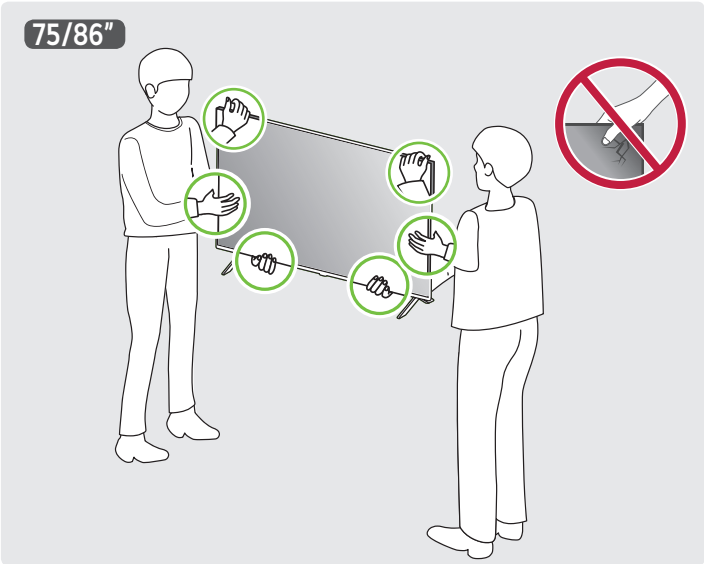
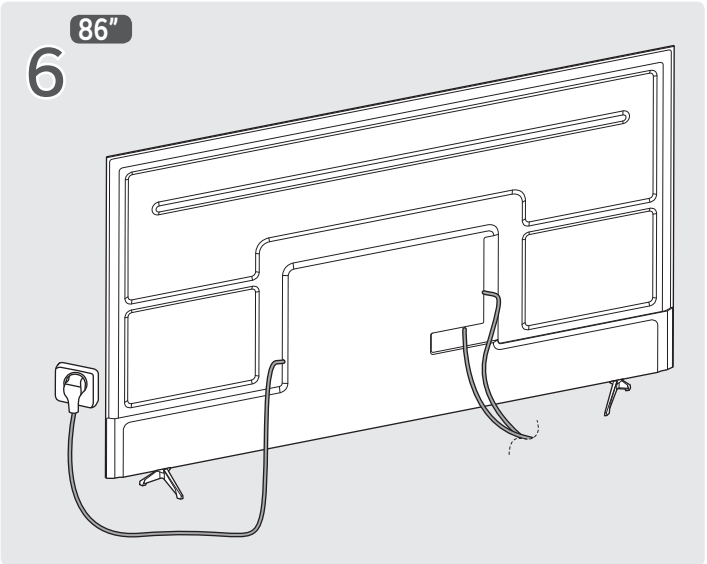
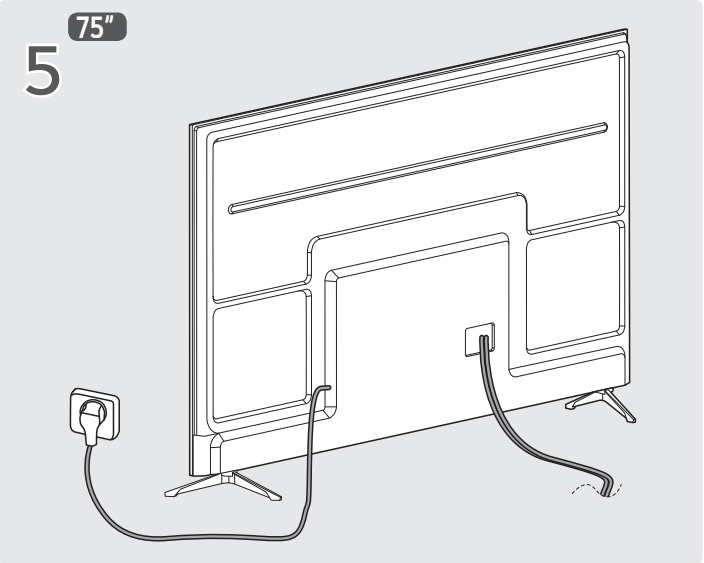
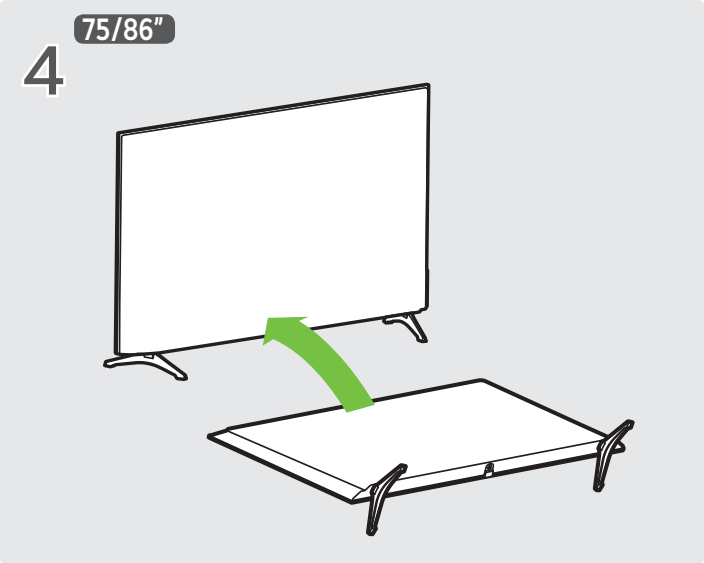
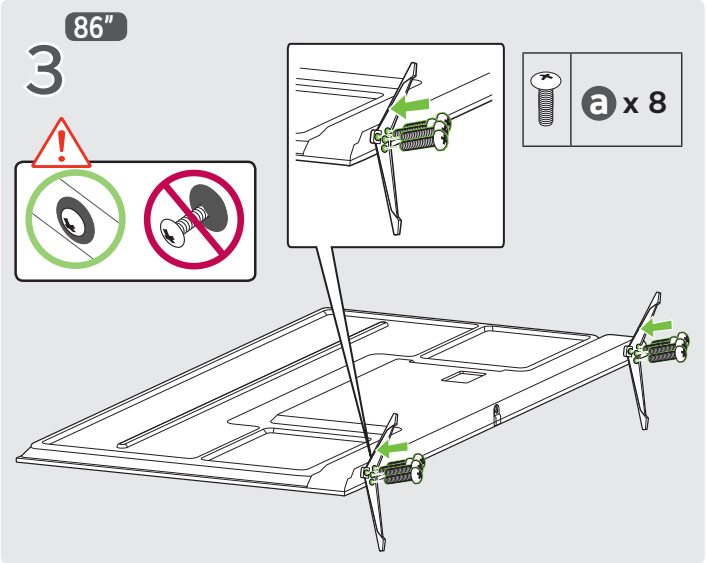
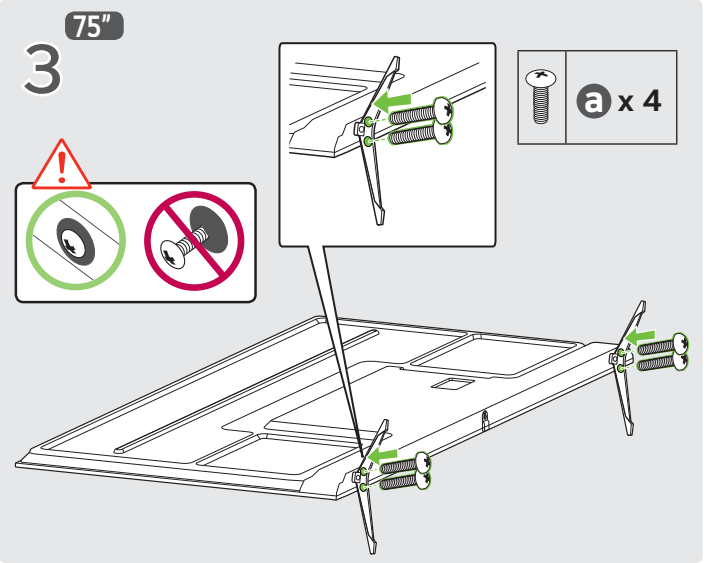
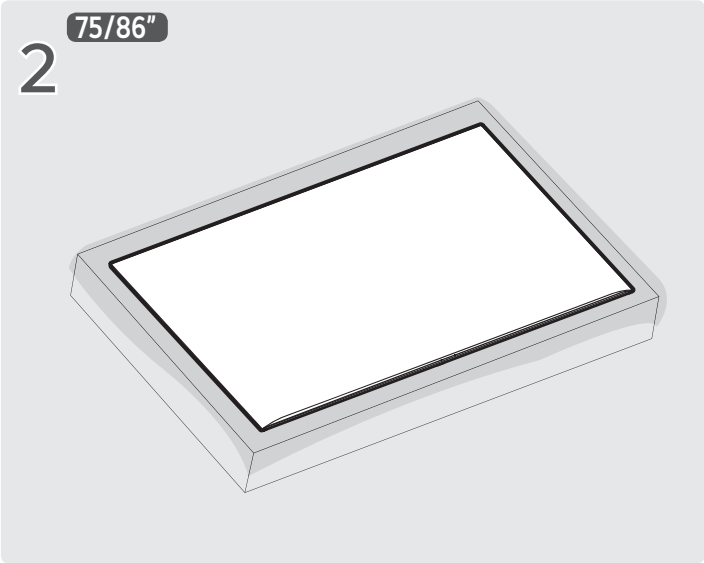
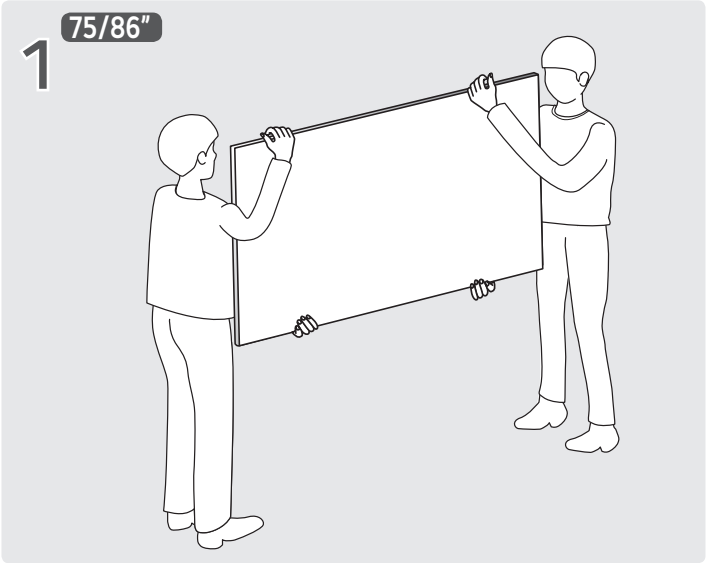
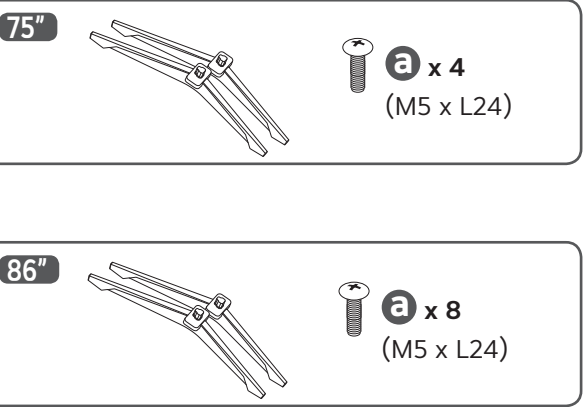
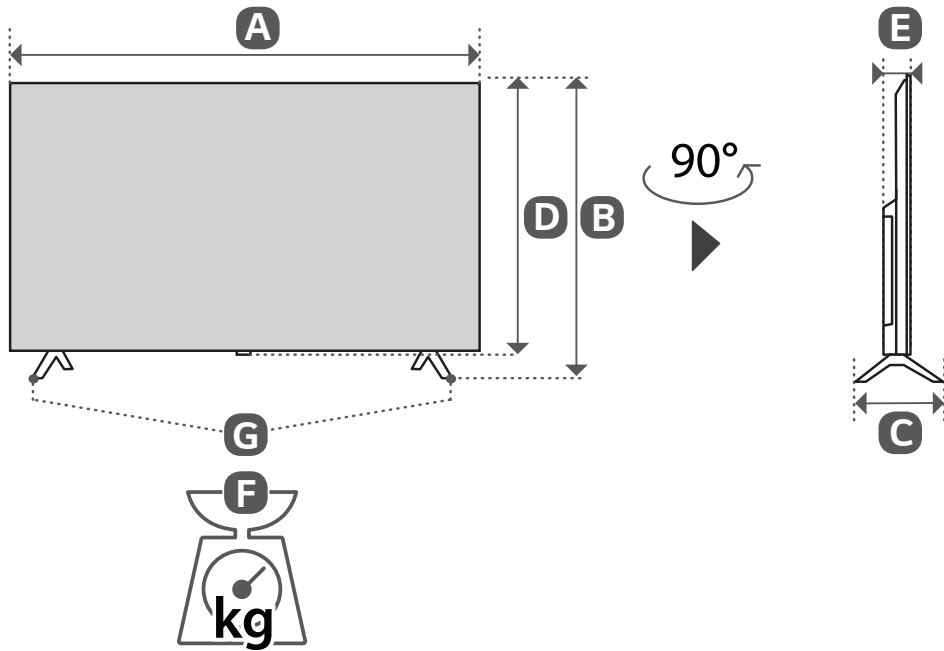
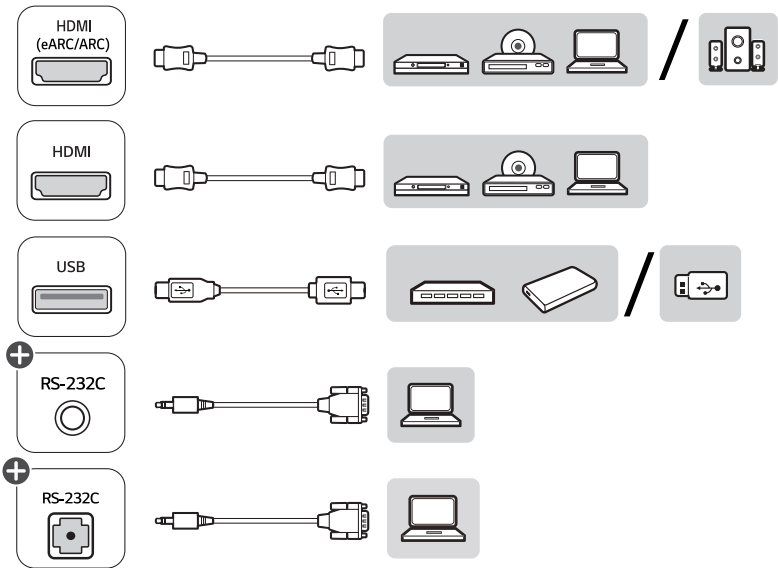
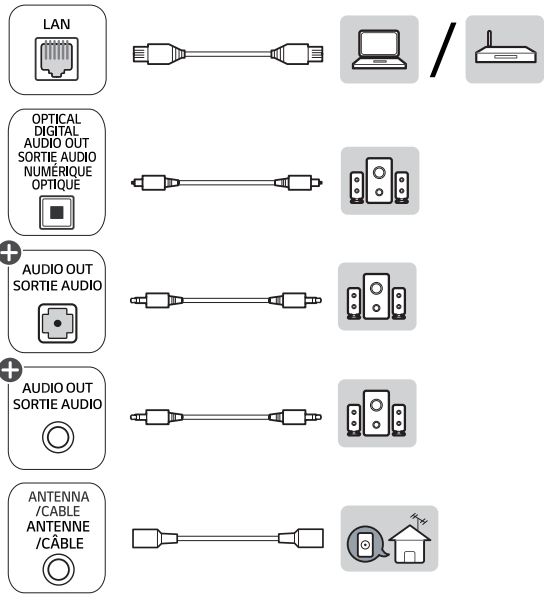


75PK640S0UA 75PK340S0UA
86PK640S0UA 86PK340S0UA





mm (inches / pulgadas / po)
kg (lbs / libras / lb)

	A	B	C	D	E	F	F - G	
75PK640S0UA 75PK340S0UA	1 668 mm (65.6) inches	1 031 mm (40.5) inches	344 mm (13.5) inches	960 mm (37.7) inches	59.8 mm (2.3) inches	24 kg (52.9) lbs	23.5 kg (51.8) lbs	201 W
86PK640S0UA 86PK340S0UA	1 920 mm (75.5) inches	1 182 mm (46.5) inches	413 mm (16.2) inches	1 102 mm (43.3) inches	59.8 mm (2.3) inches	34 kg (74.9) lbs	33.4 kg (73.6) lbs	226 W



OWNER'S MANUAL

Safety and Reference

LED TV*

* LG LED TV applies LCD screen with LED backlights.

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

43PK640S0UB	43PK340S0UB
50PK640S0UB	50PK340S0UB
55PK640S0UB	55PK340S0UB
65PK640S0UB	65PK340S0UB
75PK640S0UA	75PK340S0UA
86PK640S0UA	86PK340S0UA



* M F L 0 5 8 2 2 4 0 1 2 5 0 7 R E V 0 1 *

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Important Safety Instruction

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Warning! Safety instructions



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.



The symbol is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying this apparatus.

WARNING: TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

- TO PREVENT THE SPREAD OF FIRE, KEEP CANDLES OR OTHER ITEMS WITH OPEN FLAMES AWAY FROM THIS PRODUCT AT ALL TIMES.
- **Do not place the TV and/or remote control in the following environments:**
 - Keep the product away from direct sunlight.
 - An area with high humidity such as a bathroom
 - Near any heat source such as stoves and other devices that produce heat.
 - Near kitchen counters or humidifiers where they can easily be exposed to steam or oil.
 - An area exposed to rain or wind.
 - Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g., on shelves above the unit).

- Near flammable objects such as gasoline or candles, or expose the TV to direct air conditioning.
- Do not install in excessively dusty places. Otherwise, this may result in fire, electric shock, combustion/ explosion, malfunction or product deformation.

• Ventilation

- Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase.
- Do not install the product on a carpet or cushion.
- Do not block or cover the product with cloth or other materials while unit is plugged in.
- Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot.
- Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the device.
- Do not move the TV whilst the Power cord is plugged in.
- Do not use a damaged or loosely fitting power cord.
- Be sure to grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.
- Do not connect too many devices to the same AC power outlet as this could result in fire or electric shock.
- **Disconnecting the Device from the Main Power**
 - The power plug is the disconnecting device. In case of an emergency, the power plug must remain readily accessible.
- Do not let your children climb or cling onto the TV. Otherwise, the TV may fall over, which may cause serious injury.

- **Outdoor Antenna Grounding** (Can differ by country):
 - If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits as death or serious injury can occur. Be sure the antenna system is grounded to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode. Antenna grounding according to the National Electrical Code, ANSI/NFPA 70
- **Grounding** (Except for devices which are not grounded.)
 - TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet. Ensure that you connect the earth ground wire to prevent possible electric shock.
- Never touch this apparatus or antenna during a lightning storm. You may be electrocuted.
- Make sure the power cord is connected securely to the TV and wall socket if not secured damage to the Plug and socket may occur and in extreme cases a fire may break out.
- Do not insert metallic or inflammable objects into the product. If a foreign object is dropped into the product, unplug the power cord and contact the customer service.
- Do not touch the end of the power cord while it is plugged in. You may be electrocuted.
- **If any of the following occur, unplug the product immediately and contact your local customer service.**
 - The product has been damaged.
 - If water or another substance enters the product (like an AC adapter, power cord, or TV).
 - If you smell smoke or other odors coming from the TV.
 - When lightning storms or when unused for long periods of time.

Even the TV is turned off by remote control or button, AC power source is connected to the unit if not unplugged in.
- Do not use high voltage electrical equipment near the TV (e.g., a bug zapper). This may result in product malfunction.
- Do not attempt to modify this product in any way without written authorization from LG Electronics. Accidental fire or electric shock can occur. Contact your local customer service for service or repair. Unauthorized modification could void the user's authority to operate this product.
- Use only an authorized attachments / accessories approved by LG Electronics. Otherwise, this may result in fire, electric shock, malfunction, or product damage.
- Never disassemble the AC adapter or power cord. This may result in fire or electric shock.
- Handle the adapter carefully to avoid dropping or striking it. An impact could damage the adapter.
- To reduce the risk of fire or electrical shock, do not touch the TV with wet hands. If the power cord prongs are wet or covered with dust, dry the power plug completely or wipe dust off.

• Batteries

- Store the accessories (battery, etc.) in a safe location out of the reach of children.
- Do not short circuit, disassemble, or allow the batteries to overheat. Do not dispose of batteries in a fire. Batteries should not be exposed to excessive heat.
- Caution: Risk of fire or explosion if the battery is replaced by an incorrect type.

• Moving

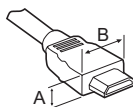
- When moving, make sure the product is turned off, unplugged, and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press or put stress on the front panel of the TV. Otherwise, this may result in product damage, fire hazard or injury.
- Keep the packing anti-moisture material or vinyl packing out of the reach of children.
- Do not allow an impact shock, any objects to fall into the product, and do not drop anything onto the screen.
- Do not press strongly upon the panel with a hand or a sharp object such as a nail, pencil, or pen, or make a scratch on it. It may cause damage to screen.

