OWNER'S MANUAL

LG UltraFine™ Display OLED Pro

(Professional Video Display)

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

65EP5Q

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TABLE OF CONTENTS

SAFETY PRECAUTIONS 3

- Precautions for the AC Adapter and Power 4
- Precautions for Moving the Product 6
- Precautions for Installing the Product 7
- Precautions for Cleaning the Product 9
- Precautions for Using the Product 10
- Precautions for Using the Remote control. 12
- Precautions for Experiencing Image Retention 13
- Product Disposal 13

REMOTE CONTROL 14

MAKING CONNECTIONS 16

- Connecting to a PC 16
- SDI Signal Connection 17
- External Device Connection 17
- Using the Input List 18

MENU 19

USER SETTINGS 25

- Quick Settings 26
- Picture 28
- Picture Advanced 33
- Sound 38
- Audio Analysis 40
- General 44
- Calibration 54

TROUBLESHOOTING 56

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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.

SAFETY PRECAUTIONS

The safety precautions are intended to prevent unexpected danger or harm by helping the user to use the product safely and for its intended purpose.

⚠ WARNING

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

⚠ CAUTION

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

Precautions for the AC Adapter and Power

⚠ WARNING

- Use only the power cord or AC adapter provided or approved by LG Electronics, Inc. If you use another power cord, make sure that it is certified by the national standards. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized service center for a replacement.
- Operate the display only from a power source(i.e. voltage) indicated in the product specification.
  - Otherwise the product can be damaged, fire can occur or you may be electrocuted. If you are not sure what type of power supply you have, consult a certified installation company.
- Make sure the power cord connect to a properly grounded outlet.
  - If you do not you may be electrocuted or injured or the product can be damaged.
- Insert the power plug or AC adapter firmly so it cannot come loose.
  - Poor connection may cause a fire or electric shock.
- In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous.
  - It can cause electric shock.
- Be careful not to step or place heavy objects (electronic appliances, clothing, etc.) on the power cord or AC adapter. Additionally, do not bend or pull out the power cord or AC adapter with excessive force.
  - Damaged power cords may cause a fire or electric shock.
- Do not connect power cord or AC adapter damaged with sharp objects to power outlet.
  - You may be electrocuted.
- Do not insert a conductor (like a metal chopstick) into one end of the power cord while the other end is connected to the input terminal on the wall. Additionally, do not touch the power cord right after it is unplugged.
  - You may be electrocuted.
- Do not use with a multi-outlet connected by many electrical product and heating devices. Use an exclusive multi-outlet with a grounding terminal.
  - A fire can break out due to overheating.

- If water or any foreign substance goes inside the product, disconnect the power cord immediately and contact the service center.
  - Otherwise, this may cause a fire or electric shock due to damage to the product.
- Keep the power cord or AC adapter away from any heating devices.
  - The cord coating may melt and cause fire or electric shock.
- Never disassemble, repair or modify the power cord or AC adapter.
  - This may cause a fire or electric shock.
- The main cutoff device is the power cord. Please make sure the product is installed near the wall outlet and that it is easily accessible.
- As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if the unit is turned off.
- Power consumption will be '0' only when the power plug is unplugged.
- Use the appliance coupler as the disconnect device.

⚠ CAUTION

- If the outlet pins of the power plug or AC adapter is covered with dust, be sure to wipe them and keep them clean.
  - Overheating due to layers of dust may cause a fire or electric shock.
- If the outlet pins of the power plug or AC adapter is covered with water be sure to wipe them and keep them clean. Additionally, Do not touch the power plug or AC adapter with wet hands.
  - This may cause an electric shock.
- Do not turn the product on or off by plugging in or unplugging the power plug from the power outlet. Do not use the power socket as a switch.
  - This may cause an electric shock or product malfunction.
- Do not unplug the power cord while the product is in use.
  - Electrical shock can damage the product.

Precautions for Moving the Product

WARNING

- Contact the service center before moving the product.
  - It may cause electric shock and damage the product.
- Make sure the product is turned off, unplugged, and all cables have been removed before the product is moved.
  - You may be electrocuted or the product can be damaged.
- When moving the product, do not shock or cause an impact on the front panel.
  - You may be electrocuted or the product can be damaged.
- Use the correct number of people according to the weight of the product. (Under 25 Kg per person use lifting equipment when exceeding 100 Kg)
  - If use the damaged product again, contact the service center because it can cause electric shock or fire.
- Do not hold it upside down while holding only the stand. (It is for stand supported models only.)
  - This may cause stand warping, panel damage and other types of product damage.

CAUTION

- Do not dispose of the product-packing box. Use it when moving by putting the product in the box to carry it.

Precautions for Installing the Product

⚠ WARNING

- Contact the service center before installing the product.
  - It can cause electric shock and damage the product.
- Do not drop an object on or impact on the product. Keep out of reach of children and do not place toys or objects near the product to prevent throwing things on the product screen.
  - It can cause injury to human, problem to product and damage the display.
- Do not put heavy objects on, or hang from, the product.
  - If the product collapses or is dropped, you may be injured.
- Do not touch the surface of the product if it overheats.
  - It can cause injury to human.
- Install the product firmly fixed on a floor, wall, etc. to prepare against external impact such as wind and earthquake.
  - You must refer to the manual provided.
- Prevent Children from climbing or hanging on the product.
  - If the product collapses or is dropped, you may be injured.
- Do not install it where there are heating devices such as electrical heaters or lighting equipment.
  - Fire, electrical shock, malfunction may occur.
- Do not install this product by yourself as you may injure yourself or cause damage to the product. Please contact service engineer authorized by service center.
- 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.
- Do not leave the power or signal cable, etc. on the pathway.
  - This could cause a trip or fall, which could cause an electrical shock, fire, product breakdown, or injury.
- Do not let the product drop when connecting it to an external device connected with a short cable.
  - This may cause injury and damage to the product.
- If you drop the product or the case is broken, turn off the product and unplug the power cord and contact the service center.
  - If you continue to use without taking proper measures, electrical shock or fire can occur.
- Install the product in a dry place where it is not near dust and water. Avoid high temperatures and humidity.
  - This may cause electrical shock, fire or product damage.
- Safely install the product in a place that can hold the weight of the product.
  - A lack of strength may cause the product to fall.
- Take a comfortable and natural position to relax the muscles when working with a product.
- Do not install this product on a location that is wobbly, sloped, unstable, exposed to vibrations, or that does not safely and securely support the product to remain in place. Do not place a cloth or any other item between the product and the furniture supporting the product.
  - The product may fall down or overturn, causing an injury or malfunction.

