] must be set to FFH.

Example 1: fd 01 f1 ff ff - reads the first index data from On Timer.

Example 2: fd 01 e1 ff ff - deletes the first index data from On

Example 3: fd 01 04 02 03 - sets On Timer to 02:03 from Monday to Saturday.

\* This function is only available when Time 1 (year/month/day) and Time 2 (hour/minute/second) are set.

## Acknowledgement

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

#### 22. On Timer Input (Command: fu)

Select an external input for the current On Time setting and add a new schedule.

Transmission

[f][u][][Set ID][][Data1][Cr]

[f][u][][Set ID][][Data1][][Data2][Cr]

Data (Add schedule)

70: DVI-D

90: HDMI1

91: HDMI2 C0: DISPLAYPORT

Data1 (Read schedule)

1. f1h to f7h (Read data)

F1: Select the 1st schedule input

F2: Select the 2nd schedule input

F3: Select the 3rd schedule input

F4: Select the 4th schedule input

F5: Select the 5th schedule input

F6: Select the 6th schedule input

F7: Select the 7th schedule input

Data2 (Read schedule)

FF

\*To read the schedule input, enter FF for [Data2]. If no schedule is available for [Data1] when attempting to read the schedule data, the text 'NG' will be displayed and the operation will fail.

(Example 1: fu 01 90 - Move each schedule input down one row and save the 1st schedule input in HDMI mode.)
(Example 2: fu 01 f1 ff - Read the 1st schedule input.)

\*This function is supported only when 1 (Year/Month/Day), 2 (Hour/Minute/Second), On Time (Repeat Mode/Time) are set.

\*\* It may not be supported depending on the model.

Acknowledgement

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

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

#### 23. No Signal Power Off (15Min) (Command: fg)

Configures the automatic standby settings.

Transmission

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

Data 00: Off 01: On

Acknowledgement

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

#### 24. Auto Power Off (4 Hours) (Command: m n)

Configures the automatic off settings.

Transmission

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

Data 00: Off

01: 4 hours

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

#### 25. Language (Command: fi)

Sets the OSD language.

Transmission

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

Data 00: Czech

01: Danish 02: German

03: English

04: Spanish (Europe)

05: Greek 06: French

07: Italian 08: Dutch

09: Norwegian
0A: Portuguese

0B: Portuguese (Brazil)

OC: Russian

0E: Swedish

0F: Korean

10: Chinese (Mandarin)

11: Japanese

12: Chinese (Cantonese)

## Acknowledgement

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

#### 26. Reset (Command: fk)

Performs the Picture and Factory Reset functions.

Transmission

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

Data

00: Picture Reset

02: Initial Settings (factory reset)

Acknowledgement

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

29. Time Elapsed (Command: d I)

Checks the elapsed time.

Transmission

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

Data FF: Read status Acknowledgement

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

\*The data received is shown as a hexadecimal value.

## 27. Current temperature (Command: d n)

Checks the inside temperature.

Transmission

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

Data FF: Check the status

Acknowledgement

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

Data1 Temperature sensor at the exit (top).

Data2 Temperature sensor at the entrance (bottom).

Data3 Temperature sensor at the main board (main PCB)

\* Temperature is displayed as a hexadecimal value.

## 30. Product serial number (Command: f y)

Checks the serial number of the product.

Transmission

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

Data FF: Check product serial number

Acknowledgement

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

\* Data is in ASCII code.

#### 28. Key (Command: m c)

Sends a key code for the IR remote control.

Transmission

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

Data

IR\_KEY\_CODE

Acknowledgement

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

For key codes, see IR Codes.

\* Some key codes are not supported depending on the model.

## 31. Software Version (Command: f z)

Checks the software version of the product.

Transmission

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

Data FF: Check software version

Acknowledgement

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

## 32. White balance red gain (Command: j m)

Adjusts the white balance red gain value.

Transmission

[j][m][][Set ID][][Data][Cr]

Data

00 to FE: Red Gain 0 to 254 FF: checks the red gain value

Acknowledgement

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

#### 35. White Balance Red Offset (Command: s x)

Adjusts the white balance red offset value.

Transmission

[s][x][][Set ID][][Data][Cr]

Data 00 to 7F: Red Offset 0 to 127
FF: checks the red offset value

Acknowledgement

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

#### 33. White Balance Green Gain (Command: j n)

Adjusts the white balance green gain value.