• Cleaning

- When cleaning, unplug the power cord and wipe gently with a soft/dry cloth. Do not spray water or other liquids directly on the TV. Do not clean your TV with chemicals including glass cleaner, any type of air freshener, insecticide, lubricants, wax (car, industrial), abrasive, thinner, benzene, alcohol etc., which can damage the product and/or its panel. Otherwise, this may result in electric shock or product damage.

Preparing

- When the TV is turned on for the first time after being shipped from the factory, initialization of the TV may take approximately one minute.
- Image shown may differ from your TV.
- Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.
- The available menus and options may differ from the input source or product model that you are using.
- New features may be added to this TV in the future.
- The device must be easily accessed to a location outlet near the access. Some devices are not made by turning on / off button, turning off the device and unplugging the power cord.
- The items supplied with your product may vary depending upon the model.
- Product specifications or contents of this manual may be changed without prior notice due to upgrade of product functions.
- For an optimal connection, HDMI cables and USB devices should have bezels less than 10 mm (0.39 inches) thick and 18 mm (0.7 inches) width.
- Use an extension cable that supports USB 2.0 if the USB cable or USB flash drive does not fit into your TV's USB port.
- 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
 - Ultra High Speed HDMI®/™ cable (3 m (9.84 feet) or less)



- * $A \leq 10 \text{ mm}$
(0.39 inches)
- * $B \leq 18 \text{ mm}$
(0.7 inches)

- Do not use any unapproved items to ensure the safety and lifespan of the product.
- Any damages or injuries by using unapproved items are not covered by the warranty.

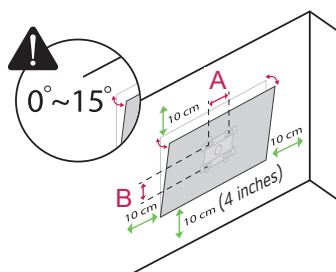
Optional Extras

Optional extras can be changed or modified for quality improvement without any notification. Contact your dealer for buying these items. These devices work only with certain models.

The model name or design may be changed due to the manufacturer's circumstances or policies. (Depending upon model)

Wall Mounting Bracket

Make sure to use screws and wall mounts that meet the VESA standard. Standard dimensions for the wall mount kits are described in the following table.



Model	43PK640S0UB 50PK640S0UB 55PK640S0UB 65PK640S0UB	43PK340S0UB 50PK340S0UB 55PK340S0UB 65PK340S0UB
VESA (A x B) (mm)	200 x 300	
Standard screw	M6	
Number of screws	4	
Wall mount bracket (optional)	Buy a suitable wall mount kit in the market by referring to this table for each model.	
Model	75PK640S0UA 75PK340S0UA	86PK640S0UA 86PK340S0UA
VESA (A x B) (mm)	300 x 300	400 x 400
Standard screw	M8	M8
Number of screws	4	4
Wall mount bracket (optional)	Buy a suitable wall mount kit in the market by referring to this table for each model.	

Lifting and Moving the TV

When moving or lifting the TV, read the following to prevent the TV from being scratched or damaged and for safe transportation regardless of its type and size.

- It is recommended to move the TV in the box or packing material that the TV originally came in.
- Before moving or lifting the TV, disconnect the power cord and all cables.
- When holding the TV, the screen should face away from you to avoid damage.
- Hold the top and bottom of the TV frame firmly. Make sure not to hold the transparent part, speaker, or speaker grille area.
- Use at least two people to move a large TV.
- When transporting the TV, do not expose the TV to jolts or excessive vibration.
- When transporting the TV, keep the TV upright; never turn the TV on its side or tilt towards the left or right.
- When handling the TV, be careful not to damage the protruding buttons.



- Avoid touching the screen at all times, as this may result in damage to the screen.
- Do not place the product on the floor with its front facing down without padding. Failure to do so may result in damage to the screen.
- Do not move the TV by holding the cable holders, as the cable holders may break, and injuries and damage to the TV may occur. (Depending upon model)
- When attaching the stand to the TV set, place the screen facing down on a cushioned table or flat surface to protect the screen from scratches. (Depending upon model)

Mounting on a Table

(Depending upon model)

1 Lift and tilt the TV into its upright position on a table.

- Leave a 10 cm (4 inches) (minimum) space from the wall for proper ventilation.

2 Connect the power cord to a wall outlet.

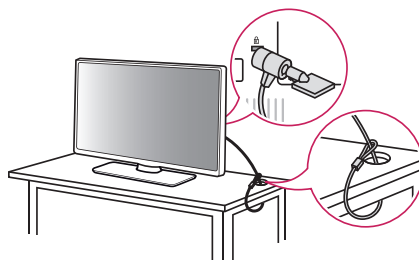


- Do not apply foreign substances (oils, lubricants, etc.) to the screw parts when assembling the product. (Doing so may damage the product.)
- If you install the TV on a stand, you need to take actions to prevent the product from overturning. Otherwise, the product may fall over, which may cause injury.
- Do not use any unapproved items to ensure the safety and product life span.
- Any damage or injuries caused by using unapproved items are not covered by the warranty.
- When assembling the stand, ensure that all of the provided screws are attached. If the screws are not fully tightened, the product may tilt or tip over, resulting in damage. Tightening the screws with excessive force may cause them to come off due to abrasion of the screw joint.

Using the Kensington Security System (optional)

(Depending upon model)

The Kensington security system connector is located at the rear of the TV. For more information of installation and using, refer to the manual provided with the Kensington security system or visit <http://www.kensington.com>. Connect the Kensington security system cable between the TV and a table.



- The Kensington security system is optional. You can obtain additional accessories from your local dealer.

Securing TV to the Wall

- 1** Insert and tighten the eye-bolts or TV brackets and bolts on the back of the TV.
 - If there are bolts inserted at the eye-bolts position, remove the bolts first.
- 2** Mount the wall brackets with the bolts to the wall. Match the location of the wall bracket and the eye-bolts on the rear of the TV.
- 3** Connect the eye-bolts and wall brackets tightly with a sturdy rope or cable. Make sure to keep the rope parallel to the flat surface.
 - Use a platform or cabinet that is strong and large enough to support the TV securely.
 - Brackets, bolts, and ropes are optional. You can obtain additional accessories from your local dealer.



- Remove the stand before installing the TV on a wall mount by performing the stand attachment in reverse. (Depending upon model)
- For more information of screws and wall mount bracket, refer to the Separate purchase.
- If you intend to mount the product to a wall, attach VESA standard mounting interface (optional parts) to the back of the product. When you install the set to use the wall mounting bracket (optional parts), fix it carefully so as not to drop.
- When mounting a TV on the wall, make sure not to install the TV by hanging the power and signal cables on the back of the TV.
- 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.

Mounting on a Wall

An optional wall mount can be used with your LG Television. Consult with your local dealer for a wall mount that supports the VESA standard used by your TV model. Carefully attach the wall mount bracket at the rear of the TV. Install the wall mount bracket on a solid wall perpendicular to the floor. If you are attaching the TV to other building materials, please contact qualified personnel to install the wall mount. Detailed instructions will be included with the wall mount. We recommend that you use an LG brand wall mount. The LG wall mount is easy to adjust or to connect the cables. When you do not use LG's wall mount bracket, use a wall mount bracket where the device is adequately secured to the wall with enough space to allow connectivity to external devices. If you are using a non-adjustable mount, attach the mount to the wall. Attach the cables to the TV first, then attach the TV to the mount.

- When installing the wall mounting bracket, it is recommended to cover the stand hole using tape, in order to prevent the influx of dust and insects. (Depending upon model)

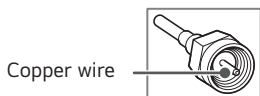
Connections

You can connect various external devices to the TV. For more information on external device's connection, refer to the manual provided with each device.

Antenna/Cable

Connect an antenna, cable, or cable box to watch TV while referring to the following. The illustrations may differ from the actual items and an RF cable is optional.

- Make sure not to bend the copper wire of the RF cable.



- Complete all connections between devices, and then connect the power cord to the power outlet to prevent damage to your TV.
- Use a signal splitter to use 2 TVs or more.
- This TV cannot receive ULTRA HD (3840 x 2160 pixels) broadcasts directly because the related standards have not been confirmed.
(Depending upon model)

Other connections

Connect your TV to external devices. For the best picture and audio quality, connect the external device and the TV with the HDMI cable.

HDMI

- Supported HDMI Audio format:
(Depending upon model)
AC3(Dolby Digital), EAC3, PCM



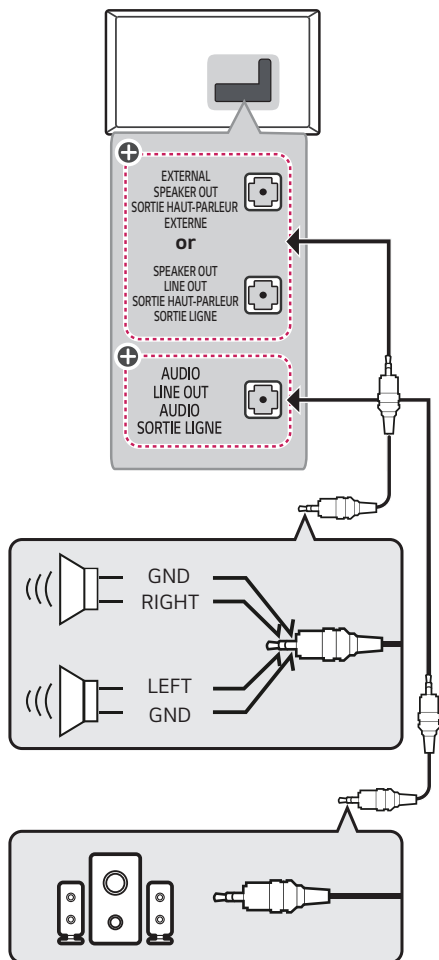
- If the device connected to Input Port also supports HDMI Deep Color, your picture may be clearer. However, if the device doesn't support it, it may not work properly. In that case, change the TV's [HDMI Deep Color] setting to off.
(Depending upon model)
-  ►  ► [General] ► [External Devices] ► [HDMI Settings] ► [HDMI Deep Color] (Depending upon model)

USB

- Some USB Hubs may not work. If a USB device connected through a USB Hub is not detected, connect it directly to the USB port on the TV.
- It is recommended that you use a USB hub or USB HDD with a power supply. (If the power supplied is not sufficient, the USB storage device may not be detected properly.)
- It is recommended that you use an external USB HDD with a rated voltage of 5 V or less and a rated current of 500 mA or less.

External Speakers

(Depending upon model)



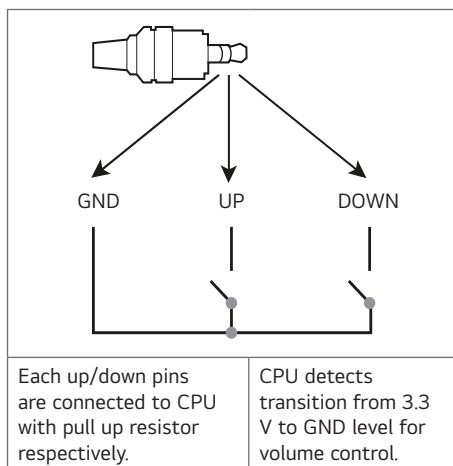
⊕: Depending upon model

- Use only with the 3 pole 3.5 mm stereo jack.
- Do not connect your headphones or earphones to the port for connecting an external speaker.

Method of volume control port

(Depending upon model)

- Cable Spec.



External Devices

Supported external devices are: Blu-ray player, HD receivers, DVD players, VCRs, audio systems, USB storage devices, PC, gaming devices, and other external devices.

- The external device connections shown may differ slightly from illustrations in a manual.
- Connect external devices to the TV regardless about the order of the TV port.
- If you connect a gaming device to the TV, use the cable supplied with the gaming device.
- Refer to the external equipment's manual for operating instructions.
- In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the [Picture] menu until the picture is clear. Depending upon the graphics card, some resolution settings may not allow the image to be positioned on the screen properly.
- When connecting via a wired LAN, it is recommended to use a CAT 7 cable.

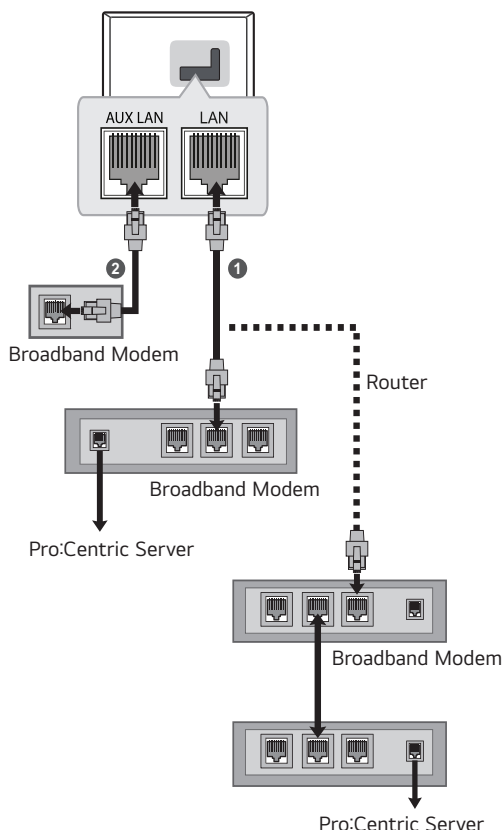
Network setup

(Depending upon model)

Wired network connection

This TV can be connected to a Pro:Centric server via the **LAN** port. After making the physical connection, the TV needs to be set up for network communication.

Connect the **LAN** port of the Modem or Router from Pro:Centric server to the **LAN** port on the TV.

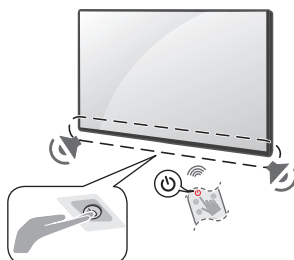


- 1) Connect the **LAN** port of the Modem or Router to the **LAN** port on the TV.
- 2) Connect the **LAN** port of the PC to the **AUX LAN** port on the TV. (Depending upon model)

- Do not connect a modular phone cable to the **LAN** port.
- Since there are various connection methods, please follow the specifications of your telecommunication carrier or internet service provider.

Using the Button

You can simply operate the TV functions, using the button.



Basic Functions

	Power On (Press)
	Power Off ¹⁾ (Press and Hold)
	Menu Control (Press ²⁾)
	Menu Selection (Press and Hold ³⁾)

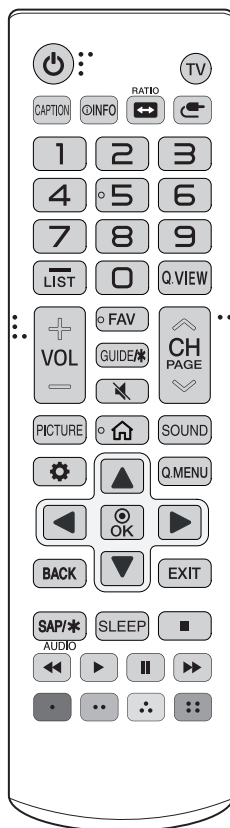
- 1) All running apps will close.
- 2) You can access and adjust the menu by pressing the button when TV is on.
- 3) You can use the function when you access menu control.

Using Remote Control

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

To install batteries, open the battery cover, replace batteries (1.5 V AAA) matching the $\oplus$ and $\ominus$ ends to the label inside the compartment, and close the battery cover.

To remove the batteries, perform the installation actions in reverse. This remote uses infrared light. When in use, it should be pointed in the direction of the TV's remote sensor.



(Some buttons and services may not be provided depending upon models or regions.)

* To use the button, press and hold for more than 3 seconds.

⏻ (Power) Turns the TV on or off.

TV Returns to the last TV channel.

CAPTION Activates or deactivates the subtitles.

ⓘ INFO Shows information on the current program.

RATIO
↔ Resizes an image.

📶 (Input) Changes the input source.

Number button Enters numbers.

□ * Pressing and holding the button accesses the quick access menu.

— (Dash) Inserts a dash between numbers such as 2-1 and 2-2.

LIST Accesses the saved channel list.

Q.VIEW Alternates between the two last channels selected (pressing repeatedly).

+ VOL — Adjusts the volume level.

FAV Accesses your favorite channel list. (This function is not supported.)

GUIDE/* Displays the program event according to time scheduler.

🔇 (Mute) Mutes all sounds.

🔇 (Mute) * Pressing and holding the button accesses the [Accessibility Shortcuts] menu.

^ CH v Scrolls through the saved channels.

^ PAGE v Moves to the previous or next screen.

PICTURE Changes the picture mode.

🏠 (Home) Accesses the Home menu.

SOUND Changes the sound mode.

⚙ (Settings) Accesses the quick setting menu.

⚙ (Settings) * Pressing and holding the button accesses the setting menu.

Q.MENU Accesses the quick menu.

Navigation button (up / down / left / right)
Scrolls through menus or options.

⦿ OK Selects menus or options and confirms your input.

BACK Returns to the previous screen.

EXIT Clears all on-screen displays and returns to TV viewing.

SAP/* Enables SAP (Secondary Audio Program) Feature.

AUDIO Digital signal: Changes the audio language.
Analog signal: Changes the MTS sound.

SLEEP Sets the length of time until the TV to turns off.

■, ◀, ▶, ⏮, ⏭ Control buttons for media contents
⏮, ⏭, ⏪, ⏩ These access special functions in some menus.



- Do not mix new batteries with old batteries. This may cause the batteries to overheat and leak.
- Failure to match the correct polarities of the battery may cause the battery to burst or leak, resulting in fire, personal injury, or ambient pollution.
- This apparatus uses batteries. In your community there might be regulations that require you to dispose of these batteries properly due to environmental considerations. Please contact your local authorities for disposal or recycling information.
- Batteries inside or inside the product shall not be exposed to excessive heat such as sunshine, fire or the like.

Troubleshooting

The software may be updated for improvement in performance. The customer is responsible to ensure the compatibility of their equipment with any LG Electronics software. If needed, please consult with LG Electronics and update new software versions according to the guidance provided by LG Electronics.

- Cannot control the TV with the remote control.
 - Check if anything such as tape has been placed over the receiver.
 - Check if there is any obstacle between the product and the remote control.
 - Replace the batteries with new fresh ones.
- No image display and no sound is produced.
 - Check if the product is turned on.
 - Check if the power cord is connected to a wall outlet.
 - Check if there is a problem in the wall outlet by connecting other products.
- The TV turns off suddenly.
 - Check the power control settings. The power supply may be interrupted.
 - Check if the auto-off function is activated on the settings related time.
 - If there is no signal while the TV is on, the TV will turn off automatically after 15 minutes of inactivity.
- When connecting to the PC (HDMI), no signal is detected.
 - Turn the TV off/on using the remote control.
 - Reconnect the HDMI cable.
 - Restart the PC with the TV on.
- **Abnormal Display**
 - If the TV feels cold to the touch, there may be a small flicker when it is turned on. This is normal; there is nothing wrong with TV. Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the TV's performance. Avoid touching the LCD screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

- This panel is an advanced product that contains millions of pixels. In a very few cases, you could see fine dots on the screen while you're viewing the TV. Those dots are deactivated pixels and do not affect the performance and reliability of the TV.
- Displaying a still image for a prolonged period of time may cause an image sticking. Avoid displaying a fixed image on the TV screen for an extended length of time.

• Generated Sound

- **Cracking noise** A cracking noise that occurs when watching or turning off the TV is generated by plastic thermal contraction due to temperature and humidity. This noise is common for products where thermal deformation is required.
- **Electrical circuit humming/panel buzzing** A low level noise is generated from a high-speed switching circuit, which supplies a large amount of current to operate a product. It varies depending upon the product. This generated sound does not affect the performance and reliability of the product.



- When cleaning the product, be careful not to allow any liquid or foreign objects to enter the gap between the upper, left or right side of the panel and the guide panel. (Depending upon model)
- Make sure to wring any excess water or cleaner from the cloth.
- Do not spray water or cleaner directly onto the TV screen.
- Make sure to spray just enough of water or cleaner onto a dry cloth to wipe the screen.

Settings

(Depending upon Model)

Selecting Picture Mode

⚙️ (Settings) ▶️ 📺 ▶️ [Picture] ▶️ [Select Mode]

Select the picture mode that is best suited to your viewing environment, preferences or video type.

- [Vivid] Sharpens the image by increasing the contrast, brightness and sharpness.
- [Standard] Displays the picture with natural contrast, brightness and sharpness levels.
- [Basic] Displays the picture in the manufacturer's basic setting which is optimized for normal viewing.
- [Cinema] Suitable picture for movies.
- [Sports] / [Soccer] Suitable picture for sports games. Sharpens the image of rapid movements such as kicking or throwing a ball.
- [FILMMAKER MODE] Provides optimized Cinema Picture quality certified by UHD Alliance, the standard setting body for UHD-related technologies.
- [Expert (Bright space, daytime)] / [Expert (Dark space, night)] Suitable for movies, etc. viewed in a dark environment. [Expert (Dark space, night)] has lower color temperature than [Expert (Bright space, daytime)]. Select a mode that is suitable for the movie you are watching.
- If an HDR/Dolby Vision video signal is input to the models that do not support the HDR/Dolby Vision technology, normal signal picture mode options will be made available.
- Depending upon the input signal, the available picture models may be different.
- When watching online service content, the Picture Mode may be changed to match the content being shown.
- [Expert] is an option that allows a picture quality expert to fine-tune the quality of the standard picture. Thus, it may not be effective for a normal picture.
- [Select Mode] changes may modify [Energy Saving] and [Motion Eye Care] settings and it can affect energy consumption.