⚠ CAUTION

- Install the product where no Electromagnetic Interference occurs.
- If you install the product in a place that does not meet the recommended conditions, this may cause serious damage to the product's picture quality, life cycle, and appearance. Please check with service engineer before installing. Please do not install the product in places such as where there is an abundance of fine dust or oil mist, chemical substances are used, exposed to direct sunlight, the temperature is very high or low, the humidity is very high.
- Make sure the product is well ventilated by Installing at a distance (100 mm or more) from the wall.
  - If you install the product too close to the wall, it may be deformed or fire can break out due to internal heat buildup.
- Do not cover the product with a tablecloth or a curtain or other materials (e.g. plastic) while plugged in. Do not block the ventilation hole of the product.
  - The product can be deformed or fire can break out due to overheating inside the product.
- Do not install the product in an area with poor ventilation (e.g. on a bookshelf, in a closet) or outside and avoid placing on cushions or carpets.
  - The product could catch fire due to overheating inside the product.
- Install the product on a flat and stable place that is large enough to support the product.
  - If the product is dropped, you may be injured or the product may be broken.
- When installing the product on a shelf or cabinet, make sure that the bottom end of the product is not protruding forward.
  - The product may fall due to unbalanced center of gravity, which may cause personal injury or damage to the product. Be sure to use cabinets or shelves that fit your product.

Precautions for Cleaning the Product

⚠ WARNING

- Keep the product clean at all times.
  - If you don't clean the unit for a long time and it becomes covered in dust, it can cause fire or product damage.
- When you need to clean the inside of the product, you must contact the service center.
  - Otherwise, cleaning without support may cause a fire, electric shock, or damage to the product.
- When cleaning the product, unplug the power cord and wipe gently with a soft cloth to prevent scratching.
  - An electric shock may occur or damage to the screen if its scratched.
- When you want to clean the front frame, spray water onto a soft cloth 2 to 4 times and wipe in one direction only.
  - Too much moisture may cause staining.

⚠ CAUTION

- When cleaning the product or the screen, unplug the power cord and wipe it gently with a soft cloth. Do not spray water or other liquids directly on the product. Especially, do not clean your product 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 or its panel.
  - This may result in fire, electric shock or product damage (deformation, corrosion or breakage).

Precautions for Using the Product

⚠ WARNING

- Do not use the product in any environment with excessively high temperatures or humidity.
  - It may cause electrical shock or damage the product.
- If you use the product for a long period of time, take a rest from time to time to protect your vision.
  - Extended viewing could result in impaired vision.
- Listening at high volume or using for a long time can cause damage to your hearing.
- In the event that liquid or a foreign object falls into the product, please switch it off and unplug it from the wall outlet and contact the service center.
  - Otherwise, the product may cause fire or electric shock.
- In the event that no image appears on the screen or no sound is heard, stop using the product. Switch it off immediately, unplug it from the power outlet and contact the service center.
  - Otherwise, the product may cause fire or electric shock.
- Do not drop an object or impact on the product or screen.
  - It can cause injury to human, problem to product and damage the screen.
- If you can smell smoke or other odors or hear a strange sound, unplug the power cord and contact the service center.
  - If you continue to use the product without taking proper measures, it may cause electrical shock or fire.
- Do not attempt to disassemble, repair or modify the product yourself. Please contact service center if you need to repair it.
  - Fire or electric shock can occur.
- Do not place objects filled with liquids such as vases, cups etc. on or over the product to prevent liquid from entering the product.
  - Failure to do so may result in fire, electric shock, malfunction or deformation.
- Do not push hard on or scratch the product's surface with your hands or sharp objects, such as nails, pencils or pens. Do not shock or scratch the front and sides of the screen with metallic objects.
  - This may damage the products and cause it to malfunction.
- Do not touch the product if it has been exposed to sunlight or an intense light because it could be hot.

- Do not use high voltage electrical goods near the product (e.g., a bug zapper).
  - This may result in product malfunction if it receives an electrical shock.
- If there is a gas leak, do not touch the outlet, and open the windows for ventilation.
  - Otherwise, the product may cause fire or electric shock.
- If you drop the product or the case is broken, turn off the product and unplug the power cord.
  - If you continue to use without taking proper measures, electrical shock or fire can occur. Contact the service center.
- Keep small accessories out of the reach of children.
  - If a child swallows it, consult a doctor immediately.
- Keep out of reach of children from the product. Also, do not throw toys or objects at the product or screen.
  - It can cause injury to human, problem to product and damage the screen.
- All the power sources must be disconnected by removing the power cables to remove all power from the unit.

⚠ CAUTION

- This panel is an advanced product that contains millions of pixels. You may occasionally see pixel spots when viewing the screen. Since these deactivated pixels are not a defect, the performance and reliability of the product is not affected.
- Do not put or store inflammable substances near the product.
  - There is a danger of explosion or fire.
- Keep the proper distance from the product.
  - It can cause damage to your vision if you look at the product too closely.
- Set the appropriate resolution and frequency by products.
  - It can cause damage to your vision.
- Take a regular break when working with the product for a long time.