Transmission

[j][n][][Set ID][][Data][Cr]

Data

00 to FE: Green Gain 0 to 254 FF: checks the green gain value

Acknowledgement

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

## 36. White Balance Green Offset (Command: s y)

Adjusts the white balance green offset value.

Transmission

[s][v][ ][Set ID][ ][Data][Cr]

Data 00 to 7F: Green Offset 0 to 127
FF: checks the green offset value

Acknowledgement

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

## 34. White Balance Blue Gain (Command: j o)

Adjusts the white balance blue gain value.

Transmission

[j][o][][Set ID][][Data][Cr]

Data

00 to FE: Blue Gain 0 to 254

FF: checks the blue gain value

Acknowledgement

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

## 37. White Balance Blue Offset (Command: s z)

Adjusts the white balance blue offset value.

Transmission

[s][z][][Set ID][][Data][Cr]

Data 00 to 7F: Blue Offset 0 to 127

FF: checks the blue offset value

Acknowledgement

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

## 38. Backlight (Command: m g)

Adjusts the backlight brightness.

Transmission

[m][g][ ][Set ID][ ][Data][Cr]

Data 00 to 64: Backlight 0 to 100 Acknowledgement

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

#### 39. Screen Off (Command: k d)

Turns the screen on or off.

Transmission

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

Data

00: turns the screen on

01: turns the screen off

Acknowledgement

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

## 40. Tile Mode (Command: d d)

Sets the Tile Mode and sets values for the tile rows and columns.

Transmission

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

Data

00 to FF: The first byte - tile column The second byte - tile row

\* 00, 01, 10, and 11 mean that the tile mode is off

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

## 41. Check Tile Mode (Command: d z)

Checks the tile mode.

Transmission

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

Data FF: checks the tile mode

Acknowledgement

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

Data1 00: tile mode off 01: tile mode on

Data2 00 to 0F: tile column

Data3 00 to 0F: tile row

#### 42. Tile ID (Command: di)

Sets the tile ID value of the product.

Transmission

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

Data 01 to E1: Tile ID 1 to 225\*\*

FF: checks the tile ID

\*\* The data value cannot exceed the value of row x column.

Acknowledgement

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

\* When a data value that exceeds the value of row x column is entered (except 0xFF),

ACK becomes NG.

## 43. Natural Mode (in Tile mode) (Command: d j)

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

Transmission

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

Data 00: Off

01: On

Acknowledgement

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

## 44. DPM Select (Command: fj)

To set the DPM (Display Power Management) function.

## Transmission

## [f][j][][Set ID][][Data][Cr]

Data

00: Off 01: 5 seconds

31. 3 Second:

02: 10 seconds 03: 15 seconds

04: 1 minutes 05: 3 minutes

06: 5 minutes

07: 10 minutes
Acknowledgement

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

## 45. Power On Delay (Command: f h)

Sets the schedule delay when the power turns on. (unit: seconds).

Transmission

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

Data 00 to FA: min. 0 to maximum 250 (seconds)

Acknowledgement

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

## 46. Fail Over Select (Command: m i)

Selects an input mode for auto switch.

Transmission

[m][i][][Set ID][][Data][Cr]

Data

00: Off 01: Auto 02: Manual

Acknowledgement

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

## 47. Fail Over Input Select (Command: m j)

Selects an input source for auto switch.

\*This command is only available when the Fail Over (auto) mode is set to Custom.

Transmission

[m][j][ ][Set ID][ ][Data1][ ][Data2][ ][Data3][ ][Data4][Cr]

Data 1 to 4 (Input priority: 1 to 4)

70: DVI-D

90: HDMI1 91: HDMI2

C0: DISPLAYPORT Acknowledgement

[j][ ][SetID][ ][OK/NG][Data1][Data2][Data3][Data4][x]

Data 1 to 4 (Input priority: 1 to 4)

70: DVI-D

90: HDMI1

91: HDMI2

C0: DISPLAYPORT

## 48. IR Operation (Command: t p)

Configures the IR operation settings of the product.

Transmission

[t][p][][Set ID][][Data][Cr]

Data 00: locks off all of the keys

01: locks on all of the keys except the Power key

02: locks on all of the keys

Acknowledgement

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

#### 49. Status check (Command: s v)

Check the current signal of the product.