Adjusting the Brightness of a Picture

⚙️ (Settings) ▶️ 📺 ▶️ [Picture] ▶️ [Advanced Settings] ▶️ [Brightness]

Adjust the brightness of the entire screen.

- [Panel Brightness] Controls the level of screen brightness by adjusting the backlight.
- [Adjust Contrast] Adjusts the contrast of the bright and dark areas of the picture.
- [Black Level] Adjusts the brightness of dark areas of the screen.
- [Auto Dynamic Contrast] Corrects the difference between the bright and dark areas of the screen for optimal results depending upon the brightness of the picture.
- [Gamma(Adjust Brightness)] Adjusts the medium brightness of the picture.
- [Video Range] Adjusts the darkness of the screen in order to display a perfect black.
- [Motion Eye Care] Automatically adjusts brightness and reduces image blur based on image data which reduces eyestrain.
- Depending upon the input signal or the selected picture mode, the available options may differ.
- The configurable items differ depending upon model.

To use Energy Saving Feature

⚙️ (Settings) ▶️ 📺 ▶️ [General] ▶️ [Energy Saving]

Reduces power consumption by adjusting peak screen brightness.

- [No Signal Auto Off] Configure how the TV operates when there is no video signal for a certain period.
- [Energy Saving Step]
 - [Off]: Turns off the [Energy Saving Step].
 - [Minimum]/[Medium]/[Maximum]: Use the power saving feature according to [Energy Saving Step] set on TV.
- [Screen Off] Screen is turned off and only sound is played.

Specifications

Product specifications may be changed without prior notice due to upgrade of product functions.
Estimated yearly energy consumption indicated on the FTC label is measured in accordance with the Test Procedures for Television Sets (USA only).
The actual energy consumption depends on the usage environment (The content watched, TV settings, etc.).

Power requirement	AC 120 V~ 50 / 60 Hz
-------------------	----------------------

Broadcasting Specifications	
Television system	ATSC, NTSC-M, 64 & 256 QAM
Program coverage (Band)	VHF 2-13, UHF 14-69, DTV 2-69, CATV 1-135, CADTV 1-135
External antenna impedance	75 Ω

Environment condition	
Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating Humidity	Less than 80 %
Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Storage Humidity	Less than 85 %

Open Source Software Notice Information

To obtain the source code that is contained in this product, under GPL, LGPL, MPL, and other open source licenses that have the obligation to disclose source code, and to access all referred license terms, copyright notices and other relevant documents, please visit <https://opensource.lge.com>.

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 to anyone in receipt of this information for a period of three years after our last shipment of this product.

Updating Firmware

(Depending upon model)

You can update the firmware for the product by downloading the latest firmware.

- 1 Download the latest firmware at partner.lge.com. (Signing up for a membership and log-in required)
- 2 Create a folder named "LG_DTV" or "lg_dtv" on a USB memory device.
- 3 Move the downloaded file to the folder that you have created on the USB memory device.
- 4 Connect the USB memory device to the USB port on your TV.
- 5 When a pop-up window appears, start the update by following the instructions.

Licenses

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

Manufactured under license from Dolby Laboratories. Dolby, Dolby Vision, Dolby Vision IQ, Dolby Audio, Dolby Atmos, and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.



The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

CRESTRON CONNECTED



The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by LG Electronics Inc. is under license. Other trademarks and trade names are those of their respective owners.

Regulatory

FCC Notice

(For USA)

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radio Frequency Interference Requirements (for UNII devices)

(For USA)

High power radars are allocated as primary users of the 5.25 to 5.35 GHz and 5.65 to 5.85 GHz bands. These radar stations can cause interference with and/or damage this device. This device cannot be co-located with any other transmitter.

Transmitters in the 5.925-7.125 GHz band are prohibited from operating to control or communicate with unmanned aircraft systems.

FCC RF Radiation Exposure Statement

(For USA)

[For having wireless function (WLAN, Bluetooth,...)]

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with minimum distance 20 cm (7.8 inches) between the antenna and your body. Users must follow the specific operating instructions for satisfying RF exposure compliance.

Industry Canada Statement

(For Canada)

[For having wireless function (WLAN, Bluetooth,...)]

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

IC Radiation Exposure Statement

(For Canada)

[For having wireless function (WLAN, Bluetooth,...)]

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm (7.8 inches) between the antenna & your body.

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

RSS-247 Requirement

(For Canada)

[For product having the wireless function using 5 GHz frequency bands]

- (1) The device for operation in the band 5150–5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- (2) For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
- (3) For devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate; and
- (4) [For devices operating in the band 5250-5350 MHz having an e.i.r.p. greater than 200 mW] Antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 of RSS-247 shall be clearly indicated.

Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

[For product having the wireless function using 6 GHz frequency bands]

- (1) Devices shall not be used for control of or communications with unmanned aircraft systems.
- (2) Devices shall not be used on oil platforms.
- (3) Devices shall not be used on aircraft, except for the low-power indoor access points, indoor subordinate devices, low-power client devices, and very low-power devices operating in the 5925-6425 MHz band, that may be used on large aircraft as defined in the Canadian Aviation Regulations, while flying above 3,048 meters (10,000 feet).
- (4) Devices shall not be used on automobiles.
- (5) Devices shall not be used on trains.
- (6) Devices shall not be used on maritime vessels.

NOTE TO CABLE/TV INSTALLER

(For USA and Canada)

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

WARNING! (STABILITY HAZARD)

A television set may fall, causing serious personal injury or death. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- ALWAYS use cabinets or stands or mounting methods recommended by the manufacturer of the television set.
- ALWAYS use furniture that can safely support the television set.
- ALWAYS ensure the television set is not overhanging the edge of the supporting furniture.
- ALWAYS educate children about the dangers of climbing on furniture to reach the television set or its controls.
- ALWAYS route cords and cables connected to your television so they cannot be tripped over, pulled or grabbed.
- NEVER place a television set in an unstable location.
- NEVER place the television set on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television set to a suitable support.
- NEVER place the television set on cloth or other materials that may be located between the television set and supporting furniture.
- NEVER place items that might tempt children to climb, such as toys and remote controls, on the top of the television or furniture on which the television is placed.

If the existing television set is going to be retained and relocated, the same considerations as above should be applied.

Symbols

	Refers to alternating current (AC).
	Refers to direct current (DC).
	Refers to class II equipment.
	Refers to stand-by.
	Refers to "ON" (power).
	Refers to dangerous voltage.

LG Take-back & Recycling Policy

(For USA)

LG Electronics offers a customized e-waste take-back & recycling service that meets local needs and requirements in the countries where e-waste regulations are in place, and also provides product take-back & recycling service voluntarily in some regions. LG Electronics evaluates products' recyclability at the design step selectively, with the goal of improving recyclability where practicable. Through these activities, LG Electronics seeks to contribute to conserving natural resources and protecting the environment. For more information, please visit our global site at <https://www.lg.com/recycling>



Supplier's Declaration of Conformity

Trade Name	LG
Responsible Party	LG Electronics USA, Inc.
Address	111 Sylvan Avenue, North Building, Englewood Cliffs, NJ 07632
E-mail	lg.environmental@lge.com

The model and serial number of the product are located on the back and on one side of the product. Record them below in case you ever need service.

MODEL _____

SERIAL NO. _____

LG Customer Information Center

For inquiries or comments,
visit www.lg.com or call;

1-888-865-3026	USA, Commercial User
1-855-286-2456	CANADA



INSTALLATION MANUAL

LED TV*

* LG LED TV applies LCD screen with LED backlights.

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

UK6**

PK3**

PK6**

UK7**

UK5**

UK3**

STB-75**



* M F L 0 5 7 7 9 0 1 *

(2506-REV01)

www.lg.com

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! NOTE

- The word “TV” in titles and menu items may appear as “STB” or “Device” on certain models.
- Some features described in the manual may not be supported in certain models and countries.

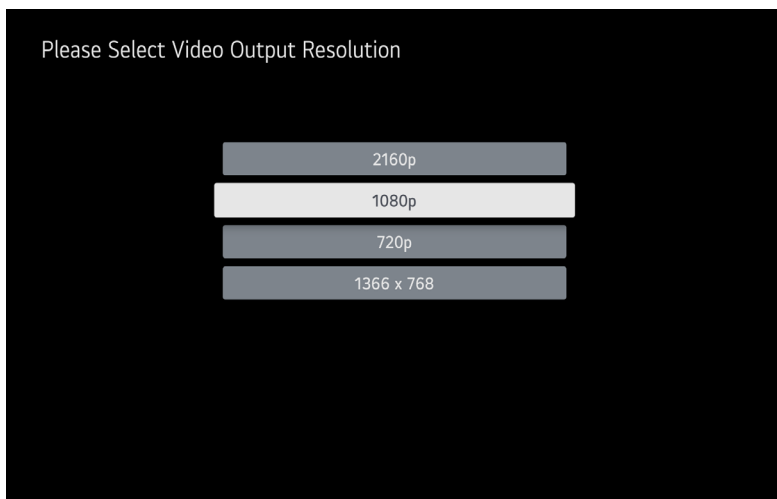
First Use Wizard

* Image shown may differ from your device.

Screen Resolution

(Depending on model)

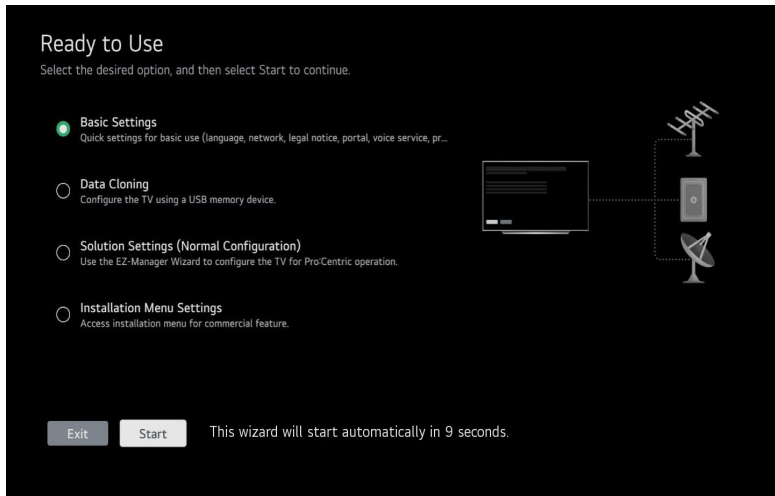
The first time you turn ON the STB/display panel, a prompt to select the screen resolution will be displayed, and you will need to select the appropriate option — 2160p, 1080p, 720p, 1366 x 768 — for the STB’s video output format. You cannot proceed with STB configuration until you make a selection.



- If you select this option, the Please Select the Screen Resolution screen will close and the EZManager Wizard Welcome screen will be displayed.
- If you select one of the other four resolution options, a Changing the Resolution screen will be displayed, and the STB will reboot within a few seconds to change the resolution per your selection. When the STB reboot is complete (it may take several minutes), you will be prompted to confirm the new video output resolution. Use the arrow keys on the Installer Remote to select **YES** in the confirmation window, and then press **OK** on the Installer Remote.
- If there is no user interaction within 10 seconds, or if you select “No” in the confirmation window, the STB will reboot and revert to the default resolution. After this reboot is complete, the Please Select the Screen Resolution screen will be redisplayed.

(Depending on model)

- There are four options - **Basic Settings**, **Data Cloning**, **Solution Settings**, and **Installation Menu Settings**. Each menu can access by **START** button.
(Normal Configuration is the default focus item.)



Basic Settings

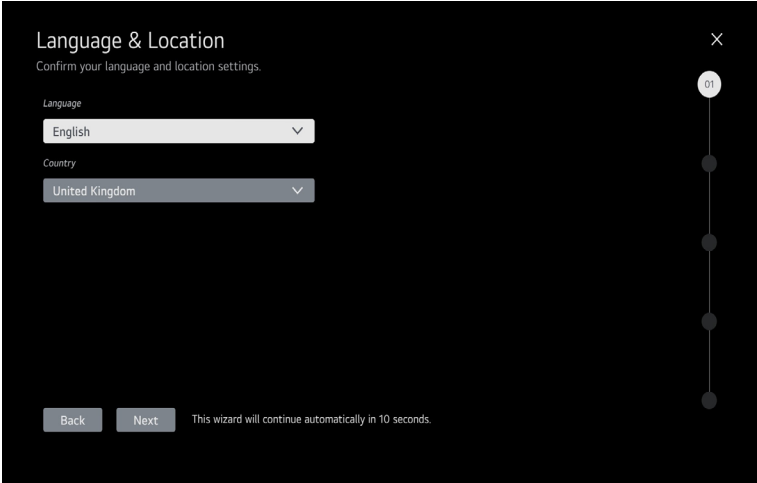
* Image shown may differ from your device.

This menu is for Basic Settings related to language, network, portal, voice service coverage and channel tuning without SI (Pro:Centric) setting. There are four steps for it.

Language & Location

(Depending on model)

- Select the **Language** and **Country**. Some countries need to select the Time Zone.



Network Settings

(Depending on model)

- Set Network connection. You can connect easily to wired/wireless network. ("Network" on page 32)
Wireless (Auto Wi-Fi) : Connect a default hidden SSID/PW. (SSID : lgwebostv, PW : procentric, Security : WPA/WPA2 PSK)

Network Settings

Configure network settings.

Network Connection Type

Wired (Ethernet)

Advanced options

IPv6

Enabled

Automatically Assign IP Address

IP Address

192.168.0.32

Subnet Mask

255.255.255.0

Back

Next

02

Legal Notice

(Depending on model)

These are the terms and conditions related to use of the Smart device service and protection of privacy.

Legal Notice

×

Welcome to LG Smart TV Services!

LG Smart TVs provide access to a number of features and services, including streaming movies, music, and games, as well as the ability to browse the Internet. Before you can start using these Smart TV Services, you'll be presented with our Privacy Policy, Terms of Use, and a few other documents that seek your agreement to use specific features and services. These documents describe how the Smart TV Services work, tell you what kinds of information LGE collects from your Smart TV, and set out your rights and obligations as a Smart TV user. Please read each of these documents carefully. You will have a chance to revisit these documents at any time from the Settings menu on your Smart TV. Note that not all Smart TV features and services are available in all countries. Depending on where you live, certain features and services may not be available to you. If you have questions or want further information about our practices, please contact our customer-service department.

LEGAL NOTICE

PLEASE READ THIS LEGAL NOTICE CAREFULLY BEFORE ACCESSING OR USING YOUR LG SMART TV. YOUR USE OF YOUR TV IS SUBJECT TO THE TERMS SET OUT BELOW. BY USING YOUR TV, YOU AGREE TO ALL OF THESE TERMS.

Please note that if you connect your TV to the Internet, you may be presented with additional terms to which you will need to agree before you can use certain Internet-connected features.

Back

Next

This wizard will continue automatically in 10 seconds.

03

User Agreements

×

Please agree to the User Agreements. To read the Terms and Conditions, go to Settings > Support > Privacy & Terms.

☐ Privacy Policy

Privacy Policy

Our Privacy Policy explains and seeks your agreement to the collection, use, and sharing of information that we obtain as a result of your use of LG Smart TV Services, as well as to our use of cookies. You do not have to agree to the Privacy Policy, but if you choose not to, certain Smart TV Services will not be available to you. In this case, we will still receive certain non-identifying information from your Smart TV that we need to provide the basic functions that are available.

1. Introduction
2. What information does LGE obtain?
3. How will LGE use the information it obtains?
4. Information Sharing with Third Parties
5. Overseas Transfers
6. How long will LGE keep my personal information?
7. Security

Back

Later

Agree

This wizard will continue automatically in 10 seconds.

03

Portal Settings

(Depending on model)

- Set the Portal Mode and Portal Auto Start.

Portal Mode

(Depending on model)

- You can select 'Default Portal' (Use webOS default portal), 'Customizable Portal' (Use editable Portal), or 'None' (Do not use portal).

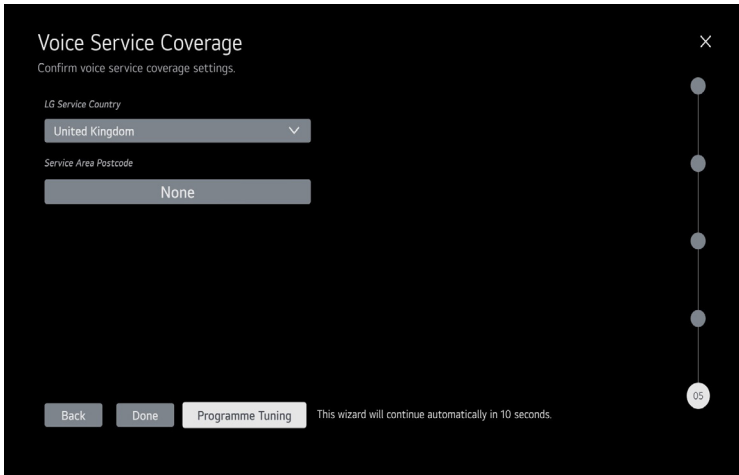
Portal Auto Start

- You can select 'On' or 'Off'. If you select 'On', Portal (Home Launcher) will be executed automatically after the device is turned on.

Voice Service Coverage

(Depending on model)

- Set the voice service coverage. You can set **LG Service Country** and **Service Area Postcode**(Depending on model) for voice service.
- Some models display the title as LG Services Country.



The image shows a 'Voice Service Coverage' settings screen. At the top, the title 'Voice Service Coverage' is displayed, followed by the instruction 'Confirm voice service coverage settings.' Below this, there are two settings: 'LG Service Country' with a dropdown menu showing 'United Kingdom' and a downward arrow, and 'Service Area Postcode' with a text field containing 'None'. At the bottom, there are three buttons: 'Back', 'Done', and 'Programme Tuning'. To the right of these buttons, a message states 'This wizard will continue automatically in 10 seconds.' On the far right, there is a vertical progress indicator with four dots, the bottom one of which is highlighted and labeled '05'.

Voice Service Coverage

Confirm voice service coverage settings.

LG Service Country

United Kingdom

Service Area Postcode

None

Back Done Programme Tuning

This wizard will continue automatically in 10 seconds.

05

Data Cloning

(Depending on model)

Access Data cloning menu of TV Manager application for applying cloning file.

Solution Settings

(Depending on model)

The Pro:Centric Platform enables you to simply install, manage and use guest-centric solutions. The default Domain "procentric.local" and IP Server Address are needed to be registered in DNS. The device will contact the IP Server using the default Domain "procentric.local" via IP on server search page. If the device doesn't contact the Server, the device will search the pre-defined channel earlier than all channels.

Language & Location selection

(Depending on model)

Language & Location

Confirm your language and location settings.

Language

Português

Country

Brazil

Time Zone

Select...

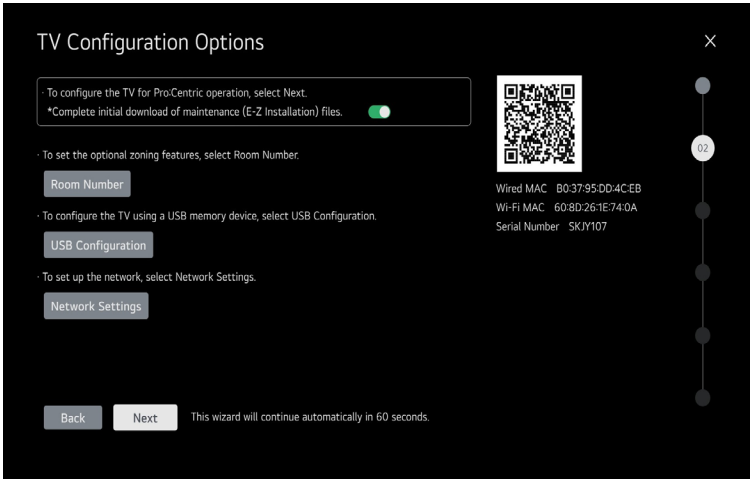
Back Next This wizard will continue automatically in 10 seconds.

- Please select the **Language** and **Country**. Some countries need to select the **Time Zone**.

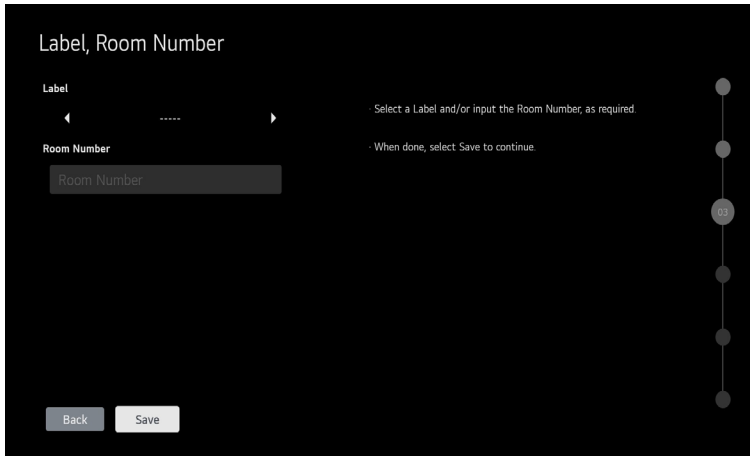
TV Configuration Options

(Depending on model)

- 1 From the TV Configuration Options screen, you can choose how to proceed with the configuration. Whether you will configure the device for Pro:Centric operation via the wizard or use a USB memory device to configure the device, you may first wish to set the Room Number. Also, you can configure the network environment.