Precautions for Using the Remote control

⚠ WARNING

- Avoid places with high humidity.
  - It may cause electrical shock or damage the product.
- Do not expose batteries to excessive heat, such as direct sunlight, open fireplace, and electric heaters.
  - It may cause fire and you may be injured.
- Make sure that children do not swallow the remote control batteries when you replace them. Keep batteries out of reach of children.
  - If a child swallows a battery, consult a doctor immediately.
- Do not dispose of batteries in a fire.
  - Please dispose batteries at a local recycling center or a retail store that handles batteries.
- Used batteries, which include rechargeable batteries, should be recycled separately from waste.
  - Please dispose used batteries and rechargeable batteries at a local recycling center or a retail store that handles batteries.

⚠ CAUTION

- Do not short circuit and disassemble of batteries.
  - It may cause electrical shock or fire.
- The remote control may not function properly in sunlight or under a strong lamp. Move the product if it is being used in these conditions.
- Check if there is any obstacle between the product and the remote control.
- Do not mix new batteries with old batteries.
  - Overheating or leaking batteries may cause fire or electric shock.
- Only use the specified type of battery. Do not insert batteries that are not rechargeable into the charger.
  - Overheating or leaking batteries may cause fire or electric shock.

Precautions for Experiencing Image Retention

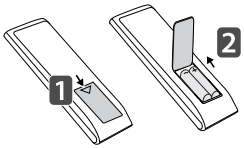
- Displaying a still image for a prolonged period of time may cause damage to the screen, resulting in image retention. Most third-party products have the same issue. The resulting damage is not covered by the product warranty.
  - Use a screen saver when using the monitor for a prolonged period of time.

Product Disposal

- Do not dispose of this product with general household waste.
- Disposal of this product must be carried out in accordance to the regulations of your local authority.

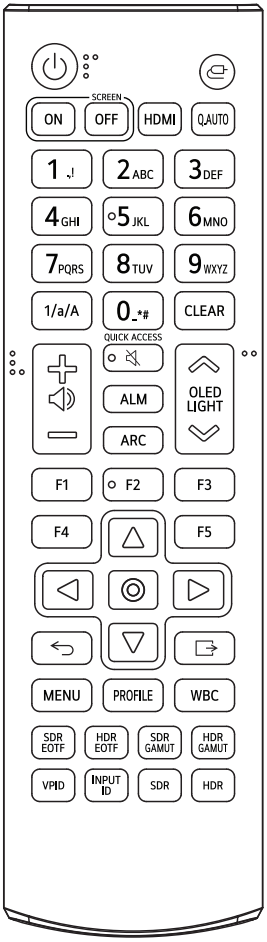
REMOTE CONTROL

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



⚠ CAUTION

- Do not mix old and new batteries, as this may damage the remote control.
- Be sure to point the remote control toward the remote control sensor on the monitor.
- Some features of the remote control may not be supported in certain models.
- The product's internal and external batteries should not be exposed to excessive heat such as direct sunlight, fire, or the like.



(Power) Turns the monitor on or off.

(Input) Selects the input mode.

SCREEN ON, SCREEN OFF Turns the image on the monitor on and off.

HDMI Selects the HDMI mode.

Q.AUTO Sets the Quad Link mode to Auto mode. (Automatically converts Quad Link 2SI and Square input.)

Number and Alphabet Button Enters numerical or alphabetical characters depending upon the setting.

1/a/A Toggles between numerical and alphabetical. (This function is not supported.)

CLEAR Deletes the entered numerical or alphabetical character.

(Volume Control Button) Adjusts the volume of the headphone output.

OLED LIGHT Press the Up / Down button on the remote control to adjust the OLED brightness.

(Mute) Mutes all sounds.

ALM Turns the Audio Level Meter on or off.

ARC Selects the screen size.

F1~F5 Execute the hotkeys you set.

After selecting the menu, select and adjust functions.

(Previous) Moves back one step in the user operation feature.

(EXIT) Closes the menu.

WBC Enter the White Balance Control menu.

SDR EOTF Select SDR EOTF (Gamma).

HDR EOTF Select HDR EOTF (Gamma).

SDR GAMUT Select the SDR Color Space.

HDR GAMUT Select the HDR Color Space.

VPID Shows the information of the SDI input signal.

INPUT ID It shows the details of the input signal.

SDR Set the Signal Format to SDR.

HDR Set the Signal Format to HDR.

MAKING CONNECTIONS

You can connect various external devices to your monitor. Change the input mode and select the external device you want to connect. For more information about external device connections, see the user manual provided with each device.

Connecting to a PC

Some of the cables are not provided. This monitor supports the Plug and Play* feature.

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

SDI Signal Connection

- Use an SDI standard cable to secure the transmission distance of the SDI signal.
- Use in the order of SDI cable connection according to the SDI transmission specifications.
  - Single Link 12G / 6G / 3G / HD / SD-SDI and Dual-Link 3G-SDI signals can be input to the SDI IN connectors of this monitor.
  - Up to 2-channel Single Link 12G-SDI signals or 1-channel Dual-Link 3G-SDI signals can be input.
  - Use the appropriate input connectors depending on the input signal, referring to the tables below.

* Examples of SDI Signal Connection

Single Link 12G SDI		Dual Link 3G SDI	
Connector	Input Signal	Connector	Input Signal
SDI In 1	12G SDI	SDI In 1	3G SDI Link1
SDI In 2	12G SDI	SDI In 2	3G SDI Link2
Quad Link Square		Quad Link 2SI	
Connector	Input Signal	Connector	Input Signal
SDI In 1	3G SDI Link1	SDI In 1	3G SDI Link1
SDI In 2	3G SDI Link2	SDI In 2	3G SDI Link2
SDI In 3	3G SDI Link3	SDI In 3	3G SDI Link3
SDI In 4	3G SDI Link4	SDI In 4	3G SDI Link4

External Device Connection

Some of the cables are not provided. Connect a HD receiver, DVD, or VCR player to the monitor and select an appropriate input mode.

For the best picture and sound quality, connecting external devices to your monitor using HDMI cables is recommended.