#### Transmission

## [s][v][][Set ID][][Data][][FF][Cr]

Data 02: Checks whether there is a signal

05: Checks whether luminance sensors 1 and 2 work properly.

06: Currently used luminance sensor

07: Checks whether the Top, Bottom, and Main temperature sensors are functioning normally.

08: The temperature of each temperature sensor when the monitor set was last powered off.

09: Fan Speed

Acknowledgement

## [v][][Set ID][][OK/NG][Data][Data1][x]

Data: If the value is 02,
Data1 00: Signal absent
01: Signal present
Data: If the value is 05.

Data: If the value is 05,
Data1 00: All sensors normal

01: BLU sensor 1 normal, BLU sensor 2 down 02: BLU sensor 1 down, BLU sensor 2 normal

03: All sensors down If the value is 06,

00: Luminance sensor 1 currently used 01: Luminance sensor 2 currently used

Data: If the value is 07,

Data:

Data1 00: All temperature sensors are faulty.

01: Top normal, Bottom faulty, Main faulty
02: Top faulty, Bottom normal, Main faulty
03: Top normal, Bottom normal, Main faulty
04: Top faulty, Bottom faulty, Main normal
05: Top normal, Bottom faulty, Main normal
06: Top faulty, Bottom normal, Main normal

07: All temperature sensors are normal If the value is 08.

Data: If the value i
Acknowledgement

## [v][][SetID][][OK/NG][Data][Data1][Data2][Data3][x]

Data1 The temperature of the Top sensor when the

monitor set is last powered off.

Data2 The temperature of the Bottom sensor when the

monitor set is last powered off.

Data3 The temperature of the Main sensor when the

monitor set is last powered off.

Data: if the value is 09,
Acknowledgement

#### [v][][SetID][][OK/NG][Data][Data1][Data2][x]

Data1 00-ff: The upper 1-byte of the fan speed
Data2 00-ff: The lower 1-byte of the fan speed

Fan speed: 0 to 2008 in hexadecimal and 0 to 8200 in decimal  $\,$ 

\*\* Depending on the model, this feature may not be supported.

#### 50. Speakers (Command: d v)

Sets the speakers feature.

Transmission

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

Data 00: Off 01: On

Acknowledgement

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

## 51. Daylight Saving Time (Command: s d)

Sets the Daylight Saving Time feature.

Transmission

[s][d][][Set ID][][Data1][][Data2][][Data3][]

[Data4] [ ][Data5] [Cr]

Data1 00: Off (Data2~5: FFH)

01: Start time 02: End time

Data2 01 to 0C: January to December

Data3 01 to 06: Weeks 1 to 6

\* The maximum value of [Data3] may vary depending on the

date.

Data4 00 to 06 (Sunday to Saturday)
Data5 00 to 17: 00th to 23th hour

\* To read the start/end times, enter FFH in [Data2] through

[Data5].

(Ex. 1: sd 01 01 ff ff ff ff - Checks the start time. Ex. 2: sd 01 02 ff ff ff ff - Checks the end time.)

\*This feature is only available when Clock 1 (year/month/day) and Clock 2 (hour/minute/second) are set.

Acknowledgement

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

[Data3][Data4][Data5][x]

## 52. Wake On Lan (Command: f w)

Selects whether to turn on/off Wake On Lan.

Transmission

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

Data 00: Wake On Lan On

01: Wake On Lan Off

Acknowledgement

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

<sup>\*\*</sup> Depending on the model, this feature may not be supported.

<sup>\*\*</sup> Depending on the model, this feature may not be supported.

#### 53. Power Indicator (Command: f o)

Sets the Power Indicator Settings.

Transmission

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

Data 00: Off 01: On

Acknowledgement

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

\*\* Depending on the model, this feature may not be supported.

#### 54. Fan control (Command: d o)

Sets the fan mode.

Transmission

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

Data 00: Auto

01: On 02: Manual

03: Off

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

\*\* Depending on the model, this feature may not be supported.

## 55. Fan Failure Check (Command: d w)

Checks for fan failures.

Transmission

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

Data FF: Status read

Acknowledgement

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

Data 1 00: One or more fans are faulty. 01: All fans are normal

02: The model has no fan.

Data2 00: No fan is faulty (all fans are normal).

01: 1 fan is faulty.

02: 2 fans are faulty.

03: 3 fans are faulty.

04: 4 fans are faulty.

05: 5 fans are faulty.