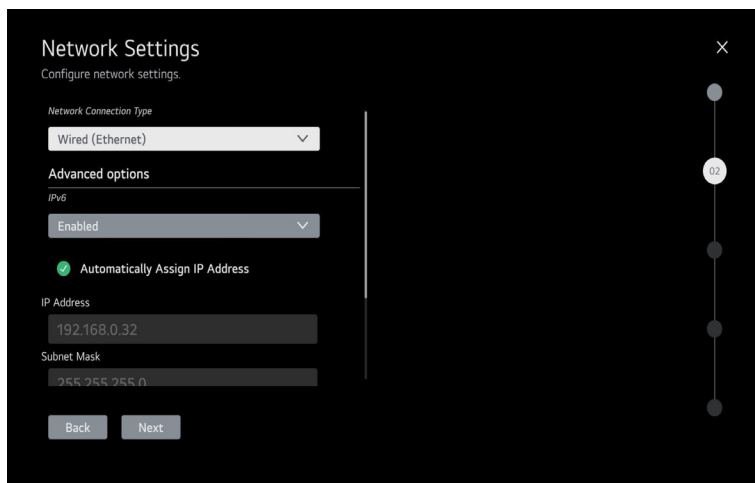


- Complete initial download of maintenance(On/Off Toggle): you can choose the option whether to skip the maintenance files download during the EZ-Manager process.
- If you intend to set Room Number as part of the device configuration, use the Room Number option to assign the Room # before you continue with additional configuration.
- In the Label field, use the Left/Right arrow keys to specify a North, South, East, or West designation.
- In the Room Number field, you can use the number keys on the Installation Remote to direct enter a room number or use the virtual keyboard on the device screen.



- If you intend to apply the files via USB, use USB Configuration option to access TV Manager app. ("TV Manager" on page 60)
- If you intend to set network, use the Network Settings option. You can connect easily to wired/wireless network by this option. ("Network" on page 32)

Wireless (Auto Wi-Fi) : Connect a default hidden SSID/PW. (SSID : lgwebostv, PW : procentric, Security : WPA/WPA2 PSK)



Network Settings ×

Configure network settings.

Network Connection Type

Wired (Ethernet) ▼

Advanced options

IPv6

Enabled ▼

☒ Automatically Assign IP Address

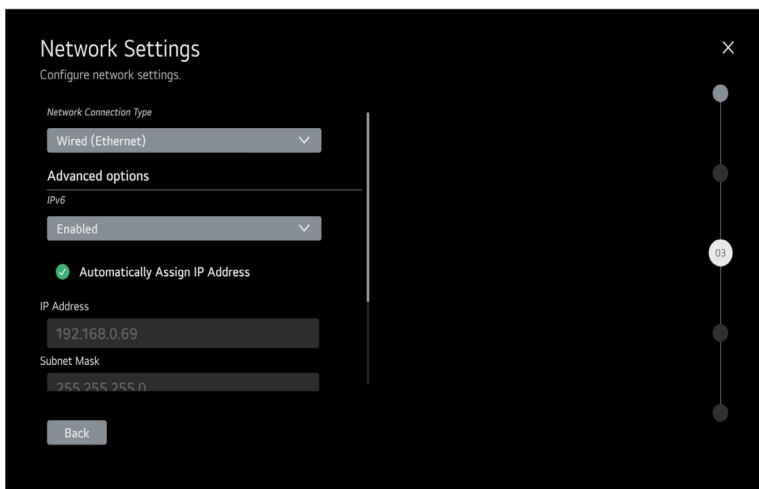
IP Address

192.168.0.32

Subnet Mask

255.255.255.0

Back Next



Network Settings ×

Configure network settings.

Network Connection Type

Wired (Ethernet) ▼

Advanced options

IPv6

Enabled ▼

☒ Automatically Assign IP Address

IP Address

192.168.0.69

Subnet Mask

255.255.255.0

Back

Network Settings

Configure network settings.

Network Connection Type

Wireless (Auto Wi-Fi)

Advanced options

IPv6

Enabled

Automatically Assign IP Address

IP Address

192.168.0.13

Subnet Mask

255.255.255.0

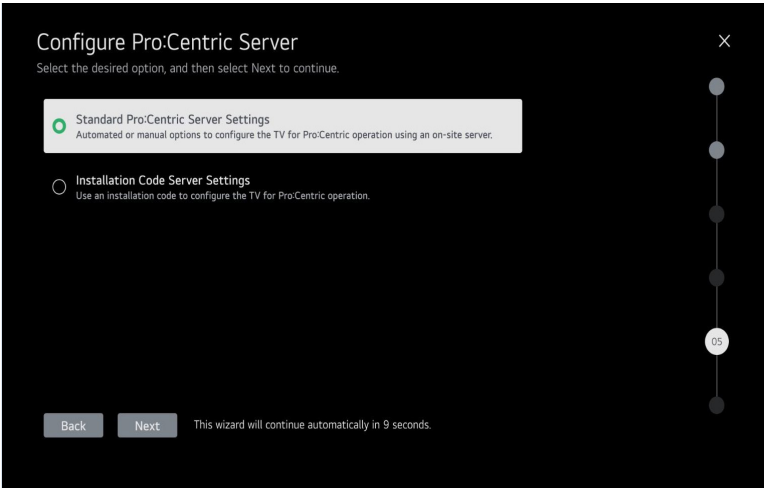
Back

Configure Pro:Centric Server

(Depending on model)

You can select two options.

- Standard Pro:Centric Server Settings : Default Automatic / Manual Pro:Centric Server Configuration
- Installation Code Server Settings : Installation Code based simple installation for Cloud solution

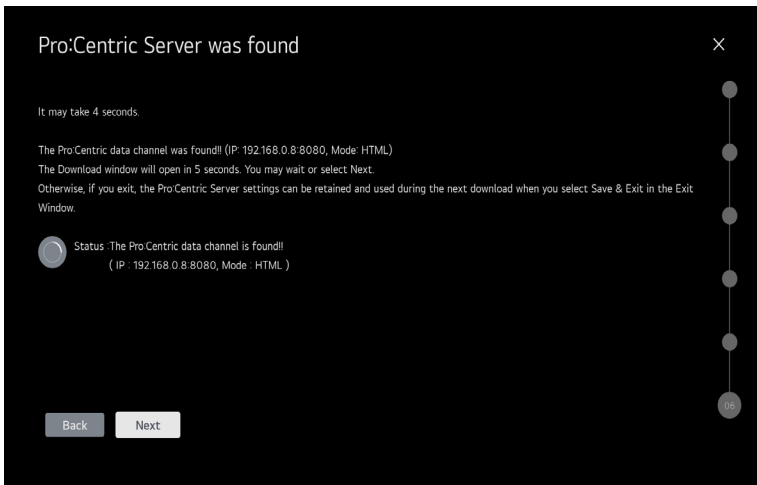
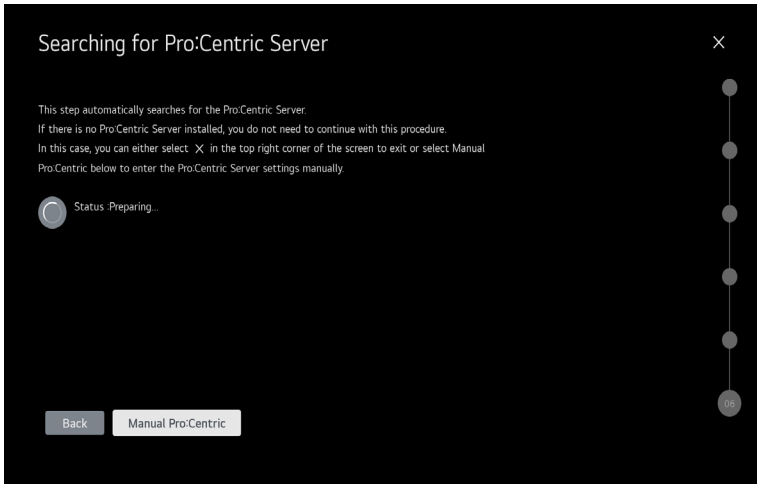


Standard Pro:Centric Server Settings

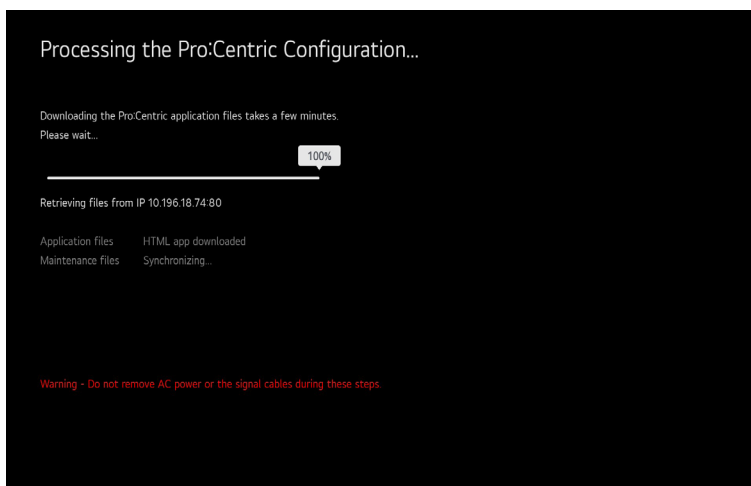
(Depending on model)

Automatically for Setup

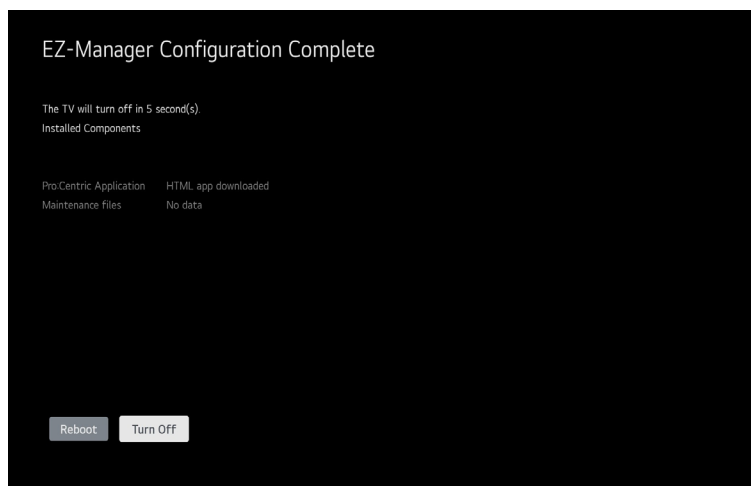
- 1 This step automatically searches for the Pro:Centric Server. If was found the Pro:Centric data programme, select the **Next**.



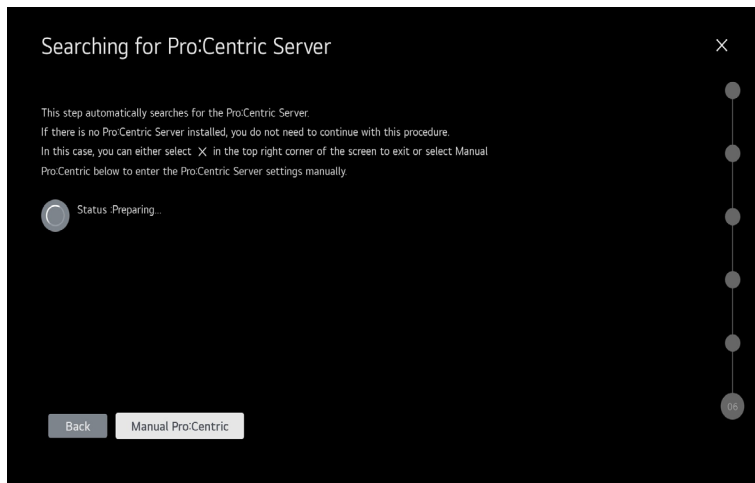
- 2 Downloading the Pro:Centric application files takes few minutes.



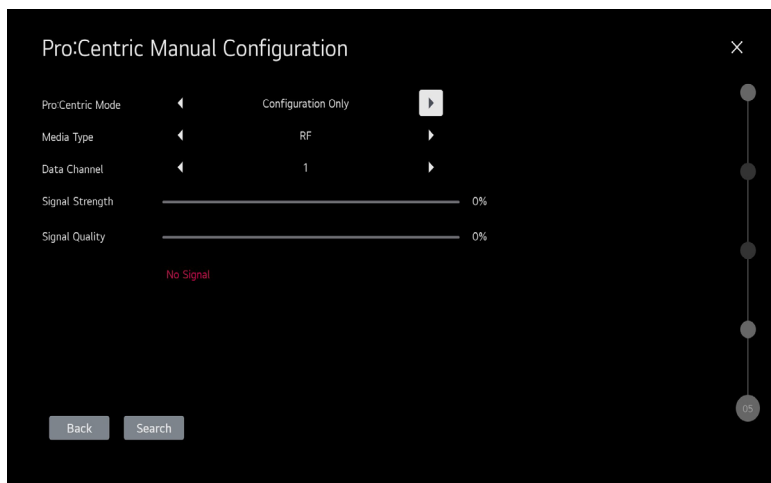
- 3 After the installation is completed, the following screen will be displayed.



- 1 Please select the **Manual Pro:Centric**.



- 2 Configure the appropriate Pro:Centric settings. (Taiwan does not support RF)



Pro:Centric Manual Configuration

Pro:Centric Mode ◀ Configuration Only ▶

Media Type ◀ IP ▶

Server Address ◀ IP Address ▶

IP Type ◀ IPv4 ▶

IP Address 0 0 0 0

IP Port 0

Secure Connection ☒ HTTP ☐ HTTPS ☐ Encryption Only

IP Server Not Found

Back Search

05

Pro:Centric Manual Configuration

Pro:Centric Mode ◀ HTML ▶

Media Type ◀ IP ▶

Server Address ◀ IP Address ▶

IP Type ◀ IPv4 ▶

IP Address 192 168 0 3

IP Port 4000

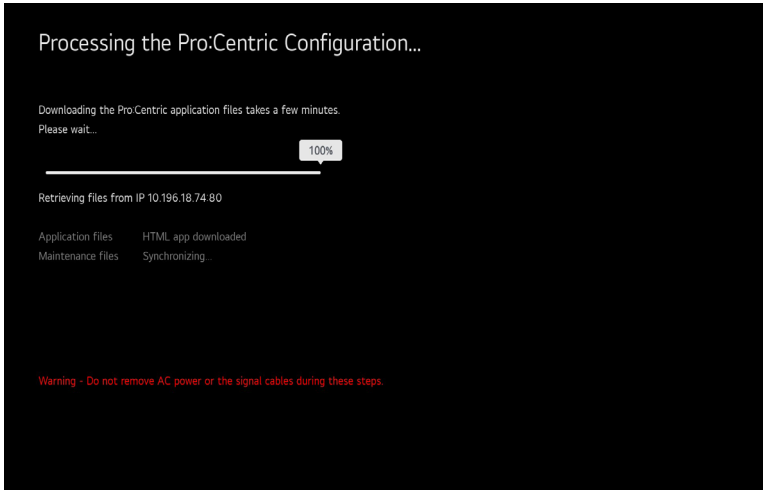
Secure Connection ☒ HTTP ☐ HTTPS ☐ Encryption Only

IP Server Found

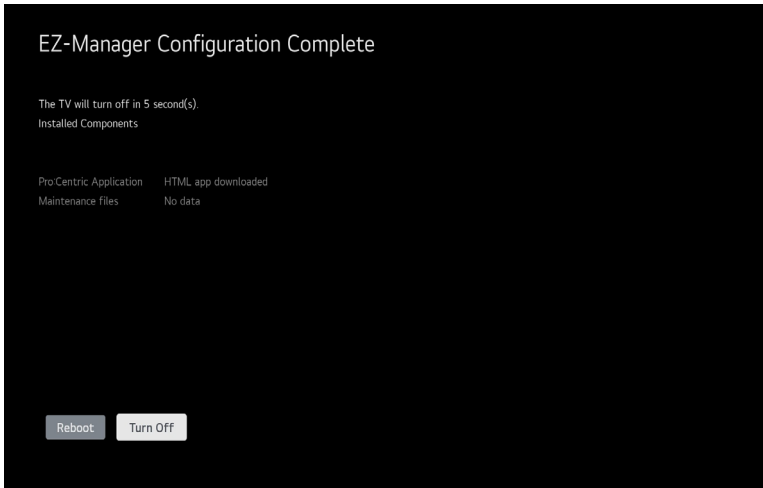
Back Next

05

- 3 Downloading the Pro:Centric application files takes few minutes.



- 4 After the installation is completed, the following screen will be displayed.



Installation Code Server Settings

(Depending on model)

From the Installation Code Server Settings screen, You can input the installation code that was issued from Cloud Portal.

1 Server Searching

1) LG Pro:Centric Cloud

Installation Code Server Settings

server type and enter the installation code. The installation code is generated and obtained from each server's respective portal.

Server Type

☒ LG Pro:Centric Cloud ☐ LG QI Server

Installation Code

000000

Back Search

- Server search succeed : The message "Server Found [property name]" is displayed. And the search button changes to the next button.
- In case of invalid code : The message "Invalid Installation Code" is displayed.
- In case of network error : The message "Server Not Found" is displayed.

Installation Code Server Settings

respective portal. Select server type and enter the installation code

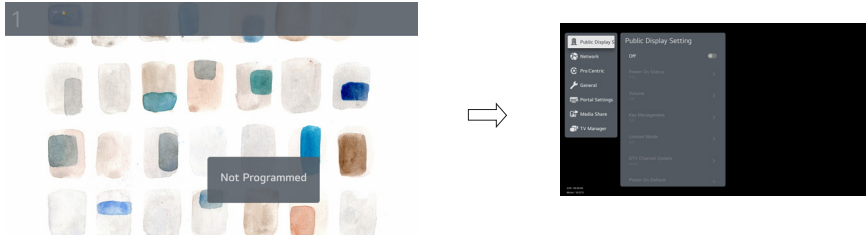
Server Type

☒ LG Pro:Centric Cloud ☐ LG QI Server

Installation Code

456953

Back Next Server Found : New Workspace



The screenshot shows the "Installation Code Server Settings" screen. At the top, it says "Select server type and enter the installation code. The installation code is generated and obtained from each ser". Under "Server Type", there are two radio buttons: "LG Pro/Center Cloud" (selected) and "LG QI Server" (highlighted). Below this, the "Installation Code" field contains "00000000". At the bottom, there are "Back" and "Search" buttons. A vertical progress bar on the right side of the screen shows the current step as 06.

- Server search succeed : The message "Server Found" is displayed. And the search button changes to the next button.
- In case of error : The message "Server Not Found" is displayed.

Installation Code Server Settings

Select server type and enter the installation code. The installation code is generated and obtained from each server's respective por

Server Type

☐ LG ProCentric Cloud ☒ LG QI Server

Installation Code

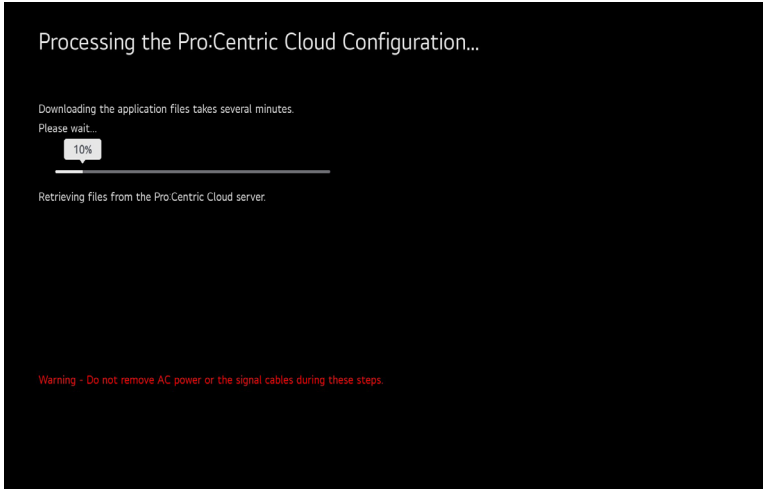
38629857

Server Found



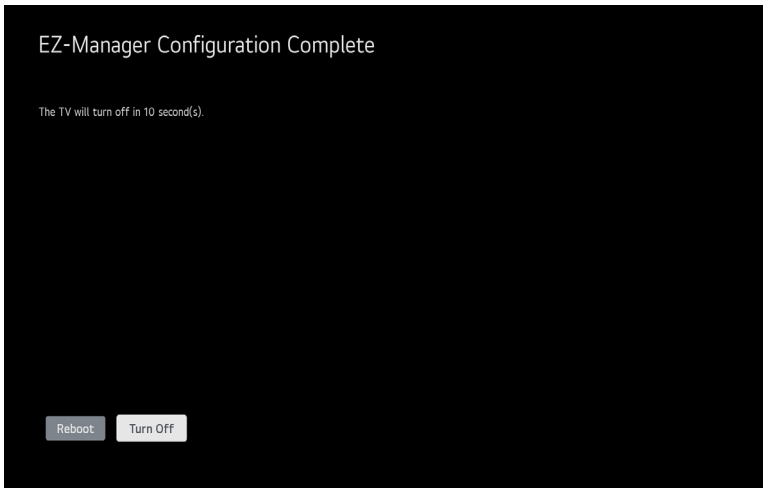
3 Download Pro:Centric App

- After clicking the next button, Downloading the Pro:Centric application files takes few minutes.



4 Download Complete

- After the installation is completed, the following screen will be displayed.



Installation Menu Settings

(Depending on model)

Access Installation menu for commercial feature settings.

Installation Menu

* Image shown may differ from your device.

Introduction

The abundant functions linked with software installation can be projected on OSD as 'Installation Menu'.