NOTE

- For the best image quality, using the monitor with HDMI connection is recommended.
- To comply with the specifications of the product, use a shielded interface cable with ferrite core, such as a HDMI cable.
- If you turn the monitor on when the set is cold, the screen may flicker. This is normal.
- Sometimes red, green, or blue spots may appear on the screen. This is normal.
- Use a High Speed HDMI®/™ cable (shorter than 3 m).
- Use a certified cable with the HDMI logo attached. If you do not use a certified HDMI cable, the screen may not display or a connection error may occur.
- Recommended HDMI Cable Types
  - High Speed HDMI®/™ Cable
  - High Speed HDMI®/™ Cable with Ethernet

- If you cannot hear any sound in HDMI mode please check your PC settings. Some PCs require you to manually change the default audio output to HDMI.
- You may experience compatibility issues if you use HDMI-PC mode.
- Make sure the power cable is disconnected.
- If you connect a gaming device to the monitor, use the cable provided with the gaming device.

⚠ CAUTION

- Do not press the screen with your finger for a prolonged period as this may result in temporary distortion on the screen.
- Avoid displaying static images on the screen for a long period of time to prevent image retention. Use a screensaver if possible.
- A wireless communication device near your monitor can affect the image.

Using the Input List

- HDMI, SDI1, SDI2, SDI3, SDI4, Dual Link (SDI 1&2), Dual Link (SDI 3&4), Quad Link : Auto, Quad Link : 2SI, Quad-Link : Square, SDI Quad View, SFP+

MENU

Menu	Item 1	Item 2	Item 3
Quick Settings	Current Input		
	SDR / HDR Signal Format		
	Color Temperature		
	SDR EOTF		
	HDR EOTF		
	Input Range		
	SDR Gamut		
	HDR Gamut		
	Transfer Matrix		
	SDI Color Format		

Menu	Item 1	Item 2	Item 3
Picture	OLED Light		
	Brightness		
	Contrast		
	Chroma		
	Sharpness		
	Tint		
	White Balance Control	Color Temp	
		VAR Temp	
		Method	
		R-Gain	
		G-Gain	
		B-Gain	
		R-Offset	
		G-Offset	
		B-Offset	
		Signal Level (%)	
		Code Value	
		Target Luminance	
		Adjusting Luminance	
		Red	
		Green	
		Blue	
		Reset	

Menu	Item 1	Item 2	Item 3
Picture	Display Configuration	SDR / HDR Signal Format	
		SDR Configuration	SDR Gamut
			SDR EOTF
			SDR EOTF User
		HDR Configuration	HDR Gamut
			HDR EOTF
			HDR Format
			ST 2084 PQ Tone Curve
			BT.2100 HLG System Gamma
			BT.2100 HLG System Gamma User
			HDR Peak Brightness
		User LUT Settings	Upload LUT
			Apply LUT
			Reset LUT
		Dolby Visioin Configuration	Dolby Vision 1D LUT
			Dolby Vision Parameters
		Transfer Matrix	
		PQ Clip Point	
		SDI Color Format	
		Input Range	
		Mono / Blue Only	
	Uniformity Compensation	Uniformity Compensation	
		Reset	

Menu	Item 1	Item 2	Item 3
Picture Advanced	Scaler Adjustment	Over Scan	
		Aspect Ratio	Aspect Ratio
		Zoom	2x Zoom
			3x Zoom
			4x Zoom
			5x Zoom
	Picture Option	Noise Reduction	
		MPEG Noise Reductionn	
		Real Cinema	
		Motion Eye Care	
		Dynamic Tone Mapping	
		Dynamic Contrast	
		Dynamic Color	
		Smooth Gradation	
		Low Luminance Gradation	
	HDMI Deep Color	HDMI	
	OLED Panel Settings	TPC Auto-dimming	
		Pixel Refresher	
		Screen Shift	
		Logo Luminance Adjustment	
		GSR Auto-dimming	
		Convex Power Control	
Sound	Select Mode		
	Sound Out	Use Main Speaker	
		Use Wireless Speaker	
		Use Wired Speaker	
	Advanced Settings	Balance	
		Equalizer	
		Reset	
		Match Screen and Sound	

Menu	Item 1	Item 2	Item 3
Audio Analysis	Audio Source Selection		
	Audio Channel Settings	Left Channel	
		Right Channel	
	Audio Level Meter	Audio Level Meter	
		Audio Display Type	
		Audio Channel Selection	
		Audio Level Meter Position	
		Audio Level Meter Size	

Menu	Item 1	Item 2	Item 3
General	Profile		
	Function Key	F1/F2/F3/F4/F5	
	On Screen Display	Input ID	Details for Input
			ID Style
			Input Label
		VPID	
	Information	Device Name	
		Model Name	
		webOS Version	
		S/W Version	
		Serial Number	
		Micom Version	
		FPGA Version	
		Wired Connection(Ethernet)	
		Wi-Fi Connection	
		Available Internal Storage	
		Temperature	
		Open Source Software Notice	
	Auto IR Lock		
	RCU ID		
	Screen Saver		
	No Signal Message		
	Screen Control	Interlacing / De-interlacing Mode	
		Internal pattern	
	Power	Standby Mode When NoSignal	
		No IR Power off (4hours)	
	Network Settings	Wired Connection (Ethernet)	
		Wi-Fi Connection	
	LG Connect		
	MultiView		
	Change Device Password		
	Factory Reset		

USER SETTINGS

- How to adjust the menu
  - You can press the MENU button to launch the Settings menu.
  - Press the OK / Dial button on the Main menu icon to go to the Submenu.
  - Pressing the MENU button while running the Setup menu moves you to the previous step.

- You can adjust the slider value by moving the remote control's ^ v < > button or Dial up and down, and press the OK / Dial button to move to the next slider.

Quick Settings

[SDR/HDR Signal Format]

Select HDR, SDR signal format manually.

- [Auto]: Use Video Information.

[Color Temperature]

The higher the Color temperature, the cooler the Color. The lower the Colortemperature, the warmer the Color.