#### 56. Luminance Value Read (Command: m u)

Reads luminance values.

Transmission

[m][u][ ][Set ID][ ][FF][Cr]

Acknowledgement

[u][][SetID][][OK/NG][Data1][Data2][Data3][Data4]

[Data5][Data6][Data7][x]

Data1 00 to 64: The Backlight PWM value (0 to 100)

Data2 00 to ff: The upper 1-byte of the value measured by

the CA-210.

Data3 00 to ff: The lower 1-byte of the value measured by

the CA-210. CA-210 measurement: 0000 to ffff in hexadecimal and 0 to 65535

in decimal.

00 to ff: The upper 1-byte of the value measured by Data4

BLU 1 sensor.

Data5 00 to ff: The lower 1-byte of the value measured by

BLU 1 sensor.

Data6 00 to ff: The upper 1-byte of the value measured by BLU 2 sensor.

00 to ff: The lower 1-byte of the value measured by

Data7

BLU 2 sensor

BLU measurements: 0000 to ffff in hexadecimal and 0 to 65535 in decimal

\* During final assembly, a CA-210 measurement is entered through the calibration procedure. The default value, before calibration, is 0.

## 57. BLU Maintenance (Command: mt)

Selects whether to turn on/off BLU Maintenance.

Transmission

[m][t][][Set ID][][Data][Cr]

Data 00: BLU Maintenance Off

01: BLU Maintenance On

Acknowledgement

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

\*\* Depending on the model, this feature may not be supported.

## 58. Easy Brightness Control Mode (Command: s m)

Selects whether to turn on/off Easy Brightness Control Mode.

Transmission

[s][m][][Set ID][][Data][Cr]

00: Easy Brightness Control Off Data 01: Easy Brightness Control On

Acknowledgement

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

<sup>\*\*</sup> Depending on the model, this feature may not be supported.

<sup>\*</sup> This function does not work if the current time is not set.

<sup>\*\*</sup> Depending on the model, this feature may not be supported.

#### 59. Easy Brightness Control Schedule (Command: s s)

Sets an Easy Brightness Control schedule.

#### Transmission

## [s][s][][Set ID][][Data1][][Data2][][Data3][Cr]

#### Data1

1. f1 to f6 (data reading)

F1: Reads the 1st data from the Easy Brightness Control

F2: Reads the 2nd data from the Easy Brightness Control

F3: Reads the 3nd data from the Easy Brightness Control

F4: Reads the 4th data from the Easy Brightness Control

F5: Reads the 5th data from the Easy Brightness Control

F6: Reads the 6th data from the Easy Brightness Control

2. FF: Reads all stored lists

3. e1-e6 (deletes one index); e0 (deletes all indexes)

E0: Deletes all Easy Brightness Controls

E1: Deletes the 1st Easy Brightness Control

E2: Deletes the 2nd Easy Brightness Control

E3: Deletes the 3rd Easy Brightness Control

E4: Deletes the 4th Easy Brightness Control

E5: Deletes the 5th Easy Brightness Control E6: Deletes the 6th Easy Brightness Control

4. 00 to 17: 00th to 23th hour

Data2 00 to 3B: 00th to 59th minute
Data3 00 to 64: Backlight, 0 to 100

- \* If you want to read or delete the configured Easy Brightness Control lists, set [Data2][Data3] to FF.
- \* If you want to import all the configured Easy Brightness Control lists through FF, do not enter any values in [Data2] [Data3].
- \* When all the configured Easy Brightness Control lists are imported through FF, OK is acknowledged even if there is no stored list.

Example 1: ss 01 f1 ff ff - Reads the first index data from the Easy Brightness Control.

Example 2: ss 01 ff - Reads all index data from the Easy Brightness Control.

Example 3: ss 01 e1 ff ff - Deletes the first index data from the Easy Brightness Control.

Example 4: ss 01 07 1E 46 - Adds a schedule whose time is 07:30 and whose backlight is 70.

## Acknowledgement

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

<sup>\*\*</sup> Depending on the model, this feature may not be supported.



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.

**WARNING** -This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

MODEL \_\_\_\_\_\_
SERIAL

To obtain the source code under GPL, LGPL, MPL, and other open source licenses, that is contained in this product, please visit http://opensource.lge.com. In addition to the source code, all referred license terms, warranty disclaimers and copyright notices are available for download.

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

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