The wide range of hotel features can be performed simply on additional window to enhance easy installation and convenient operation for Hotelier and System Integrators.

- 1 Press the Setting button for more than 5 seconds using the user remote control, and a banner will appear at top on the screen.
- 2 Enter a four digit password and press '**OK**' button.
 - The device is set with the initial password "1-1-0-5".

Public Display Settings

- When Public Display Settings is set to On, all functions of Public Display Settings apply.

Power On Status

- Decide to select working status when the main power is turned on.
- You can select PWR, STD, LST.
- PWR always makes the device set On status when the main power is turned on.
- STD makes Stand-by status when the main power is turned on.
- LST makes the device set work like previous power status. As same concept as Power Backup mode; If main power were turned off in Power On status, the device would work in On status. If main power were turned off in Stand-by status, the device would work in Stand-by status.
- If there Block All is both IR Operation and Local Key Operation from Key Management, In order to turn on the device when turned off situation, change the value of the PWR. (Reference the Key Management)
- The default value depends on each model.

Volume

- Decide to apply volume policy of 'Start Volume', 'Maximum Volume' and 'Minimum Volume' as On or Off.
- ($0 \leq \text{Min} \leq \text{Start} \leq \text{Max} \leq 100$)

Start Volume

- This entry sets the start volume level when is power on.
 - The level is specified as a number between minimum volume to maximum value. ($\text{Min} \leq \text{Start} \leq \text{Max}$)
 - The default setting is 'Off'.
 - When selected to 'On', if the value is lower then the minimum specified in the minimum volume entry, the minimum volume entry must be used.
 - When selected to 'On', if the value is larger then the maximum specified in the maximum volume entry, the maximum volume value must be used.
 - Access to a volume in 'Power On Timer' must be fixed to start volume when Public Display Settings (On) and 'Start Volume' (Off, 0 ~ 100) were set simultaneously.

Maximum Volume

- This entry sets the maximum volume level the set. The level is specified as a number between 'Minimum Volume' to 100. ($\text{Min} \leq \text{Max} \leq 100$).
 - The default value is 100.

Minimum Volume

- This entry sets the minimum volume level the set. The level is specified as a number between 0 to 'Maximum Volume'. ($0 \leq \text{Min} \leq \text{Max}$)
 - The default value is 0.

Key Management

- Manage key usability of Local(Front) Key and Remote Control.

IR Operation

- Decide whether work the LG remote control or not.
 - When set to 'Normal', all remote keys are available.
 - 'Use PWR Only' blocks all remote keys except power key.
 - When set to 'Block All', all normal remote keys don't work.

Exclude USB HID Key

(Depending on model)

- Decide whether work the USB HID key or not
- It is activated only when 'IR Operation' is set to 'Block All' or 'Use PWR Only'.
 - When set to 'On', USB HID keys are available.
 - When set to 'Off', USB HID keys don't work.
- It is deactivated when 'IR Operation' is set to 'Normal' and in this case, USB HID keys are available.

Local Key Operation

(Depending on model)

- Decide to operate 'Local Key' working behavior.
 - When set to 'Normal', all local keys are available.
 - 'Use PWR Only' blocks all local keys except power key.
 - When set to 'Block All', all local keys don't work.

Limited Mode

- Configure function's limitation. When selected to 'On', following sub-menus will be worked by below.

Setup Menu

- Permit to tune and manage Channels.

Channel Change

- Decide to change channel or not.

Menu Display

- Function to decide whether work with menu of control key or not.
 - Although select Off, the action that press a Menu button for 5 seconds to enter 'Installation Menu' is available.
 - When select On, Menu works.

OSD Display

- Decide to display OSD or not.
 - When is set to 'Off', all OSD is not displayed except some exception.
 - Although select 'Off', the action that press a Menu button for 5 seconds to enter 'Installation Menu' and entering service menu are available. (In-Start, Power-Only, Adjust, Installation Menu...)

System Provider Mode

- 'System Provider Mode' allows access to the menu system from the front panel or remote control but access is controlled as follows:
 - When value is 'On', Accessible Items on the menu system, others are not permissible. (Depending on model)
 - » Input select screens
 - » Sleep timer
 - » Aspect Ratio
 - » Caption
 - » Channels (Except for Channel Tuning & Settings and Channel Manager)
 - » Input Manager

DTV Channel Update

(Depending on model)

- It is a mode to set whether to update DTV Channel automatically or not.
- When set to 'Auto', update Channel map according to DTV Channel's stream information.
- When set to 'Manual', keep Channel map even though DTV Channel's information is changed.

Power On Default

- Set the channel to display, etc. when turn on power.
- When is set to Off, it is not applied to the subordinate Input, Channel, A/V Setting, Aspect Ratio menu.
- When is set to On, it can set by entering the subordinate menu.

Input

- Set whether it is turned on by the set input source or by the last stored input source.

Channel

- Select start channel number.

A/V Setting

- If 'A/V Setting' is changed from 'Off' to 'On', A/V parameters that are set before entering 'Installation Menu' are applied whenever turn on power.

Aspect Ratio

- The aspect ratio determines the default aspect ratio that the set returns to on power up.

Aux Source Setting

- Set to On or Off.
- Set to enable or disable for each external input.
- User cannot disable the current input.

Power Management

- Turn off the device if no input control command is received from either the Local or IR Key within a selected hours.
 - Activity on either of these inputs shall reset the 'Power Management' timer.
 - This entry can be set to a value which is corresponding to the desired hours (1Hour to 7Hours).
 - Default value is 'Off'

Factory Reset

- Change all settings to their default values.

Signage

(Depending on model)

Vertical Setup

Corporate/Government/Retail

- Lock Mode
 - Refer to Installation Menu ⇨ General ⇨ Security ⇨ Lock Mode. (See p. 49)
- USB Auto Playback
(Depending on model)
 - Refer to Installation Menu ⇨ General ⇨ Configuration Setup ⇨ USB Auto Playback. (See p. 39)
- Content Manager
 - Player: Play a variety of content including images, videos, and SuperSign content.
 - Scheduler: Manage schedules for content that will be played at different times.
 - Template: You can create your own content using templates and media files.
 - Group Manager 2.0: Distribute content schedules and setting data to the connected device.
- System Information
 - Refer to Installation Menu ⇨ Signage ⇨ System Information. (See p. 31)
- On/Off Scheduler
 - Set on/off times for each day of the week.
- SoftAP
 - Refer to Installation Menu ⇨ Media Share ⇨ SoftAP. (See p. 56)
- Screen Share
 - Refer to Installation Menu ⇨ Media Share ⇨ Screen Share. (See p. 56)
- Play Via URL
 - Refer to Installation Menu ⇨ Signage ⇨ Play Via URL. (See p. 31)

Meeting Room

- Input Shortcut
 - Refer to Installation Menu ⇨ Portal Settings ⇨ Input Shortcut. (See p. 51)
- Network Ready
 - Monitor is turned off, but you can control power internally through the network.
- WOL
 - Refer to Installation Menu ⇨ Network ⇨ Wake On LAN. (See p. 33)
- DPM
 - Refer to Installation Menu ⇨ General ⇨ Configuration Setup ⇨ DPM. (See p. 42)

Fail Over

- Set the priority of the input devices when a fault occurs.
 - Fail Over : Turns on or off.
 - Input Priority : Set the priority of input sources for fail over.
 - Reset : Reset to initial settings.
- The input will change to Live TV when all input sources have no signal and AV Jack is not connected.
- SIMPLINK, Auto Sensing and Fail Over cannot work simultaneously. If SIMPLINK or Auto Sensing is set to On, Fail Over is automatically set to Off.

Play Via URL

- Play content you want to play automatically through the built-in web browser.
 - URL Loader: Turns Play via URL on or off.
 - Set URL : Enter the URL address to display automatically.
 - Preview : Preview your desired website by accessing the specified URL.
 - Save : Save the specified URL.
 - Reboot to Apply : Restarts the TV after saving the specified URL.
 - Reset : Reset to initial settings.

NTP Server Setting

- Allows you to set other NTP servers other than the basic NTP server.

LG Business Cloud

(Depending on model)

You can install the LG Business Cloud solution for fault diagnosis and prediction service.

- Installation Type: Selects the type to install the LG Business Cloud solution.
- Installation Code: Installs the LG Business Cloud solution using the number provided by each workspace created in LG Business Cloud.
- Install: Installs the LG Business Cloud solution.
 - 1) Enter Installation Code: Enters the 6-digit installation code to install the LG Business Cloud solution.
 - When the installation code is entered, the workspace information corresponding to the installation code is obtained.
 - If the installation code is not registered, "The installation code is invalid." is displayed, and you cannot continue to install the solution.
 - 2) Confirm Installation Code: Displays the installation code and the workspace information corresponding to the installation code.
 - If the installation code is registered, the workspace information corresponding to the installation code is displayed, and you can continue to install the LG Business Cloud solution.
- Workspace: Displays the user's currently connected business and workspace information.
- Account: Displays user's currently connected account name.
- Version: Displays the version of the LG Business Cloud solution.
- Details: Displays the version of supported solutions.
- Server Status: Displays the status of connection between the set and server.
 - Connected: Displayed when the set and server are connected.
 - Not Connected: Displayed when the set and server are disconnected.
 - Waiting for Approval: Displayed when the server is waiting for approval.
 - Rejected: Displayed when the server rejected the connection.
- Reset: Resets the installed LG Business Cloud solution.

System Information

- You can check the System information.

Meeting Room Solution

(Depending on model)

- Set to 'On' or 'Off'.
- This mode sets whether to include the Office Meeting Mode Application in Home Launcher.

* If the SoftAP at Media Share is set to "Off", the Meeting Room Solution is set to "Off" and disabled.

Network

(Depending on model)

MAC Address (Wired)

- Displays the MAC address (not customizable).

Network Settings

One-click network connection

- Connects easily to a network.
- This menu supports to connect to an available network.

To connect to a network through Set Expert

- For use in special circumstances such as in offices (in cases where a static IP is used).
 - 1 Select a network connection, either Wired or Wireless. (Wireless is supported depending on model)
 - 2 When connecting via Wired, Configures the 802.1X EAP. Authentication based on IEEE 802.1X is available for wired connection. Select the desired EAP type and Phase 2 Authentication, enter the ID/Password registered with the authentication server, and press the connect button to attempt the connection.
 - 3 When connecting via Wired, Configures the IP settings. You can set the IP address, subnet mask, gateway and DNS server.
 - 4 When connecting via Wi-Fi, use the one of the following network connection methods.

AP List	Connects to the network selected from the AP List.
Enter the SSID	Connects to the wireless AP typed in.
WPS-PBC	Connects easily when the button of a wireless AP supporting PBC is pressed.
WPS-PIN	Connects easily when the PIN of the wireless AP that you wish to connect to is entered in to the AP website.
Advanced Wi-Fi Settings	After connects Wi-Fi, you can set the IP address, subnet mask, gateway and DNS server.

Certificate Download

(Depending on model)

- Download the certificates used for 802.1X EAP stored in USB.
- Only PEM file format can be downloaded.

IP Stream Control

(Depending on model)

Audio PTS Offset

- Controlling output stream timing of audio.

Video PTS Offset

- Controlling output stream timing of video.

IGMP

- You can set IGMP version. (2 or 3)

Wake On LAN

- Sets the Wake On LAN function.
 - The Wake On LAN feature enables the device to receive software updates and/or be powered ON upon receipt of Magic Packet data via the wired LAN. To facilitate use of this feature, note that the appropriate wired connection must be made.

VLAN ID

(Depending on model)

- This menu provides VLAN settings.
- Recommend that the network manager set this menu.
- If you set different ID between switch and the device, you cannot use network.

LAN ID

- Set VLAN ID for a network.

Aux LAN ID

(Depending on model)

- Set AUX LAN ID for devices connected via port.

Server Setting

(Depending on model)

- Set up to connect your device to a SuperSign server.

Ping Test

(Depending on model)

- Check your network status with the ping test.

SNMP

(Depending on model)

- If enabled, certain functions can be remotely managed through SNMP.
(For a list of controllable functions, please refer to the separately provided SNMP documentation.)

Pro:Centric

(Depending on model)

Server Type

(Depending on model)

- You can set to 'Standard Pro:Centric Server', 'Installation Code Server'.

Installation Code Server Type

(Depending on model)

- You can set to 'LG Pro:Centric Cloud', 'LG QI Server'.
- If you select 'LG Pro:Centric Cloud', you can configure Cloud.
- If you select 'LG QI Server', you can configure QI Server.

Installation Code

(Depending on model)

- If you input the 6-digit installation code when 'Type' is 'LG Pro:Centric Cloud', the server is automatically searched.
- If you input the 8-digit installation code when 'Type' is 'LG QI Server', the server is automatically searched.
- The results of the server search are displayed in a pop-up.
- If you click the 'Confirm' button in the popup, the installation code is saved.
- If you click the 'Cancel' button in the popup, the installation code is restored to previous value.

Mode

- Sets whether or not enable Pro:Centric and the service method.
- You can set to Off, Configuration Only, GEM or HTML. The default value is Off. (Depending on model)

Secure Connection

- Sets up the security protocol to access the server to install the Pro:Centric App,
- Only Support "Configuration Only" and "HTML" Mode.
- When set to 'Encryption Only', it only encrypts the packets without validating the server certificate. It can use an SSC(Self-Signed Certificate)

LG Business Cloud

(Depending on model)

You can install the LG Business Cloud solution for fault diagnosis and prediction service.

- **Installation Type:** Selects the type to install the LG Business Cloud solution.
- **Installation Code:** Installs the LG Business Cloud solution using the number provided by each workspace created in LG Business Cloud.
- **Install:** Installs the LG Business Cloud solution.
 - 1) **Enter Installation Code:** Enters the 6-digit installation code to install the LG Business Cloud solution.
 - When the installation code is entered, the workspace information corresponding to the installation code is obtained.
 - If the installation code is not registered, "The installation code is invalid." is displayed, and you cannot continue to install the solution.
 - 2) **Confirm Installation Code:** Displays the installation code and the workspace information corresponding to the installation code.
 - If the installation code is registered, the workspace information corresponding to the installation code is displayed, and you can continue to install the LG Business Cloud solution.
- **Workspace:** Displays the user's currently connected business and workspace information.
- **Version:** Displays the version of the LG Business Cloud solution.
- **Details:** Displays the version of supported solutions.
- **Server Status:** Displays the status of connection between the set and server.
 - **Connected:** Displayed when the set and server are connected.
 - **Not Connected:** Displayed when the set and server are disconnected.
 - **Waiting for Approval:** Displayed when the server is waiting for approval.
 - **Rejected:** Displayed when the server rejected the connection.
- **Reset:** Resets the installed LG Business Cloud solution.

WORF

- When set to 'Enable', time setting item is enabled and then the Update Event function is enabled.
- When set to 'Disable', time setting item is disabled and then the Update Event function is disabled.

Room Number Setting

(Depending on model)

- You can set Label and Room Number using the Room Number Setting.

Media Type

(Depending on model)

- Sets the media type to RF or IP.
- The default value is RF.

RF

(Depending on model)

- **Data Channel Freq (kHz)**
 - Sets the RF frequency at which the Pro:Centric data is received.
- **Data Channel Type**
 - Sets the RF modulation type to DVB-T or DVB-C.
 - The default value is DVB-C.

IP

- P:C IP Setting
 - Server Address is set to IP Address.
 - Can select IPv4 or IPv6 type using 'IP Type'. (Depending on model)

(IP Address)	Set IPv4 or IPv6 address.
(Port Number)	Sets the actual port or number where the Pro:Centric server is running.

- Server Address is set to Domain Name.

(Domain Name)	Sets the domain name where the Pro:Centric server is running.
(Port Number)	Sets the actual port or number where the Pro:Centric server is running.

- The default value of IP(IPv4) is 0 and the range is between 0 and 255.
- The default value of IP(IPv6) is 0 and the range is between 0 and FFFF.
- The default value of Port is 0 and the range is between 0 and 65535.

Receive Data

(Depending on model)

- Sets Enable or Disable.

General

Configuration Setup

Select RCU

- It is a mode to set whether to use Select RCU or not. When set to 'Enable', You can adjust 'Number of RCU' menu.

Number of RCU

- Number of RCU value range 1~16. (When 'Select RCU' is set to 'Enable')
- Number of RCU value range 0. (When 'Select RCU' is set to 'Disable')
 - RCU (Remote Control Unit) : It is special RCU that operates only setted number of RCU in the device.

Splash Offset Time

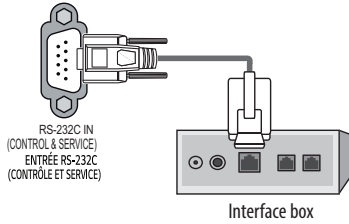
(Depending on model)

- Set the splash image display time.
- When Splash Offset Time is set to Off, logo(splash image) do not display.
- The time can be set to between 0 and 10 seconds.

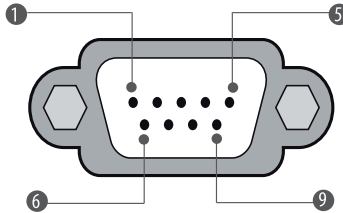
RS232 DC Power Outlet

(Depending on model)

- It is a mode to decide whether to output DC or not for power supply to IB Box in Installation Menu. We offer a output terminal in one Pin of RS232C Jack for the use of communication.
- 5 V DC Power Outlet and 12 V DC Power Outlet must operate mutually exclusively. That is, only one of the two sides must be turned on.
 - You can select **Off**, '5 V' or '12 V'.
 - » When select '5 V' the 5 V is forwarded through the port. when select '12 V' the 12 V is forwarded through the port.



» Type of Connector: D-Sub 9-Pin Male



Male connector on box, viewed towards connector.

No.	Signal	Signal requirements
1	VCC	
2	RX RS232	Standard RS232 specification
3	TX RS232	Standard RS232 specification
4	IR from the device	
5	GND	Power ground
6, 8	Not connected	
7	2 A	+5 V DC 10 %, max 100 mV ripple
9	1.5 A	+12 V DC 10 %, max 100 mV ripple

One Channel Map

(Depending on model)

- If set to 'Enable', the device will operate as below.
 - A. When the device is auto-scanning, it searches both air and cable channels.
 - B. User can assign a channel number him/herself by manual scan.
 - C. In 'Channel Edit' window, all channels are shown in a single list regardless of input source.
 - D. Automatically scanned channels may not have the user-desired channel numbers.
- If user change the 'Enable/Disable' value, an pop-up window will be displayed to warn that all channel will be deleted. The Default value is 'Enable'.

DTV Channel Update

(Depending on model)

- It is a mode to set whether to update DTV Channel automatically or not.
- When set to 'Auto', update Channel map according to DTV Channel's stream information.
- When set to 'Manual', keep Channel map even though DTV Channel's information is changed.

On Timer Operation

(Depending on model)

- It is a mode to select **Power On Timer** working one time or repeatedly.
- 'Once': **Power On Timer** in the user menu operates only one time.
- 'Repeat': **Power On Timer** operates repeatedly.

Radio Name Display

(Depending on model)

- Instead of "Audio Only", the name of a radio programme is displayed on the screen when a radio broadcast is playing.
- If the setting is "On", the name of a radio programme is displayed for the radio programme.
- If the setting is "Off", the text "Audio Only" is displayed for the radio programme.

USB Auto Playback

(Depending on model)

- When set to 'Movie', the device finds and plays the USB's movie files located at the root(top) directory Movies if USB is plugged in.
- When set to 'Photo', the device finds and plays the USB's photo files located at the root(top) directory Photos if USB is plugged in.
- If it reaches the last file, it starts the first file again.

Teletext

(Depending on model)

- If set to 'Disable', the teletext behave as the default specification.
- If set to 'Enable', the teletext stays on screen when the no signal programme.
- If set to 'Auto', the teletext disappears on screen when no signal programme. the teletext appear automatically when programme signal is detected.
- If set to 'Off', the teletext doesn't work when pressing teletext key.

15Min Auto Off

(Depending on model)

- When set to 'Enable', the device will turn off if there is no signal in 15Min.

DVB-C

(Depending on model)

- DVB-T/C programmes are searchable and selectable if DVB-C is "Enable".

DVB-C Bandwidth

(Depending on model)

- If country is 'Philippines', 'DVB-C Bandwidth' menu will be shown.
- Select the bandwidth of cable tuning (6 MHz/8 MHz). The default is 6 MHz.

Additional Pixel Refresher

(Depending on model)

- If set to Power Plug In, the device always does pixel refresh when AC power on.
- If set to Off, the device does pixel refresh on time.

Auto Sensing

- If input is set to 'Enable', the input is automatically switched when the input signal is received.
- If input is set to 'Disable', the input is not switched when the input signal is received.
 - SIMPLINK and Auto Sensing cannot work simultaneously. If SIMPLINK is set to On, Auto Sensing is automatically set to Disable.
 - If the signal is removed while Auto Sensing (automatic input switch) is enabled, the input returns to the previous setting. If the several input are connected by enabling Auto Sensing and the automatic input returns to the previous setting, the input returns to the previous setting only for the last input and does not repeat the operation for the rest.

Quick Start+

(Depending on model)

- This setting puts your device in standby mode when it's turned off so it will start up more quickly the next time it's turned on.