[SDR EOTF]

Selects the EOTF for SDR input.

[HDR EOTF]

Selects the EOTF for HDR input.

[Input Range]

Correct the darkness and contrast of the screen based on the input signal range.

- Settings recommended based on input signal:
  - RGB 0 – 255: Full
  - RGB 16 – 235: Narrow
  - YCbCr: Narrow
  - RGB based on SDIStandard : SDI Full

[SDR Gamut]

Selects the Color Gamut for SDR input.

[HDR Gamut]

Selects the Color Gamut for HDR input.

[Transfor Matrix]

Sets the value for colorimetry, which is part of the HDMI Packet AVI Infoframe.

[SDI Color Format]

Sets the pixel encoding value, which is part of the SDI Packet AVI Infoframe.

Picture

[OLED Light]

Adjusts the brightness of the screen by adjusting the brightness of the OLED panel.

[Brightness]

Adjusts the overall brightness of the screen. The closer the value to 100, the brighter the screen.

[Contrast]

Adjusts the difference between the screen's light and dark areas. The closer the value to 100, the greater the difference.

[Chroma]

Softens or deepens the Colors on the screen. The closer the value to 100, the deeper the Color.

[Sharpness]

Adjusts the sharpness of the edges of objects. The closer the value to 50, the clearer and sharper the edges.

[Tint]

Adjusts the balance between the levels of red and green Colors displayed on the screen. The closer to +50, the deeper the red, and the closer to -50, the deeper the green.

[White Balance Control]

The function to adjust white balance.

- [Color Temp]: The higher the Color temperature, the cooler the Color. The lower the Color temperature, the warmer the Color.
- [VAR Temp]: Adjusts the Color temperature to the desired level. Enable this function by setting the [Color Temp] option to [VAR Temp].
- [Method]: This method is for fine-tuning the color temperature setting, and for select the levels to adjust the color temperature. If [Method] is set to 2 Points, you can control Gain, Offset. If [Method] is set to 10,22 Points IRE, you can control white balance at each point of 10, 22 levels of the video.
  - Depending upon the selected [Method], the available options may differ. [Signal Level(%)], [Target Luminance], [Adjust Luminance], [Red/Green/Blue] will be shown, if [Method] is set to 10,22 Points.

[Signal Level(%)]

Select screen brightness for color temperature adjustment.

[Target Luminance]

Adjust the luminance to the highest IRE (100 Points).

[Adjust Luminance]

You can adjust brightness of the selected signal level.

[Display Configuration]

- [SDR / HDR Signal Format]: Select HDR, SDR signal format manually. Auto: use Video Information
- [SDR Configuration]
  - [SDR Gamut]: Selects the Color Gamut for SDR input.
  - [SDR EOTF]: Selects the EOTF for SDR input.
  - [SDR EOTF User]: Adjusts the EOTF in the range of 0.8 ~ 3.0. It can be set in units of 0.1. It is activated when [SDR EOTF USer] is selected as [User].
- [HDR Configuration]
  - [HDR Gamut]: Selects the Color Gamut for HDR input.
  - [HDR EOTF]: Selects the HDR EOTF for HDR input.
  - [HDR Format]: selects the HDR format manually. Auto: use Video Information
  - [ST 2084 Tone Curve]: selects the ST 2084 Tone Curve
  - [BT.2100 HLG System Gamma]: selects the BT.2100 HLG system gamma setting.
  - [BT.2100 HLG System Gamma User]: Adjusts the HLG System Gamma in the range of 1.00 ~ 1.60. It can be set in units of 0.05. It is activated when [BT.2100 HLG System Gamma] is selected as [User].
  - [HDR Peak Brightness]: change peak brightness on HDR mode.
- [Dolby Vision Configuration]
  - [Dolby Vision 1D LUT]: Selects the 1D LUT for Dolby Vision input.
  - [Dolby Vision Parameters]: Selects the Parameters for Dolby Vision input.

NOTE

- [ST.2084 PQ], [BT.2100 HLG], and [Dolby Vision] cannot be selected if [Internal Pattern] is turned on.

- [Transfer Matrix]: Sets the value for colorimetry, which is part of the HDMI Packet AVI Infoframe.
  - [Auto]: Sets to the colorimetry value received from the device.
  - [BT.601]: Sets the colorimetry value to BT.601.
  - [BT.709]: Sets the colorimetry value to BT.709.
  - [BT.2020]: Sets the colorimetry value to BT.2020.

NOTE

- This feature works in HDMI, SDI, and SFP+.
- Colorimetry: Data indicating the Color space of the video. It is part of the metadata contained in the HDMI video format. (e.g., BT.601 → SD standard, BT.709 → HD / FHD standard, BT.2020 → UHD / HDR standard)

- [Mono / Blue Only]
  - [Off]: Disables [Mono / Blue Only].
  - [Mono Color]: Displays a single Color screen.
  - [Blue Color]: Displays only the blue signal on the screen.
- [Input Range]: Correct the darkness and contrast of the screen based on the input signal range. (Settings recommended based on input signal: RGB 0 – 255: High, RGB 16 – 235: Low, YCbCr: Low, RGB based on SDI Standard : SDI Full)

  Available settings are as follows:
  - [Auto]: Use this option to apply settings automatically based on the input signal. (Only one of [Narrow] and [Full] is selected, [SDI Full] is not automatically selected.)
  - [Narrow]: Use this option for input signals in the 8-bit range limited to values 16 – 235 and 10bit range limited to values 64 - 940.
  - [Full]: Use this option for input signals in the 8-bit range full values 0 – 255 and 10bit range full values 0 – 1023.
  - [SDI Full]: Use this option for input signals in the 10-bit range limited to values 4 – 1019.
- [PQ Clip Point]: Sets the mastering peak, value, which is part of the HDMI HDR packet metadata.
  - [700]: Sets the mastering peak value to 700
  - [1000]: Sets the mastering peak value to 1000
  - [2000]: Sets the mastering peak value to 2000
  - [3000]: Sets the mastering peak value to 3000
  - [4000]: Sets the mastering peak value to 4000
  - [10000]: Sets the mastering peak value to 10000

NOTE

- This feature works in only HDR10 signal.

NOTE

- HLG is a type of HDR, but the signal packets in this format do not contain metadata. Since the tone curve is fixed according to the mastering peak information, image quality does not change according to the mastering peak.
- The corresponding settings can be changed with no signals in HDMI, SDI, SFP+ or with signals in SDR / HLG / Dolby; however, the actual image quality settings are applied when running in HDR.

- [SDI Color Format]: Sets the pixel encoding value, which is part of the SDI Packet AVI Infoframe.
  - [Auto]: Sets to the pixel encoding value received from the device.
  - [RGB444]: Sets the pixel encoding value to RGB444.
  - [YCbCr444]: Sets the pixel encoding value to YCbCr444.
  - [YCbCr422]: Sets the pixel encoding value to YCbCr422.

NOTE

- This feature works in SDI and SFP+.

[Uniformity Compensation]

Evens out luminance / Color across the panel using SuperSign WB.

Picture Advanced

[Scaler Adjustment]

[Over Scan]

Select a scan mode for image output.

- [Zero Scan]: Displays 100 % of the original image size.
- [Over Scan]: Displays 95 % of the original image size.
- [Under Scan]: Displays 105 % of the original image size.

NOTE

- [Over Scan] is deactivated when any of the features below have been enabled.
  - [Internal Pattern]

  When deactivated, [Over Scan] is set to [Zero Scan].
  [Over Scan] returns to the setting previously set by the user upon reactivation.
- [Over Scan] may work differently depending on the [Screen Shift] settings.

[Aspect Ratio]

The screen size can be adjusted to the set ratio.

- [Full Wide] : Sets the screen size to full wide.
- [4 : 3]: Sets the screen size to 4 : 3.
- [14 : 9]: Sets the screen size to 14 : 9.
- [13 : 9]: Sets the screen size to 13 : 9.
- [1.85 : 1]: Sets the screen size to 1.85 : 1.
- [2.35 : 1]: Sets the screen size to 2.35 : 1.
- [1 : 1]: Sets the screen size to 1 : 1.
- [Original]: Sets the screen size to original.
- [Auto]: Sets the screen size according to the input source information.

NOTE

- Screen Size can be adjusted sequentially by registering Screen Size values to the Function keys and GPI settings.
- When [Aspect Ratio] is set to [1 : 1], the items below are disabled.
  - [Over Scan]
  - [Noise Reduction]
  - [MPEG Noise Reduction]
  - [Real Cinema]
  - [Smooth Gradation]
  - [Screen Shift]
  - [Logo Luminance Adjustment]
  - [GSR Auto-dimming]
  - [Convex Power Control]
- When [Aspect Ratio] is set to [Auto], If the input source does not have any screen ratio information, the screen ratio is adjusted to [Full Screen]
- This feature is not available when running [Internal Pattern].

[Zoom]

Zoom into the current external input image.

- [2x Zoom]: The original image is enlarged 2x by dividing the external input into a 2 x 2 grid.
- [3x Zoom]: The original image is enlarged 3x by dividing the external input into a 3 x 3 grid.
- [4x Zoom]: The original image is enlarged 4x by dividing the external input into a 4 x 4 grid.
- [5x Zoom]: The original image is enlarged 5x by dividing the external input into a 5 x 5 grid.

* Supported External Input: HDMI, SDI1 - 4, SFP+, SDI Dual Link, Quad Link, Quad View

NOTE

- The [Zoom] feature cannot be used without a signal or in unsupported resolutions.

[Picture Options]

[Noise Reduction]

Removes irregularly generated tiny dots for a clearer picture.

[MPEG Noise Reduction]

Reduces the noise produced during the generation of digital video signals.

[Real Cinema]

Optimises the screen for movie viewing.

[Motion Eye Care]

Adjusts brightness and image blurring based on the image information in order to reduce eyestrain.

[Dynamic Tone Mapping]

Sets an appropriate contrast according to the image brightness of the HDR content.

[Dynamic Contrast]

Optimises the difference between the light and dark areas of the screen based on the brightness of the image.

[Dynamic Color]

Adjusts the tint and saturation of the image for a more vivid and vibrant display.

[Smooth Gradation]

Reduces any jagged effect to achieve smooth screen gradation.

[Low Luminance Gradation]

Smooth expression of grayscale in low luminance regions.

[HDMI Deep Color]

If the user has a digital input (HDMI) device connected to one of the ports with adjustable deep Color, UHD Deep Color 4K (6G) or Off (3G) can be selected from the ULTRA Deep Color Settings menu.

If compatibility issues occur with the graphics card when the Deep Color option is set to 4K at 3840 x 2160 @ 60 Hz, set the option to Off.

- HDMI inputs 1 and 2 are best suited for 4K at 60 Hz (4:4:4, 4:2:2) to enjoy high definition video. However, video or audio may not be supported, depending on the specifications of the external devices. In that case, please connect to another HDMI port.

[OLED Panel Settings]

[TPC(TemporalPeak Luminance Control) Auto-dimming]

Lowers the brightness to protect the screen when a static image is detected.

[Pixel Refresher]

Corrects any issues that may arise on the screen when the TV has been turned on for a long time. This may take more than an hour.

[Screen Shift]

Moves the screen slightly at regular intervals to prevent image sticking on the display panel.

[Logo Luminance Adjustment]

Adjusts the luminance of static images such as on-screen logos to correct potential screen issues.

[GSR (Global Sticky Reduction) Auto-dimming]

Gradually reduces the luminance of the screen when a specific area on the screen has a fixed image for a certain period of time without changing.

[Convex Power Control]

The brightness of the central part of the screen is expressed as 100 %, and the farther away from the centre, the darker it is because of the Gradation Gain applied to the image for reducing power consumption.