Instant On

(Depending on model)

- Set to 'Instant On Mute' or 'Instant On Reboot' to enable the Instant On feature. The Instant On feature allows the device to turn On when AC power is applied, but with video and audio muted (Muted On). The device retains its On status while appearing to be Off. Pressing the POWER button toggles Off/On the video and audio mutes, so that the device appears to turn On instantly.
 - If this item is set to Instant On Mute, the device will not reboot to check for and download updates at turn Off. The device seems to be turned off to user(panel is off), but both micom and chipset are on.
 - If this item is set to Instant On Reboot, the device will reboot to check for and download updates from the Pro:Centric server at every turn Off.
 - If this item is set to Instant On Mute or Instant On Reboot when 'Update Event' is 'Disable', 'Update Event' is set to 'Enable' and 'Update Time' is set to auto(random) time. (Depending on model)

Always on Display

(Depending on model)

- Even when the device has not been used, it provides optimized wallpaper. When the device is turned off, it switches to Always on Display to display the selected screen wallpaper.
- This function is supported when instant on is set to instant on mute.
- Set by the Guest
 - If set to 'Off', only one category can be enabled and you can select which category to show with Initial Mode when entering menu. (Clock, Art Piece, Movement, Moments)
 - If set to 'On', 3 categories can be enabled. (Clock, Art Piece, Movement)
- Detail Settings (Go to Always on Display)
 - Screen Off : Automatically turns off Always On Display screen after a selected time.
 - Slide Show Speed : You can set slide show speed.
 - Set Time to Turn On : You can set Always on Display on schedule.

Insert Image

(Depending on model)

- Set to On or Off.
- It is a mode to decide whether to display background image when using Clock app, Bluetooth Sound Sync app, Audio Programme app and watching Radio programme.
- You can download the background image at TV Manager app.

No Signal Image

(Depending on model)

- You can set to 'Off', 'Default Image' or 'Downloaded'.
- It is a mode to decide whether to use no signal image when there is no signal.
- When set to 'Off', do not use no signal image.
- When set to 'Default Image', use no signal image using the default image.
- When set to 'Downloaded', use no signal image using the downloaded image. (Depending on model)

No Signal Text

(Depending on model)

- Set to 'On' or 'Off'.
- It is a mode to decide whether to use no signal text when there is no signal.

DPM

(Depending on model)

(On Europe models, it is indicated by DPM (Standby Mode))

- You can configure the DPM (Display Power Management) function.
- If this option is not set to Off, the device enters the DPM mode when there is no input signal.
- If you set this option to Off, the DPM function is disabled.

PM Mode

(Depending on model)

- Power Off (Default)
 - Set the normal DC Off mode.
- Sustain Aspect Ratio (Depending on model)
 - Set the power mode of the HDMI Switching IC, which detects HDMI external input signals in the device standby state after DPM Power Off turns off the device.
- Network Ready
 - Set the Active Standby mode when the device turns off.
 - The device seems to be turned off but it keeps to be on.
 - The device goes through the normal DC On process when it turns on.

Healthcare Headphone Mode

(Depending on model)

- **Healthcare Headphone On**
 - Mute is always applied to TV Speaker.
 - Sound Out menu is displayed as Internal TV Speaker + Wired Headphone, and all Sound Out submenus are gray out (Disable).
 - Internal TV Speaker / Headphone Simultaneous output, Volume key adjusts the device volume (Mute off).
 - Select TV Speaker User Interface. Volume key adjusts the internal speaker volume.
 - Select Headphone User Interface. Volume key adjusts the headphone volume.
- **Healthcare Headphone Off**
 - Sound Out normal scenario.
 - Sound Out has menu in default mode (Internal TV Speaker + Audio Out (Optical)).

Screen Saver

(Depending on model)

- When the currently displayed app has not received any user input for a period of time, it will be replaced by a Screen Saver.
- If you turn this option 'Off', the current picture may create an afterimage burned onto your screen, possibly permanently.

Default Sound Out

(Depending on model)

- You can configure the Sound Out to be set after power on.
- You can select Off, TV Speaker, Optical, LG Sound Sync., ARC
- If you set this option to Off, the device maintains Sound Out after power on.
- If you set this option to ARC, SIMPLINK is enabled.
- If a SIMPLINK-enabled device is connected to the device and item SIMPLINK is enabled, the SIMPLINK device Audio Mode will have priority over the setting of this item when the device is turned ON.

USB Power

(Depending on model)

- You can control the power status of USB port according to the mode.
 - Default : When the device is turned on, the USB device is powered. USB devices can be used regardless of 'Instant On' state.
 - Warm Off: When the device is turned on, the USB device is powered. USB devices are available. However, if 'Instant On' is 'Instant On Mute Mode' or 'Instant On Reboot' mode and the device state is 'Instant On', the USB device is powered off.
 - Always Off: No power is supplied to the USB device. However, USB port power may be temporarily supplied when the device is turned on.



- Please do not turn off the display when the connected USB storage device is working.
- When Turned off the power of USB storage device is suddenly, the stored files or the USB storage device may be damaged.

Mobile Remote

(Depending on model)

- User can use mobile device as the device's virtual remote.
- Set to 'On' to use this function, and 'Mobile Remote' will be added to Portal (Home launcher).
- Show Notification of Remote App : If on, connection guide will be shown automatically when user turns on the device.



How to use

- Launch 'Mobile Remote' in Portal (Home launcher).
- Scan the QR code or enter URL in mobile device.
- Enter 6-digit PIN code shown.
- User can use mobile device as the device's virtual remote.
- This feature is optimized for Chrome browser.

Mute Icon Stay Visible

(Depending on model)

- If the volume level is 0 or mute, keep the mute indication.

External Speaker

(Depending on model)

Volume Control

- Selects the volume control method of an external speaker.
- You can select 'Off', 'Int Variable', 'Fixed' or 'Ext Variable'. (Depending on model)
- Ext Variable uses the External Vol Up/Down Control Line to change the volume up to 2 Watts.
- Int variable is linked to the main volume OSD and change the volume up to 2 Watts.
- Fixed produces a fixed output. The default is Off.

Output

- This item is enabled when Volume Control is set to 'Int Variable', 'Fixed' or 'Ext Variable'.
- You can choose one of 7 steps. (0.01/0.03/0.05/0.1/0.2/0.5/1/1.5/2 Watts).
- The Default is 2 Watts.



- Some models support the volume up to 1Watt.

TV Speaker Off

- You can turn off TV speaker to hear sound from only external speaker.

Audio Line Out

(Depending on model)

Volume Control

- Selects the volume control method of an audio line out.
- You can select 'Off', 'Int Variable', 'Fixed', 'Ext Variable'. (Depending on model)
- Ext Variable uses the External Vol Up/Down Control Line to change the volume up to 0.02 Watts.
- Int variable is linked to the main volume OSD and change the volume 0 - 0.02 Watts.
- Fixed support fixed volume only - 0.02 Watts

TV Speaker Off

- You can turn off TV speaker to hear sound from only audio line out.

Set ID Setup

Set ID Lock

- Set the 'Set ID' item in the user menu whether to activate or not.
- Set to On (Work) or Off (Do Not Work).

Set ID

- Set the 'Set ID' with 1~99.



- Some models support the Set ID up to 1000.

Power Saving

Static Saving

- It is the item for setting the level to reduce the backlight control from the items for saving the consuming power, which is increased or decreased by 10 steps from 0 to 100. 100 makes the consuming power set to the same one from the device. 0 reduces the consuming power to the minimum. The default value is 100.
 - The value displayed at the OSD is not changed and only the actual setting value is converted to percentage based on the static saving value to set.
 - 0 ~ 30: HIGH, 40 ~ 60: MID, 70 ~ 90: LOW, 100: OFF.

Minimum Backlight

(Depending on model)

- This function controls the minimum backlight in case of using the Ambient Light sensor.

Keyless Off Hours

- Automatically the device will be turned off if there is no key input for the preset time period.

HCEC Setup

(Depending on model)

CEC Mode

(Depending on model)

- You can use TVLink-HCEC Protocol if 'HCEC' is selected. (For more detailed information, please refer to TVLink-HCEC Protocol document)
- The default value is 'Default'.

IR Decoding

- Predefined additional IR keys are transferred to the external device via CEC.
- The default value is 'Disable'.

Device ID

- You can limit the external device to communicating via CEC.
- The default value is 'All' and the range is 'All' and '1' to 'E'.

StandBy

- You can limit the power off scenario.
- Your device will be turned off if it receives power off CEC command: 'All', 'Receive Only'
- Your device will turn off the external devices via CEC when it turns off: 'All', 'Send Only'
- No effect: 'Off'
- The default value is 'All'

HTNG Public Display Mode

(Depending on model)

- If you use following functions via TVLink-HCEC, HTNG Public Display Mode will be set as "Yes" automatically.
 - Power On Default, Start Volume, Maximum Volume, Minimum Volume, or Start Volume.
- Even if Public Display Settings is set as No, above settings are still effective.

Clock Setup

(Depending on model)

Mood Display Setup

(Depending on model)

- You can setup Mood Display features.

Clock Display

(Depending on model)

- You can select 'Enable' or 'Disable'.
- After selecting 'Enable', you can see the LED Clock.

Dimming Standby

(Depending on model)

- Standby Dimming value Range : 1~2

Dimming PowerOn

(Depending on model)

- PowerOn Dimming value Range : 1~5

Clock Source

- You can select 'Off', 'Pro:Centric', 'TV', 'NTP', 'Admin'.
- NTP : Clock is synchronized using Network Time Protocol. It's only enabled when network cable is connected. (Depending on model)
- Admin : It's automatically set to Admin when clock is updated by commercial protocols like TVLink-HCEC, TVLink-Interactive, or HCAP API.
- Off : Clock is synchronized using any available clock source.
- Pro: Centric : Clock is synchronized using Pro:Centric server. (Depending on model)
- TV : Clock is synchronized using particular TV channel.
 - Input** (Depending on model)
 - You can select 'Input' according to 'Clock Source'.
 - You can select 'RF' or 'IP' when Clock Source is 'Pro:Centric'.
 - You can select TV source when Clock Source is 'TV'.
 - Input is set to 'None', 'HCAP', 'Protocol', 'HTNG' automatically when Clock Source is 'Admin'.
 - Channel / Frequency** (Depending on model)
 - Sets the Frequency to get the time information when Clock Source is 'Pro:Centric'.
 - You can select channel when Clock Source is 'TV'.
 - Timezone (City) / Timezone (Custom) / Timezone (Offset)** (Depending on model)
 - In the case when there is difference between the time information received from the Teletext and the time of the current area, it can be set up to correct this. The initial value is 0, and it can be changed in the range of -12 Hrs ~ +14 Hrs. (Timezone (Offset) range is -12 Hrs ~ +12 Hrs)

Welcome Video Mode

(Depending on model)

- You can set to Off, Once or Repeat.

Operation

- The video displays after your device is turned on and the boot logo appears.
- If Welcome Video is enabled and a video is downloaded on the device, the video plays.
- The time it takes a video to be displayed may differ depending on the decoding time of the video.
- Controls for playing the video are not available. (Pause, stop, fast forward, etc.)
- Videos in any file format that the device supports can be downloaded and displayed.

Crestron

(Depending on model)

Crestron Connected

- The connection status of the server type shall be indicated by pictures and phrases. (Disconnected, Connecting, Connected)
- Type: You can select the server type you want to connect to (Off, Control System, Virtual Control, Fusion)
- CONNECT: If you press the button once, a set tries to connect to the server and the button phrase is changed into DISCONNECT. In this case, the upper items are immutable. To disconnect and change upper items, pressing the button again is needed.
- Information for connecting with the server
 - Type: Control System
 - Server: Enter the IP information of the server
 - Port: Enter the Port information for the server
 - IP ID: A unique ID that distinguishes crestron equipment from server
 - Type: Virtual Control
 - Room ID: A unique ID that distinguishes room from server. If the IP ID is the same, but the Room ID is different, the server recognizes it as a different crestron equipment.
 - Server, Port, IP ID are the same as Control System's.
 - Type: Fusion
 - Method: Connection direction can be selected. (Device to Fusion, Fusion to Device)
 - Device to Fusion: How to connect from set to server
 - URL: Server URL
 - Port: Server Port
 - Fusion to Device : How to connect from server to set
- Auto Discovery: The ability to locate other Crestron equipment in the network
- SSL: Communication security with server can be established. The following items are meaningful only at SSL on
 - User, Password: When the Authentication function is turned on on the server, User and Password must be entered to connect with the server.
 - Verify Certificate: A feature that checks whether a certificate installed on a server is valid. If it is not valid, it does not connect to the server
 - Certificate Download: The certificate must be stored in the set to perform the Verify Certificate function. Only certificates with extensions .pem, .crt in the USB root directory are recognized and can be added or deleted through the menu. All certificates stored at the time of Factory Reset are deleted.

XiO Cloud

- The connection status with XiO Cloud is displayed. (Disconnected, Connecting, Connected)
- CONNECT: If you press the button once, a set tries to connect to the server and the button phrase is changed into DISCONNECT. To disconnect, pressing the button again is needed.

Developer Mode

(Depending on model)

- This feature provides great convenience to the app developers.
- Set up to install the Developer mode app.

Security

Port Control

(Depending on model)

- Unused ports can be blocked for network security

Lock Mode

- USB
 - If set to 'Disable', USB devices do not work in relative features. (Updates via USB are possible regardless of the 'USB' lock. However, some models cannot be updated via USB.)
- Factory Reset
 - If set to 'Disable', 'Reset to Initial Settings' item in the user menu is disabled.

Password Change

- To ensure more security, Password can be changed by installers' own design.

TV Information

- You can check the device information.

Self-diagnosis and Care

- You can Inspect the device status.

TV Manager Password Protection

- You can set password for protect access to TV Manager.
- When TV Manager password protection is activated, the password is required for access to TV Manager.

SW Update

(Depending on model)

- You can update the device software by Firmware Over The Air(FOTA) server.

Home office

(Depending on model)

Home Office

- Set the 'Home Office' item in the user menu whether to activate or not.

Delete Remote PC Account

- Determining whether to delete remote PC information in Home Office

User Agreement

(Depending on model)

- You can check Legal Notice and Terms & Conditions.

Portal Settings

(Depending on model)

Portal Mode

(Depending on model)

- You can select 'Default Portal' (Use webOS default portal), 'Customizable Portal' (Use editable Portal), or 'None' (Do not use portal).

Auto Start

(Depending on model)

- You can select 'Off', 'Website Shortcut', 'Portal Mode', or 'App'.
- If you select 'Website Shortcut', selected 'Website Shortcut' will be excute automatically after the device is turned on.
- If you select 'Portal Mode', Portal(Home Launcher) will be excute automatically after the device is turned on.
- If you select 'App', selected 'App' will be excute automatically after the device is turned on.

PreLoaded App

(Depending on model)

- If you want to use a particular app, you can choose from the menu. you can setting each apps activation.

Website Shortcut

(Depending on model)

Shortcut

- Sets Enable or Disable. When it is set to Enable, Website Shortcut app is displayed at launcher bar.

Shortcut Name

- You can set Website Shortcut app name (title).

Shortcut URL

- Sets URL to connect when excute Website Shortcut app.

Shortcut Icon

- You can select default icon, fav icons, downloaded icon or Download(Go to TV Manager).
- You can download the shortcut icon at TV Manager app.

Tile Color (Color Code)

- You can change Website Shortcut app tile color using RGB color code.

Input Shortcut

(Depending on model)

Shortcut

- Sets Enable or Disable. When it is set to Enable, Input Shortcut app is displayed at launcher bar.

Shortcut Name

- You can set Input Shortcut app name (title).

Shortcut Icon

- You can select default icon, downloaded icon or Download(Go to TV Manager).
- You can download the shortcut icon at TV Manager app.

Tile Color (Color Code)

- You can change Input Shortcut app tile color using RGB color code.

Hotel Directory

(Depending on model)

- Set the information to display at Hotel Directory app.

Facility or Service Name

- Set the facility or service name.

Details or Extension

- Set the detailed information.

Related Photo

- You can select None, downloaded images or Download (Go to TV Manager).
- You can download the directory images at TV Manager app.

Portal Editor

(Depending on model)

- If you press 'Portal Editor' menu, each portal editor is launched according to 'Portal Mode'.

Customizable Portal

- Welcome Message, Hotel Name
 - You can set the welcome message and hotel name by selecting the upper left area.
- App List
 - You can add an application by selecting the Add button from the list at the bottom.
 - You can replace another application by selecting an already added application tile.

- Edit Template
 - Vertical
 - » You can set Vertical when selecting focus. Select between Hotel or Hospital.
 - Template
 - » You can set Template when selecting focus. Select between Bar Type or Tile Type.
 - Video
 - » You can set this mode to On/Off when selecting Customizable Portal.
 - » You can download the video at TV Manager app.
 - Logo
 - » You can select images for Default/Downloaded image.
 - » You can download the icon at TV Manager app.
 - Weather
 - » You can set whether or not to show weather information.
 - » You can set the city.
 - RSS Feed
 - » You can set whether or not to show RSS feed.
 - » You can set the URL to get the RSS feed information.
 - » You can set scroll speed of RSS feed.
- Reset
 - You can reset to the state before saving the customizations.
- Save
 - Save your customizations.

Portal Manager

(Depending on model)

This feature enables you to group together multiple monitor sets on a single network into the same group and copy portal setting data on a group basis. This feature has two modes, Master and Slave.

Master

- Add, edit, and delete group.
- Distribute your device's portal data.
- All monitor sets initially come in Master mode.

Slave

- Remove monitor sets for their groups.
- Monitor sets that have been added to a group are automatically switched to Slave mode. Conversely, when a monitor set has been deleted from a group, it is automatically initialized and switched to Master mode.
- If a new Slave has been added to an existing group, or if the portal data has not been properly distributed from master, the Cloning button will be activated.
- You can duplicate the master device's portal setting data by using Cloning.

Group Management

- Creating a New Group
 - 1 Click Add New Group.
 - 2 Enter a group name.
 - 3 Click Add Device, select the devices you wish to add to the group, and add them.
 - 4 Click Done, and you will see that a new group has been created.
- Editing a Group
 - 1 Click the group you wish to edit.
 - 2 Add a new device by using Add Device.
 - 3 Delete a device by using Delete Device.
 - 4 Check whether the devices in the group are connected to a network by using Device Check.
 - 5 If there are any sets of devices in the group that are not portal data synchronized, Distribute button will be activated.
 - 6 You can re-distribute the master device's portal setting data to the group by using Distribute.
- Deleting a Group
 - 1 Click Delete Group.
 - 2 Select the group you wish to delete and click Delete.
 - 3 Check that the group you selected has been deleted.
- All Devices View: This page enables you to manage all slave monitor sets that are connected to the same network.
 - 1 Click All Devices View.
 - 2 Click Reset Device Mode.
 - 3 Select the slave monitor set whose device mode you wish to change and click Initializing.

Portal Distribution

- 1 Select your desired group and click Distribute.
- 2 Set power off on the slave sets by using remote controller after distribution is completed.
- 3 Check that the data have been copied on the slave sets after a 1 minute.

* How to Use

- Monitor: Run, add, delete or edit app on the portal setting of the installation menu
- You can create up to 25 groups.
- You can add up to 12 slave devices to a group.
- A list of devices you can add to your desired group appears only when the following conditions have been met:
 - The devices you wish to add must be on the same network as the master device.
 - The devices you wish to add must be in Master mode, and they must not belong to any existing group.
 - The UPnP feature must be enabled.
 - » Hotel : you must do one of the things listed below.
 - i. Enable SmartShare(dlna) ⇔ reboot
 - ii. Enable DIAL ⇔ reboot
 - iii. Enable Media Renderer(DMR) ⇔ reboot
 - iv. Enable LG connect ⇔ reboot
- It may not work properly in wireless network environments. It is recommended you use a wired network.

Media Share

(Depending on model)

SmartShare

(Depending on model)

- Smart Share enables DLNA function. If this value is enabled, the device acts as Media Player and displays Media Server contents through Smart Share app.

Screen Share

(Depending on model)

- Screen Share enables Wi-Fi p2p functions. If this value is enabled, Screen Share app is displayed at launcher bar and the device can display the screen of mobile phone or laptop.
- If you want Completely Exit Screen Share App, Click 'X' Button on right top side.

LG Presenter

(Depending on model)

- LG Presenter uses wired/wireless connection to share PC screen (Windows or Mac OS). If this value is enabled, LG Presenter app is displayed at launcher bar and TV can display the screen of PC or laptop.

Media Renderer

(Depending on model)

- Media Renderer enables the device to act as a Media Renderer device to receive contents from devices on the same network.

DIAL

(Depending on model)

- With this DIAL service, you can launch the target app at Smart Home Launcher bar without select the target app by remote controller. Before this function enables, the target app should be selected at Installation Menu ⇒ **Portal Settings** ⇒ **Preloaded App**.

Device Name

- When media devices (ex: smart phone, desktop, laptop) are searching the device, this string will be displayed.

SoftAP

(Depending on model)

- SoftAP is similar to Access Point. When this value is On, Wi-Fi Service application is displayed at the launcher bar. SoftAP is activated when user selects On in the Wi-Fi Service application.
- Regardless of the Instant On mode, the SoftAP setting stays unchanged after power off/on. (Depending on model)

Use Default

- If you want to use default password (this password was generated randomly), you must select 'Enable' in this item.

Security Key

- If you want to change default password, you need to change 'Use Default' value into 'Disable'.

Wi-Fi Signal Strength

- You can control wireless signal strength on SoftAP. This is controlled by 5 step. If you select 'Not Used', wireless signal strength will be set to Max value.

Wi-Fi Channel

- You can control the wireless channel in SoftAP mode. It is controlled by 1 to 11 channels (2.4GHz). The 5GHz channel is controlled by the channel supported by the country where it is set. However, DFS channels cannot be set. If you select 'Auto', the SoftAP's wireless channel is set to a random channel.