NOTE

The features below may work differently depending on [Screen Shift] settings.

- [Aspect Ratio] and [Over Scan] Behaviour
  - When [Over Scan] is set to [Zero Scan], the features behave as follows, depending on [Aspect Ratio]:
    When [Aspect Ratio] is set to [16:9] → The existing screen settings apply, regardless of [Screen Shift] settings.
    When [Aspect Ratio] is set to a value other than [16:9] → The image is enlarged when [Screen Shift] is set to [On].
  - When [Over Scan] is set to [Over Scan] → The image is enlarged when [Screen Shift] is set to [On].
  - When [Over Scan] is set to [Under Scan] → The image is enlarged when [Screen Shift] is set to [On].
- [Zoom]
  - When [Screen Shift] is set to [On], the area set for [Zoom] moves along whenever the screen moves.
- [Marker]
  - When [Screen Shift] is set to [On], the area indicated by [Marker] moves along whenever the screen moves.

Sound

[Select Mode]

Select the most suitable sound mode for each gener.

- [AI Sound Pro]: Depening on the content you watch, you can enjoy the optimized sound and virtual surround in real time.
- [Standard]: Optimizes the sound for all types of content.
- [Cinema]: Optimizes the sound for cinemas.
- [Clear Voice]: Boosts voice clarity.
- [Sports]: Optimizes the sound for sports games.
- [Music]: Optimizes the sound for music.
- [Game Optimizer]: Optimizes the sound for gameplay.

[Sound Out]

[Use Main Speaker]

Audio is played through th device's internal speakers.

[Use Wireless Speaker]

- [Bluetooth Device]: Wirelessly connect a Bluetooth audio device to enjoy the sound more conveniently

[Use Wierd Speaker]

- [Wired Headphone]: Optimise audio output according to the device connected.

[Advanced Settings]

[Balance]

Adjust the volume of the left and right speakers.

NOTE

- This setting is only available for internal device speaker.

[Equalizer]

Adjust the sound by increasing or decreasing the output of the specific frequency range of the voice signal.

- This option can be enabled if [Sound] → [Select Mode] is set to Standard.
- This settings only applies to internal speakers of the device.

[Reset]

Restores the detailed effect settings for the Standard sound mode to the initial settings.

- This settings only applies to internal speakers of the device.

[Match Screen and Sound]

Adjusts the synchronization of the sound from the speaker that is working.

- As the setting value increases, voice output becomes slower than the default.
- If you select Bypass, Outputs the sound from external devices without any audio delay.
- The audio may be output before the video because of the time this device takes to process the video input.

Audio Analysis

[Audio Source Selection]

Audio is outputted from the selected SDI input source.

The Audio Level Meter measures the audio level for the corresponding SDI audio and displays it on the screen.

- [SDI1]: Select the SDI1 input source for which to measure the audio level.
- [SDI2]: Select the SDI2 input source for which to measure the audio level.
- [SDI3]: Select the SDI3 input source for which to measure the audio level.
- [SDI4]: Select the SDI4 input source for which to measure the audio level.
- [SFP+]: Select the SFP+ input source for which to measure the audio level.

[Audio Channel Settings]

Select the audio input channel for the preferred sound output (stereo).

A graph is displayed measuring the audio levels of 16 channels, with eight channels on the left and eight channels on the right.

[Left Channel]

Select the audio input channel to output to the left sound output.

[Right Channel]

Select the audio input channel to output to the right sound output.

[Audio Level Meter]

[Audio Level Meter]

Shows audio broadcast signals on the screen through the audio level meter.

[Audio Level Meter Type]

Select the direction of the bar graph to show the audio level meter on the screen.

[Audio Channel Selection]

Select the audio channel you want to output on the audio level meter screen.

- The selected Audio Channel Selection value determines the audio channel output on the screen.

Audio Channel Selection	Display on the Left	Display on the Right
Full	CH1~CH8	CH9~CH16
Group1	CH1+CH2	CH3+CH4
Group2	CH5+CH6	CH7+CH8
Group3	CH9+CH10	CH11+CH12
Group4	CH13+CH14	CH15+CH16

- Set to 'User Group' allows to select the audio channel want to output directly on the screen.

Audio Channel Selection	Display on the Left	Display on the Right
User Group	Off	Off
	CH1+CH2	CH1+CH2
	CH3+CH4	CH3+CH4
	CH5+CH6	CH5+CH6
	CH7+CH8	CH7+CH8
	CH9+CH10	CH9+CH10
	CH11+CH12	CH11+CH12
	CH13+CH14	CH13+CH14
	CH15+CH16	CH15+CH16

[Audio Level Meter Position]

Select where to display the audio level meter on the screen.

[Audio Level Meter Size]

Set the size of the bar graph to show the audio level meter on the screen.

NOTE

- For Quad View output, the audio output and audio level meter output for a specific input source can be selected from the Audio Source Selection menu.
- For Single Link / Dual Link / Quad Link, the Audio Source Selection menu is disabled, and the feature for selecting the audio source based on the current input is automatically enabled.

Screen Output	Auto-selected in Audio Source
SDI1	SDI1
SDI2	SDI2
SDI3	SDI3
SDI4	SDI4
SFP+	SFP+
Dual Link (SDI1 & 2)	SDI1
Dual Link (SDI3 & 4)	SDI3
Quad Link: Auto	SDI1
Quad Link: 2SI	SDI1
Quad Link: Square	SDI1
SDI Quad View	Previously set Audio Source Selection values

- Audio Level Meter is deactivated if any of the features below have been enabled.
  - HDMI Output Screen

General

[Profile]

This feature allows the user to save his or her preferred settings and load them at any time.

[Load Profile]

Retrieve and load specific user settings to the device and make them available by saving them as [Profile].

If no settings have been saved by the user, the default settings are loaded.