Mode

(Depending on model)

- You can select NAT (Network address translation) mode and BRIDGE mode for Soft AP.

Security Type

(Depending on model)

- This menu is activated only when Bridge mode is selected.
- Type of security authentication protocol required for wireless connectivity
- WPA2-PSK, 802.1X EAP, and OPEN are available from this menu.

Radius Server IP, Radius Server Port, Radius Server Key

(Depending on model)

- This menu is activated only when Bridge mode is selected and 802.1X EAP is selected.
- If you want to use 802.1X, you must enter the IP address of the authentication server that manages the user's credentials, as well as the Port and Key information.

VLAN ID

(Depending on model)

- This menu is activated only when Bridge mode is selected.
- SoftAP VLAN ID is needed when you want to separate device packets and SoftAP packets.
- The packets via SoftAP are tagged when the packets go through LAN port to external network.
- It is not compatible with Network ⇒ VLAN ID. (SoftAP VLAN is not available if LAN port or AUX port in VLAN ID is set.)

Hidden SSID

- With the Hidden SSID function, the SSID is hidden on the device connecting to SoftAP.

5GHz Channel Width

(Depending on model)

- You can modify the 5GHz channel width. The default value is 80 MHz provides highest performance. However, if the network is congested, 20 MHz is suggested for the channel width.

Beacon

(Depending on model)

- This option enables BLE Beacon, one of Bluetooth 4.0's features.
- Beacon Mode (On/Off Toggle): enables the Beacon feature.
- The iBeacon/Eddystone Type Beacon features are supported.

iBeacon

- Beacon UUID (hex): Set the UUID.
 - Field1: 4byte hex value (8 digits)
 - Field2: 2byte hex value (4 digits)
 - Field3: 2byte hex value (4 digits)
 - Field4: 2byte hex value (4 digits)
 - Field5: 6byte hex value (12 digits)
- Major (0–65535): Sets the Major value.
- Minor (0–65535): Sets the Minor value.

Eddystone

- Frame: Set UUID or URL.
 - Beacon UUID (hex): Set the UUID
 - » Field1: 10 byte hex value (20 digits)
 - » Field2: 6 byte hex value (12 digits)
 - Setting the URL method
 - » URL Prefix: Sets the prefix of the URL.
 - » URL Suffix: Set the suffix of the URL.
 - » URL: Enter the part of the URL that excludes the prefix and suffix.
 - » URL string length is limited to 15 characters.



- Some models do not support background screening services in iOS.
- A reboot is recommended for the settings to be applied properly.
- The UUID value is hexadecimal and the exact number of digits must be entered.
- The distance of the beacon may vary depending on the external device.
- Beacon's distance may vary depending on the app you use on your external device.
- The Beacon feature uses Bluetooth Low Energy (BLE) technology and is therefore susceptible to radio waves. 2.4 GHz environment if not, normal operation may not be possible.

Display

(Depending on model)

Resolution

- You can set the resolution.

Display On Time Setup

- Device will send command set to display monitor after delay time(seconds) which is set in Display On Time Setup menu.

HDMI Input Setup

- Menu for setting external input values to show at screen
- Display monitor should support User select input value

Volume Preset

- Menu for setting initial volume level of display monitor.

SIMPLINK Out

- There are 3 modes to select Off, Power On/Off Only, and HTNG.
- Selecting Off has no effect.
- When Power On/Off Only is selected, device turns the monitor on or off synchronously whenever the power is turned on or off.
- When HTNG is selected, Power On/Off Only function is included, and when the device is turned on, the device sends some HTNG commands for initial setting to the monitor. (The HTNG command only affects monitors with HTNG function enabled)

TV Manager

You can update files from a USB memory device to the device through the TV manager.

Diagnostics

(Depending on model)

- Sets Enable or Disable. When it is set to Disable, user can't control the device via RMS. The changed setting is applied after reboot.

Ez Download

- Ez Download is a function that enables users to download the desired items all at once, such as EPK (software update file), TLL, Media files, Micom, Pro:Idiom M Key. (Depending on model)
 - Media files, Pro:Idiom M Key files, and Software Update files must be stored in a folder named "LG_DTV" in the root directory of the USB memory device.
 - » Clone (.tll) files should simply be stored in the root directory of the USB device.
 - » If you press 'EZ Download' menu, EZ Download is launched.
 - » The "Download Pro:Idiom M Key" option only appears if a ".pim" file is detected on the USB device.
 - » Pro:Idiom M key file name should be specified as checksum with MD5 and extension should be specified as ".pim". (case-insensitive)
 - » Pro:Idiom M Key file should be encoded by ANSI(ASCII).
 - » Pro:Idiom M Key file length should be 1024 bytes. (32 bytes * 32)
 - » If file name or the length are wrong, the file download will be failed.
 - » If you do "Factory Reset", Pro:Idiom M Key will return back to default Key.



- When the download is completed and a DZM file is created on the USB memory device, the TV Manager is automatically run by the DZM file.
Then go to Ez Download automatically and select the file you downloaded previously.

- Press  button to display storage usage information.
- Press the "Clear Storage" button to delete the downloaded media files.

Image Download

(Depending on model)

- The download sequence is Image Download ⇨ Select Image(s) ⇨ Download.
- The image files must be stored in a folder named "LG_DTV" in the root directory of the USB memory device.
- Press the "Clear Storage" button to delete the downloaded images.
 - **Boot Logo Image**

(Depending on model)

 - » Boot Logo Image can download only one file.
 - » Boot Logo Image update function supports only JPG, JPEG (up to 6 MB per image) or BMP (up to 5.93 MB per image) format file.
 - » We recommend you that splash image resolution match the device's panel resolution.
 - » Max resolution of splash image : UHD, Full HD ⇨ 1920 x 1080, HD ⇨ 1360 x 768.
 - » Min resolution of splash image : 64 x 64.
 - **Apps Background Image(s), No Signal Image(s), Hotel Directory Image(s)**

(Depending on model)

 - » Image update function supports only JPG, JPEG, PNG format file(s).
 - » Max resolution of image : UHD ⇨ 3840 x 2160, Full HD ⇨ 1920 x 1080, HD ⇨ 1360 x 768.
 - » Min resolution of image : 64 x 64.
 - » The maximum number of images to choose from per feature is 12.
 - » Images per feature can not be downloaded beyond 10 MB.
 - » If you updates the images, original images will be removed.
 - » If you want to use 'Apps Background Image(s)' in Bluetooth Sound Sync app, Audio Programme App, Clock App and Live TV's Radio Programme please change the value of 'Insert Image' property to enable ('Insert Image' is located in Installation ⇨ General ⇨ Configuration Setup).
 - » If you want to use 'No Signal Image(s)', please change the value of 'No Signal Image' property to 'Downloaded' ('No Signal Image' is located in: Installation ⇨ General ⇨ Configuration Setup).
 - **AoD Moments Images**

(Depending on model)

 - » AoD Moments function supports only JPG, JPEG, PNG format files.
 - » Images can not be downloaded beyond 100 MB
 - » If you updates the images, original images will be removed
 - » At least 16 images must be selected.

Icon Download

(Depending on model)

- If you updates the images, original images will be removed.
- The download sequence is Icon Download ⇨ Select Images ⇨ Download.
- Icon update function supports only JPG, JPEG, PNG format file.
- Press the **Clear Storage** button to delete the downloaded icons.
 - Hotel Icon on Portal, Website Shortcut, Input Shortcut
 - » The image files must be stored in a folder named "LG_DTV" in the root directory of the USB memory device.
 - » Image files can download only one file.
 - » Max resolution of icon : UHD ⇨ 3840 x 2160, Full HD ⇨ 1920 x 1080, HD ⇨ 1360 x 768.
 - » Min resolution of icon : 64 x 64.
 - IPTV/Input Source Channel Logo (Depending on model)
 - » This feature copies the "channelLogo" folder on the USB memory device.
 - » Copy only files with the image format "JPG, JPEG, PNG".
 - » We recommend you that the maximum resolution of the channel logo image file is 1920x1080 or lower.

Video Download

(Depending on model)

- The video files must be stored in a folder named "LG_DTV" in the root directory of the USB memory device.
- The download sequence is Video Download ⇒ Select video file ⇒ Download.
- Video files can only download one file each.
- If you updates the video file, original file will be removed.
- Press the "Clear Storage" button to delete the downloaded videos.

Data Cloning**Import Clone File**

- Once the internal device data and its programme map information are written to the USB memory device, the user can perform "Import Clone File" with a clone (.tll) file located in the root directory of the USB memory device. The user should not turn the device off nor unplug the USB device while processing.

Export Clone File

- "Export Clone File" creates a clone (.tll) file in the root directory of the USB memory device. The user must not turn the device off nor unplug the USB device while processing.

USB Download Menu

USB Cloning

- An Installation can quickly set up and clone multiple devices at a property. These cloned devices will all have the same Master device Setup: Installation Menu settings, User A/V settings and the programme Map. This newer procedure significantly decreases the installation time that would be necessary if the standard RS-232C method were used instead.

1 Overview USB Cloning Procedure

: The device has the capability to support cloning internal device data and programme information with an external clone device called "USB Cloning", in order to copy its data accurately and quickly. The clone internal functions use slightly different internal processes for the two types of commercial TVs. However, the UI of cloning feature remains the same in both. Regarding the demands over the current cloning feature for quicker cloning, better portability and etc, we would like to announce the cloning process via USB port, named as USB Cloning. USB cloning process is divided into 2 main processes. One is writing the previously saved device data into the device, and one another is reading of current device data into USB memory card. To avoid any confusion due to the words, it is clearly specified as "Import Clone File" and "Export Clone File" in the whole process.

2 Data To Be Cloned

: The data cloned are the same data cloned by previous USB Cloning. Details are explained in the following:

- Device data include :
 - A. Installation Menu settings
 - B. Main menu settings (Audio, Picture etc)
- Analog / Digital Programme information includes:
 - A. Programme numbers
 - B. Programme label
 - C. Programme attributes including programme type, skipping status and etc.

Software Update

► Update TV Software

- This feature updates the device software using the EPK file contained in a folder named "LG_DTV" in the root directory of the USB memory device.
- The download sequence is Software Update ⇒ Update TV Software ⇒ Select file(EPK) ⇒ Update.

► Update Micom Software

(Depending on model)

- This feature updates the Micom software using the txt or the hex file contained in a folder named "LG_DTV" in the root directory of the USB memory device.
- The download sequence is Software Update ⇒ Update Micom Software ⇒ Select file(txt, hex) ⇒ Update.

Content Manager

(Depending on model)

Web Login

- Different features are supported depending on the product.

This Signage product comes with a feature that enables you to access it on your PC or mobile device.

- Content Manager, Group Manager 2.0, Log Out, Change Password menus are provided.

- URL: <https://set.ip:3777>
- You can check the initial password in Portal (Home Launcher) ⇔ [Mobile URL] menu.



- Supported resolutions (this program is optimized for the following resolutions):
 - PC 1920 x 1080
 - Mobile: 360 x 640(1440 x 2560, 1080 x 1920), DPR
- Supported browsers (this program is optimized for the following browsers):
 - PC 1920 x 1080 / 1280 x 1024
- For security, please Login with the initial password and change the password.

Content Manager

Player

HOME / ⬆ ⇔ Content Management ⇔ Player

The Content Manager app's player feature enables you to play/manage contents of video, image, template, SuperSign and playlist in an integrated way. (The OLED models do not support the playback and management of image content and template content.)

- Continuous Play
 - 1 Select your desired type of content from the tab on the left and then select your desired content.
 - 2 Click **PLAY** in the upper right-hand corner of the screen and enjoy the content you have selected.
- Export
 - 1 Select your desired type of content from the tab on the left and click **Export** in the upper right-hand corner of the screen.
 - 2 Select the content you wish to export.
 - 3 Click **COPY/Orbiter** in the upper right-hand corner of the screen and select the device to which you wish to export the content. (If a content file stored on the target device has been selected, the processing of the content file is skipped.)
 - 4 You can see that the content has been moved/copied to the device.
- DELETE
 - 1 Select your desired type of content from the tab on the left and click **DELETE** in the upper right-hand corner of the screen.
 - 2 Select the content you wish to delete.
 - 3 Click **DELETE** in the upper right-hand corner of the screen.
 - 4 You can see that the content has been deleted.
- Options
 - 1 Click **Options** in the upper right-hand corner of the screen.
 - 2 Choose your desired sort criterion to sort content files either by file name or in the order they have been played (the most recently played file shown at the top of the list).
 - 3 It is possible to only view the content stored on your desired device by filtering content files by device.

- Create Playlist

When creating a playlist, you cannot include characters that cannot be used in file names on Windows — such as \, /, :, *, ?, ", <, >, and | — in the names of the files in the playlist. In addition, if the playlist contains content files whose names include such characters, you cannot move or copy the playlist.

- 1 Select the **Playlist** tap from the tab on the left and click **Create Playlist** in the upper right-hand of the screen.
- 2 Select the content you wish to add to the playlist and click **NEXT** in the upper right-hand of the screen.
- 3 Set a play time for each piece of content (applicable only for photo and template content), as well as other items such as Conversion Effect, Ratio, and Auto Playback, and then click **DONE** button in the upper right-hand corner of the screen.
- 4 You can see a new **Playlist** has been created.

- DISTRIBUTION

- 1 Click **Distribute** in the upper right-hand corner of Playlist tab screen.
- 2 Go to the Group Manager app to distribute the created playlists.

Scheduler

HOME / ⇌ Content Management ⇌ Scheduler

The Content Manager app's scheduler feature enables certain content to be played at a scheduled time through a playlist or external input.

- Creating a Schedule

- 1 Click **New Schedule** in the upper right-hand corner of the screen.
- 2 Choose between **Playlist** and **Input Source**.
 - If you have selected **Playlist**, select the playlist you wish to schedule the playback of.
 - If you have selected **Input Source**, select the external input source you wish to schedule the playback of.
- 3 Enter schedule information and create a new schedule. (When creating a schedule, you cannot include characters that cannot be used in file names on Windows — such as \, /, :, *, ?, ", <, >, and | — in the name of the schedule file. In addition, if the playlist linked to the schedule contains content files whose names include such characters, you cannot move or copy the playlist.)
- 4 Watch the playlist or external input you selected play back at its scheduled time.

- Importing a Schedule

- 1 Click **Import** in the upper right-hand corner of the screen.
- 2 Select the external storage device from which you wish to import a schedule.
- 3 Select the schedule you wish to import to your monitor. (You can only choose a single schedule.)
- 4 Click **Select** in the upper right-hand corner of the screen.
- 5 Check that the schedule has been imported to the monitor's internal storage memory.

- Exporting a Schedule

- 1 Click **Export** in the upper right-hand corner of the screen.
- 2 Select the external storage device to which you wish to export a schedule.
- 3 Select the schedule you wish to export from your monitor. (You can choose multiple schedules.)
- 4 Click **Select** in the upper right-hand corner of the screen.
- 5 Check that the schedule has been exported to the external storage device you selected.

- Delete Schedule

- 1 Click **DELETE** in the upper right-hand corner of the screen.
- 2 Select the schedules you wish to delete.
- 3 Click **DELETE**.
- 4 Check that the schedules have been deleted.

- Calendar View

- 1 When you have registered schedules, click **Calendar View**.
- 2 You can see that the schedules registered are displayed in the form of a timetable.

- DISTRIBUTION
 - 1 Click **Distribute** in the upper right-hand corner of the screen.
 - 2 Go to the Group Manager app to distribute the created schedules.
 - If the schedule creation time overlaps, the previously created schedule is deleted.
 - Schedule does not work while Scheduling list app is running.

Editor

HOME / ⇌ Content Management ⇌ Editor

The Content Manager app's editor feature enables you to add your desired templates.

- 1 Select the template of your desired format.
- 2 Modify the template's text.
 - Apply your desired font style (Size, Weight, Underline, Italic)
- 3 Modify the media file.
- 4 Save the template by clicking **Save** in the top right-hand corner of the screen.
- 5 Check that the template you saved is shown in the template list.

Supported Photo & Video Files

- Subtitles are not supported.

Supported video codecs

Extension	Codec	
.asf, .wmv	Video	VC-1 Advanced Profile (except for WMVA), VC-1 Simple and Main Profiles
	Audio	WMA Standard (except for WMA v1/ WMA Speech)
.avi	Video	Xvid (GMC is not supported), H.264/AVC, Motion Jpeg, MPEG-4
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, LPCM, ADPCM
.mp4, .m4v, .mov	Video	H.264/AVC, MPEG-4, HEVC, AV1
	Audio	Dolby Digital, Dolby Digital Plus, AAC, MPEG-1 Layer III (MP3), Dolby AC-4, DTS, DTS-HD, DTS:X
.3gp	Video	H.264/AVC, MPEG-4
	Audio	AAC, AMR-NB, AMR-WB
.mkv	Video	MPEG-2, MPEG-4, H.264/AVC, VP8, VP9, HEVC, AV1
	Audio	Dolby Digital, Dolby Digital Plus, AAC, PCM, DTS, DTS-HD, DTS:X, MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)
.ts, .trp, .tp, .mts	Video	H.264/AVC, MPEG-2, HEVC
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3), Dolby Digital, Dolby Digital Plus, AAC, PCM, DTS, DTS-HD, DTS:X, Dolby AC-4
.mpg, .mpeg, .dat	Video	MPEG-1, MPEG-2
	Audio	MPEG-1 Layer I, II, MPEG-1 Layer III (MP3)
.vob	Video	MPEG-1, MPEG-2
	Audio	Dolby Digital, MPEG-1 Layer I, II, DVD-LPCM

- VC-1(WMV), WMA, Dolby AC-4, DTS, DTS-HD, DTS:X: This feature is available in certain models only.

Subtitle	Format
External Subtitle	*.smi, *.srt, *.sub (MicroDVD, SubViewer 1.0/2.0), *.ass, *.ssa, *.txt (TMPlayer), *.psb (PowerDivX), *.dcs (DLP Cinema)
Embedded Subtitle	Matroska(mkv) : Sub Station Alpha(SSA), Advanced Sub Station Alpha(ASS), SRT MP4 : Timed Text

Tips for using USB storage devices

- Only USB storage devices are recognized.
- USB storage devices connected to the monitor through a USB hub may not work properly.
- USB storage devices that use an automatic recognition program may not be recognized.
- USB storage devices that use their own drivers 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 device when the connected USB storage device is working. When the device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- Please do not connect the USB storage device which was artificially maneuvered on the PC. The device may cause the product to malfunction or fail to be played. Remember to only use USB storage devices that store normal music, image, and/or movie files.
- Storage devices formatted with utility programs that are not supported by Windows may not be recognized.
- Please connect power to a USB storage device (over 0.5 A) which requires an external power supply. Otherwise, the device may not be recognized.
- Please connect a USB storage device with the cable offered by the device maker.
- Some USB storage devices may not be supported or operated smoothly.
- File alignment methods of the USB storage device is similar to Windows XP and filenames can include up to 100 English characters.
- Be sure to back up important files since data stored in a USB memory 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. So make sure to connect it to an external power source.
- Please use a power adapter for an external power source. No USB cable is provided 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 memory 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, remove it and connect it again.
- The speed at which a USB storage device is detected differs from device to device.
- If the USB storage device is connected in Standby Mode, a 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 disk and 32 GB or less for USB memory.
- Any device with more than the recommended capacity may not work properly.
- If a USB external hard disk with a Energy Saving feature does not work, turn the hard disk off and on again to make it work properly.
- USB storage devices (USB 2.0 or below) are also supported. However, they may not work properly in the videos list.
- A maximum of 999 folders or files can be recognized under one folder.

Group Manager 2.0

(Depending on model)

This feature enables you to group together multiple monitor sets on a single network into the same group and to distribute content (schedules and playlists) or copy setting data on a group basis. This feature has two modes, Master and Slave, and it can access the browser on your PC or mobile device.

Master

- Add, edit, and delete group.
- Clone your device's settings data.
- Distribute **Schedule** and **Playlists** on a group basis.
- All monitor sets initially come in Master mode.

Slave

- Play **Schedule** and **Playlists** distributed in Master mode.
- Remove monitor sets for their groups.
- Monitor sets that have been added to a group are automatically switched to Slave mode. Conversely, when a monitor set has been deleted from a group, it is automatically initialized and switched to Master mode.
- If a new Slave has been added to an existing group, or if the **Data Cloning** or the distribution of **schedule/Playlist** has not been properly performed, the **Data Cloning** or **Sync** button will be activated.
- You can duplicate the master device's setting data to the group by using **Data Cloning**.
- You can re-download the content distributed to the group by using **Sync**.

Group Management

- Creating a New Group
 - 1 Click **Add New Group**.
 - 2 Enter a group name.
 - 3 Select the devices you wish to add to the group, and add them.
 - 4 Click **Done**, and you will see that a new group has been created.
- Editing a Group
 - 1 Click the group you wish to edit.
 - 2 Add a new device by using **Add Device**.
 - 3 Delete a device by using **Delete Device**.
 - 4 Check whether the devices in the group are connected to a network by using **Device Check**.
 - 5 If there are any sets of devices in the group that are not **Data Cloning** or content synchronized, **Data Cloning** or **Sync** button will be activated.
 - 6 You can re-copy the master device's setting data to the group by using **Data Cloning**.
 - 7 You can re-distribute the content distributed to the group by using **Sync**.
- Deleting a Group
 - 1 Click **Delete Group**.
 - 2 Select the group you wish to delete and click **Delete**.
 - 3 Check that the group you selected has been deleted.
- All Devices View: This page enables you to manage all slave monitor sets that are connected to the same network.
 - 1 Click **All Devices View**.
 - 2 Click **Reset Device**.
 - 3 Select the slave monitor set whose device mode you wish to change and click **Reset**.

Setting Data Cloning

- 1 Select your desired group and click **Start**.
- 2 Check that the data have been copied on the slave sets.

Schedule Distribution / Playlist Distribution

- 1 Select the type of content you wish to distribute (Schedules or Playlists).
- 2 Select the content you wish to distribute.
- 3 Select the group to which you wish to distribute the content and click **Distribute**.
- 4 Run the Content Manager app on the slave sets and check that the content has been distributed.

How to Use

- Monitor: Run, add, delete or edit app on the home screen.
- Mobile devices: Run the app in the Launcher bar or access the app from a mobile device using the QR code or URL provided.



- You can create up to 25 groups.
- You can add up to 12 slave devices to a group.
- You can distribute the schedules stored on external devices after executing Content Manager's import operation.
- Make sure to delete all schedules stored on the slave sets before distributing any schedules.
- A list of devices you can add to your desired group appears only when the following conditions have been met:
 - The devices you wish to add must be on the same network as the master device.
 - The devices you wish to add must be in Master mode, and they must not belong to any existing group.
 - The UPnP feature must be enabled.
 - » Hotel : you must do one of the things listed below.
 - i. Enable SmartShare(dlna) ⇔ reboot
 - ii. Enable DIAL ⇔ reboot
 - iii. Enable Media Renderer(DMR) ⇔ reboot
 - iv. Enable LG connect ⇔ reboot
- It may not work properly in wireless network environments. It is recommended you use a wired network.
- Run the initial settings for Slave function when deleting the group.

IR Codes

- This feature is not available for all models.

► A Type

Code (Hexa)	Function	Code (Hexa)	Function
08	 (POWER)	44	OK 
95	ENERGY SAVING	43	SETTINGS
AF	 LIVE ZOOM*	28	 (BACK)
0B	 INPUT	5B	EXIT
F0	TV/RAD  	72	
10-19	Number Key 0-9 Alphabet buttons  (Space)	71	
53	LIST	63	
1A	Q.VIEW	61	
02		20	 TEXT
03		21	T.OPT(T.Option)
7C	SMART	39	CC
B5	APP	B1	
09	MUTE 	B0	
00	 P ↑ PAGE	BA	
01	P  PAGE ↓	8F	
AB	GUIDE	8E	
0C	PORTAL	DC	 /*
AA	INFO 	9F	DATA/*
40		91	AD/*
41		E8	ALARM/*
07			
06			

Code (Hexa)	Function	Code (Hexa)	Function
08	 (Power)	40	
0E	TIMER	07	
95	 ENERGY SAVING	44	OK 
AF	 LIVE ZOOM*	06	
0B	 INPUT	41	
0F	TV	28	 (Back)
10-19	Number Key 0-9	AA	INFO 
4C	 LIST	5B	EXIT
1A	Q.VIEW	72	
02	 VOL	71	
7C	SMART	63	
00	CH  PAGE 	61	
0C	PORTAL	B1	
03	VOL 	B0	
09	MUTE 	BA	
01	CH  PAGE 	8F	
43	SETTINGS	8E	
AB	GUIDE	BB	
B5	APP	39	CAPTION

► C Type

Code (Hexa)	Function	Code (Hexa)	Function
00	CH  PAGE 	C0	 (Green)
01	CH  PAGE 	C1	 (Red)
02	VOL 	C2	 (Yellow)
03	VOL 	C3	 (Blue)
06		8E	
07		8F	
08	 (Power)	B0	
09	MUTE  DELETE	B1	
10 - 19	Number Key 0 - 9,  (Space)	BA	
28	 (Back)	AA	INFO 
39	CC CHAR/NUM	AB	GUIDE
40		7C	SMART
41		7E	 SIMPLINK
43	MENU SETTINGS	DC	 /*
44	OK ENTER 	60	PIP/*
0B	 INPUT	61	PIP INPUT/*
0C	PORTAL	71	PIPCH+/*
0E	TIMER	72	PIPCH-/*
1A	FLASHBK	63	SWAP/*
4C	- (Dash)	91	VD/*
5B	EXIT	-	TV
		-	DVD

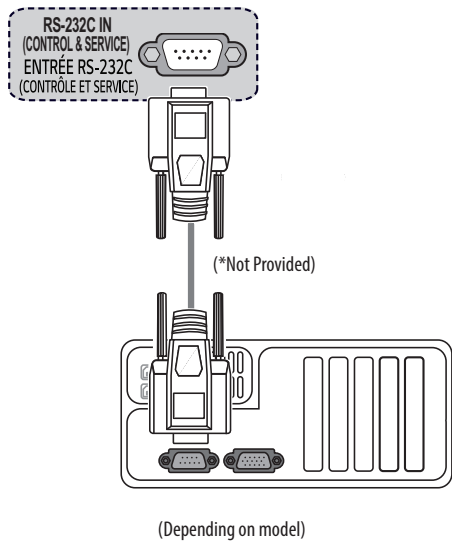
External control device Setup

RS-232C Setup

Connect the RS-232C (serial port) input jack to an external control device (such as a computer or an A/V control system) to control the product's functions externally.

Connect the serial port of the control device to the RS-232C jack on the product back panel.

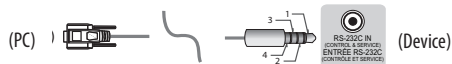
- RS-232C connection cables are not supplied with the product.
(Depending on model)



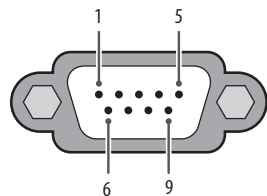
Phone jack Type

(Depending on model)

- You need to purchase the phone-jack to RS-232C cable required for the connection between the PC and the device, which is specified in the manual.
- * For other models, connect to the USB port.
- * The connection interface may differ from your device.



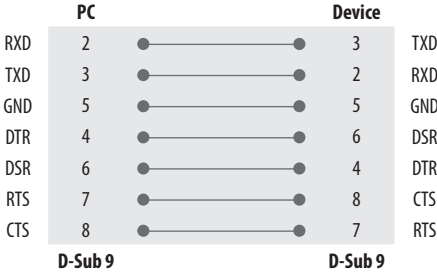
Type of Connector : D-Sub 9-Pin Male



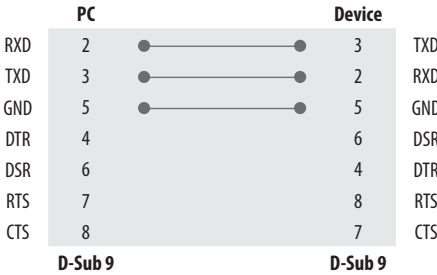
No.	Pin name
1	3.5 V
2	RXD (Receive data)
3	TXD (Transmit data)
4	IR OUT* from the device *: Depending upon model
5	GND
6	No Connection
7	No Connection (5 V available in some models)
8	No Connection
9	No Connection (12 V available in some models)

RS-232C Configurations

7-Wire Configurations (Standard RS-232C cable)



3-Wire Configurations (Not standard)



Communication Parameters

- Baud rate: 9,600 bps (UART)
- Data length: 8 bits
- Parity : None
- Stop bit: 1 bit
- Communication code: ASCII code
- Use a crossed (reverse) cable.

IR OUT Using Guide

Suitable / Not Recommend remote-controller data format

Item	Formats
Suitable data format	NEC, RC5, Toshiba
Not recommend data format	Continuous data format (short burst/gap signal)

IR Receiver specifications

Carrier frequency	37.9 KHz
Peak Wavelength	940 nm
Minimum burst length	Min. 300 us
Minimum gap time is required of	Min. 350 us
Data word length	Max. 100 ms
Minimum gap time in the data stream is needed of	Min. 50 ms

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
High Level Out Pulse Width	T _{wh}	Burst Wave = 600 μs	400	-	800	μs
Low Level Out Pulse Width	T _{wl}	Period = 1.2 ms	400	-	800	μs



- If not use the remote-controller with data formats recommended, IR output signals will be suppressed automatically by IR receiver.
- In this case, LG does not guarantee IR working function.
- To make sure of this matter, here are two methods as below.
 - Use the remote-controller with suitable data formats.
 - Use the IR dongle receiver of the set-top box.

Command Reference List

(Depending on model)

	Command1	Command2	Data (Hexadecimal)
01. Power	k	a	00 to 01
02. Aspect Ratio	k	c	(See p. 76)
03. Screen Mute	k	d	(See p. 77)
04. Volume Mute	k	e	00 to 01
05. Volume Control	k	f	00 to 64
06. Contrast	k	g	00 to 64
07. Brightness	k	h	00 to 64
08. Color	k	i	00 to 64
09. Tint	k	j	00 to 64
10. Sharpness	k	k	00 to 32
11. OSD Select	k	l	00 to 01
12. Remote Control Lock Mode	k	m	00 to 01
13. Balance	k	t	00 to 64
14. Colour Temperature	x	u	00 to 64
15. Energy Saving	j	q	(See p. 79)
16. Auto Configuration	j	u	01
17. Equalizer	j	v	(See p. 79)
18. Tune Command	m	a	(See p. 79)
19. Program [Skip]/[Add]	m	b	00 to 01
20. Key	m	c	(See p. 80)
21. Control Backlight	m	g	00 to 64
22. Input select	x	b	(See p. 80)
23. Channel (Programme) Block/Unblock	m	d	(See p. 81)
24. Fail Over Mode	m	i	(See p. 81)
25. Fail Over Input Select	m	j	(See p. 81)
26. internal storage media contents play	s	n, a8	(See p. 82)

- During USB operations such as DivX or EMF, all commands except Power(ka) and Key(mc) are not executed and treated as NG.

Transmission / Receiving Protocol

(Depending on Model)

Transmission

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

[Command1] : First command to control the device. (j, k, m or x)

[Command2] : Second command to control the device.

[Set ID] : You can adjust the set ID to choose desired monitor ID number in option menu. Adjustment range is 1 to 1000*. When selecting Set ID '0', every connected set is controlled. Set ID is indicated as decimal (1 to 1000)* on menu and as Hexa decimal (0 x 0 to 0 x 63)* on transmission/receiving protocol.

* Some models range as follows: Decimal - 1 to 99 / Hexa decimal - 0 x 0 to 0 x 63

[Data] : To transmit command data. Transmit 'FF' data to read status of command.

[Cr] : Carriage Return

ASCII code '0 x 0D'

[] : ASCII code 'space (0 x 20)'

OK Acknowledgement

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

* The set transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

Error Acknowledgement

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

* The set transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

Data 00 : Illegal Code

1 Power (Command: k a)

► To control Power On/Off of the set.

Transmission

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

Data 00 : Off

Data 01 : On

Ack

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

► To Show the device is Power On/Off.

Transmission

[k][a][][Set ID][][FF][Cr]

Ack

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

* Similarly, if other functions transmit '0 x FF' data based on this format, Acknowledgement data feed back presents status about each function.

* OK Ack., Error Ack. and other message may display on the screen when the device is power on.

2 Aspect Ratio (Command: k c) (Main Picture Size)

► To adjust the screen format. (Main picture format) You can also adjust the screen format using the picture settings.

Transmission

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

Data 01 : 4:3 (Normal screen - Just Scan Off)

Data 02 : 16:9 (Wide screen - Just Scan Off)

Data 06 : Original (Just Scan Off)

Data 09 : Just Scan

* Please make sure that the model doesn't support both Vertical Zoom and All-Direction Zoom mode.

Ack

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

* Using the PC input, you select either [16:9] or [4:3] screen aspect ratio.

* In DTV/HDMI (1080i 50 Hz / 60 Hz, 720p 50 Hz / 60 Hz, 1080p 24 Hz / 30 Hz / 50 Hz / 60 Hz), Component (720p, 1080i, 1080p) mode, [Just Scan] is available.

* Full Wide is supported only for Digital, Analogue, AV.

3 Screen Mute (Command: k d)

- To select screen mute on/off.

Transmission

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

Data 00 : Screen mute off (Picture on) / Video mute off

Data 01 : Screen mute on (Picture off)

Data 10 : Video mute on

Ack

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

- * In case of video mute on only, the device will display On Screen Display (OSD). But, in case of Screen mute on, the device will not display OSD.

4 Volume Mute (Command: k e)

- To control volume mute on/off.

You can also adjust mute using the mute button on remote control.

Transmission

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

Data 00 : Volume mute on (Volume off)

Data 01 : Volume mute off (Volume on)

Ack

`[e][ ][Set ID][ ][OK/NG][Data][x]`**5 Volume Control** (Command: k f)

- To adjust volume.

You can also adjust volume with the volume buttons on remote control.

Transmission

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

Data Min : 00 to Max : 64

- * Refer to "Real data mapping".

Ack

`[f][ ][Set ID][ ][OK/NG][Data][x]`**6 Contrast** (Command: k g)

- To adjust screen contrast.

You can also adjust contrast in the picture settings.

Transmission

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

Data Min : 00 to Max : 64

- * Refer to "Real data mapping".

Ack

`[g][ ][Set ID][ ][OK/NG][Data][x]`**7 Brightness** (Command: k h)

- To adjust screen brightness.

You can also adjust brightness in the picture settings.

Transmission

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

Data Min : 00 to Max : 64

- * Refer to "Real data mapping".

Ack

`[h][ ][Set ID][ ][OK/NG][Data][x]`**8 Colour** (Command: k i)

- To adjust the screen colour.

You can also adjust colour in the picture settings.

Transmission

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

Data Min : 00 to Max : 64

- * Refer to "Real data mapping".

Ack

`[i][ ][Set ID][ ][OK/NG][Data][x]`**9 Tint** (Command: k j)

- To adjust the screen tint.

You can also adjust tint in the picture settings.

Transmission

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

Data Red : 00 to Green : 64

- * Refer to "Real data mapping".

Ack

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

10 Sharpness (Command: k k)

- To adjust the screen sharpness.
You can also adjust sharpness in the picture settings.

Transmission

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

Data Min : 00 to Max : 32

* Refer to "Real data mapping".

Ack

`[k][ ][Set ID][ ][OK/NG][Data][x]`**11 OSD Select** (Command: k l)

- To select OSD (On Screen Display) on/off when controlling remotely.

Transmission

`[k][l][ ][Set ID][ ][Data][Cr]`

Data 00 : Off

Data 01 : On

Ack

`[l][ ][Set ID][ ][OK/NG][Data][x]`**12 Remote Control Lock Mode** (Command: k m)

- To lock the front panel controls on the monitor and remote control.

Transmission

`[k][m][ ][Set ID][ ][Data][Cr]`

Data 00 : Off

Data 01 : On

Ack

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

- * If you are not using the remote control, use this mode. When main power is on/off, external control lock is released.
- * In the standby mode, if key lock is on, the device will not turn on by power on key of IR & Local Key.

13 Balance (Command: k t)

- To adjust balance.
You can also adjust balance in the audio settings.

Transmission

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

Data L : 00 to R : 64

* Refer to "Real data mapping".

Ack

`[t][ ][Set ID][ ][OK/NG][Data][x]`**14 Color Temperature** (Command: x u)

- To adjust Colour Temperature. You can also adjust Colour Temperature in the picture settings.

Transmission

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

[Data] L : 00 to R : 64

* Refer to "Real data mapping".

Ack

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

15 Energy Saving (Command: j q)

- To reduce the power consumption of the device. You can also adjust Energy Saving in picture settings.

Transmission

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

Power Saving Function					Level				Description
7	6	5	4		3	2	1	0	
0	0	0	0	Low Power	0	0	0	0	Off
0	0	0	0	Low Power	0	0	0	1	Minimum
0	0	0	0	Low Power	0	0	1	0	Medium
0	0	0	0	Low Power	0	0	1	1	Maximum
0	0	0	0	Low Power	0	1	0	0	Auto

- 'Auto' is available in a device that supports 'Intelligent Sensor'.

Ack

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

16 Auto Configuration (Command: j u) (Only RGB support model)

- To adjust picture position and minimize image shaking automatically. It works only in RGB (PC) mode.

Transmission

[j][u][][][Set ID][][Data][Cr]

Data 01 : To set

Ack

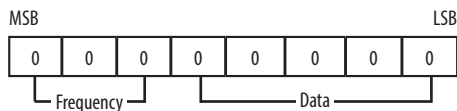
[u][][Set ID][][OK/NG][Data][x]

17 Equalizer (Command : j v)

- To adjust equalizer.

Transmission

[j][v][][][Set ID][][Data][Cr]



7	6	5	Frequency	4	3	2	1	0	Step
0	0	0	1st Band	0	0	0	0	0	0 (decimal)
0	0	1	2nd Band	0	0	0	0	1	1 (decimal)
0	1	0	3rd Band	...	...	...	...	...	...
0	1	1	4th Band	1	0	0	1	1	19 (decimal)
1	0	0	5th Band	1	0	1	0	0	20 (decimal)

Ack

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

18 Tune Command (Command: m a)

- Select channel to following physical number.

Transmission

[m][a][][][Set ID][][Data 00][][Data 01][][Data 02][Cr]

Data 00 : High channel data

Data 01 : Low channel data

ex. No. 47 → 00 2F (2FH)

No. 394 → 01 8A (18AH),

DTV No. 0 → Don't care

Data 02 : [Antenna]

0 x 00 : Analogue Main

0 x 10 : DTV Main

0 x 20 : Radio

[Cable]

0 x 80 : Analogue Main

0 x 90 : DTV Main

0 x A0 : Radio

[Satellite]

0 x 40 : DTV Main

0 x 50 : Radio Main

Channel data range

Min : 00 Max : 270F (0 to 9999)

Ack

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

19 Program Skip/Add (Command: m b)

- To set skip status for the current Channel.

Transmission

[m][b][][Set ID][][Data][Cr]

Data 00 : Skip

Data 01 : Add

Ack

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

20 Key (Command: m c)

- To send IR remote key code.

Transmission

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

Data IR CODES

Ack

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

21 Control Backlight (Command: m g)

- To control the backlight.

Transmission

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

Data Min : 00 to Max : 64

Ack

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

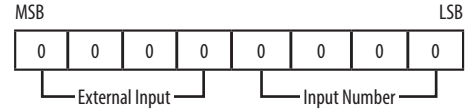
22 Input select (Command: x b) (Main Picture Input)

- To select input source for main picture.

Transmission

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

Data Structure



External Input				Data
0	0	0	0	DTV
0	0	0	1	Analogue
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB
0	1	1	1	HDMI
1	0	0	0	
1	0	0	1	
1	0	1	0	

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

Ack

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

23 Channel(Programme) Block/Unblock (Command :m d)

- This command may work differently depending on model and signal.

- For South Korea, North/Latin America except Colombia Model Transmission

```
[m][a][ ][0][ ][Data00][ ][Data01][ ][Data02][ ][Data03][ ][Data04][ ][Data05][Data06][Cr]
```

[Data 00]: Physical Channel Number

[Data 01][Data 02]: Major Channel Number

- Data 01 : High Channel data
 - Data 02 : Low Channel data
- 00 00 ~ 27 0F (Decimal: 0 ~ 9999)

[Data 03][Data 04]: Minor Channel Number

- Data 03: High Channel data
- Data 04: Low Channel data

[Data 05] : Input Source

- 02 : Antenna TV (DTV)
- 06 : Cable TV (CADTV)
- 0b : Cable DTV Plus

[Data 06] : block(01)/unblock(00)

* Block/Unblock Command Examples

Block/Unblock Cable DTV (DVB-T) Channel 18-2

Set ID = 01

Data 00 = Physical Channel Number 18 = 12 (HEX)

Data 01 & 02 = Major Channel Number is 18 = 00 12 (HEX)

Data 03 & 04 = Major Channel Number is 2 = 00 02 (HEX)

Data 05 = cable DTV = 06

Data 06 : block(01)/unblock(00)

Result :

```
md 01 12 00 12 00 02 06 (01/00)
```

24 Fail Over Mode (Command: m i)

- Selects the Fail Over mode. Transmission

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

Data 00: Off

Data 01: Auto

Data 02: Manual

Ack

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

25 Fail Over Input Select (Command: m j)

- Selects an input source for fail over. (This feature is only available when Fail Over is set to Custom.)

Transmission

```
[m][j][ ][Set ID][ ][Data1][ ][Data2][ ][Data3][ ][Data4]... [ ][DataN][Cr]
```

Data1-N (Input priority 1-N)

Data 20: AV1

Data 21: AV2

Data 22: AV3

Data 90: HDMI1

Data 91: HDMI2

Data 92: HDMI3

Data 93: HDMI4

Ack

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

* Some input signals may not be available for all models.

* The data number (N) may vary depending on the model. (The data number depends on the number of supported input signals.)

26 Internal storage media contents play (Command: s n, a8)

- Plays media stored in the internal memory.
- This command may work differently depending on model and signal.

Transmission

[s][n][][Set ID][][a][8][][Data][Cr]

Data 01 : media contents play

Acknowledgement

[n][][Set ID][][OK/NG][a][8][][Data][x]

*** Real data mapping**

00 :	Step 0
:	
A :	Step 10 (Set ID 10)
:	
F :	Step 15 (Set ID 15)
10 :	Step 16 (Set ID 16)
:	
64 :	Step 100
:	
6E :	Step 110
:	
73 :	Step 115
74 :	Step 116
:	
CF :	Step 199
:	
FE :	Step 254
FF :	Step 255