- [Profile] saved by the user are displayed as icons.
- When you select [Profile] to load, a password input window will appear, and if the password matches, the selected [Profile] will be loaded.
- If the input set in the [Profile] to load is different from the current input, a window will appear asking you to choose whether to cancel the load, load while changing the input, or load while maintaining the current input.
- If you select Cancel Load, you will return to the [Load Profile] screen.
- If you select Load while Changing the Input, you will change the input and load [Profile].
- If you select Load while Maintaining the Current Input, you will load [Profile] while maintaining the input.
- The password input window does not appear for [User Settings] that have never been saved.
- After three consecutive failed login attempts, the password input window turns off and returns to the [Load Profile] screen.
- Items Displayed in User Settings
  - OLED LightsBrightness
  - Contrast
  - Chroma
  - Sharpness
  - Tint
  - Color Temperature
  - SDR Gamut
  - SDR EOTF
  - HDR Gamut
  - HDR EOTF
  - Dolby Vision 1D LUT
  - Dolby Vision Parameters
  - PQ Clip Point
  - SDI Color Format
  - Over Scan
  - Aspect Ratio

[Save as Profile]

Save the settings in the current device onto each user setting.

- User Settings saved through the Save User Settings function are displayed as icons.
- When you select [User Settings] to save the current settings, a password entry window will appear if there is a saved history.
- If the password matches, you will enter the Input selection screen, and when you select the Input, it will save and move to the previous screen.
- Passwords can be set for [Profile] that have never been saved.

[Reset Profile]

User settings that have been saved by the user are reset and returned to default.

[Change Profile Password]

Change the password for user settings.

- In order to do this, enter the initial password first.
- The initial password can be found in [Change Device Password].

[Option for Loading Saved Profiles]

Set the option for loading saved profiles.

- [Load without Entering Password] : You can load the saved profile without entering a password
- To change from Off to On, you need to enter the initial password.
- The initial password can be found in [Change Device Password].

[Function Key]

Assign frequently changed features to the Function keys in the remote key and use them like hot keys. Assign features to Function keys 1 to 5, respectively, from the menu.

The features that can be assigned are as follows:

- Undefined: No feature assigned
- Mono/Blue Only: Changes Mono/Blue Only options
- Interlacing / De-interlacing Mode: Changes Interlacing / De-interlacing Mode options
- Zoom: Enters the Zoom menu
- PBP: Enters the PBP Multiview menu
- PIP: Enters the PIP Multiview menu
- Internal Pattern: Enters the Internal Pattern
- SDI 1: Selects the SDI1 input mode
- SDI 2: Selects the SDI2 input mode
- SDI 3: Selects the SDI3 input mode
- SDI 4: Selects the SDI4 input mode
- Dual Link (SDI 1&2): Selects the Dual Link (SDI 1&2) input mode
- Dual Link (SDI 3&4): Selects the Dual Link (SDI 3&4) input mode
- Quad Link : 2SI: Selects the 'Quad Link : 2SI' input mode
- Quad Link : Square: Selects the 'Quad Link : Square' input mode
- SDI Quad View: Selects the SDI Quad View input mode
- SFP+: Selects the SFP+ input mode

[On Screen Display]

[Input ID]

- [Details for Input]: View detailed information on the input signal.
  - [Off]: Does not show the details of the input.
  - [On]: Shows the details of the input.
  - HDMI Input: Input Signal, Resolution, Frequency, Color format, Color Space, Black Level, HDR
    - Color Format: NODATA, SMPTE170, ITU709, FUTURE
    - Color Space: RGB, YCbCr444, YCbCr422, YCbCr420
    - Black Level: FULL, LIMITED
  - SDI Input: Input Signal, Resolution, Frequency, Colorimetry, Sampling (same information as VPID)
- [ID Style]: Sets how to display the name of the input in the banner.
  - Input format: Use the input signal name as it is.
  - Custom Format: Use the name set in the input label.
- [Input Label]: Sets the name of the input to be displayed in the banner.

[Information]

Check the device information.

[Auto IR Lock]

- When this feature is set to ON, the remote control goes into locked mode if there is no remote control input for three minutes. Unlock the remote control by pressing the numbers 1, 2, 3, and 4 on the remote control in order. When this feature is set to OFF, locking does not work, even if there is no remote control input.

[RCU ID]

- This feature allows for the control of specific devices by pairing each device with its corresponding remote control.It is only available on remote controls that support the RCU ID function,and the configured RCU IDs must match for the feature to operate correctly.
  - [OFF]: RCU ID function is disabled.
  - [1~16]: The system operates with the selected RCU ID number.
  - [Remote Control Settings]: To set the RCU ID, press the Mute Key on the remote control for 5 seconds until the Power Key blinks. Then, press the number button that corresponds to the RCU ID you wish to set, followed by the OK Key to complete the pairing of the device and RCU ID.

[Screen Saver]

- Prevent afterimage or overuse of panels using the screen protection feature when there is no signal.
- On: Runs the screensaver if there is no signal for 30 minutes (default)
- Off: Screensaver is disabled.

[No Signal Message]

Set the [no signal message] function to On or Off.

- On: Enable no signal message (default).
- Off: Disable no signal message.

[Screen Control]

[Interlacing / De-interlacing Mode]

Set the output mode for interlaced pictures.

- Line Doubler: Mode that outputs the top / bottom fields of interlaced signals by processing them to be vertically doubled
- Inter Field: Mode that outputs only the top fields of interlaced signals by processing them to be vertically doubled
- Field Merge: Mode for deinterlacing the interlaced signals

[Internal Pattern]

- This feature is used to show patterns stored in the device.
- Off: Turns off the internal pattern feature. (Default)
- Auto Run: Shows internal patterns in order at five second intervals. (Color bar - White - Black - Red - Blue - Green - Color Bar...)
- Color Bar: Shows the Color bar pattern.
- White: Shows the white pattern.
- Black: Shows the black pattern.
- Red: Shows the red pattern.
- Blue: Shows the blue pattern.
- Green: Shows the green pattern.

[Power]

[Standby Mode When No Signal]

Set whether or not to enable the feature for forcing shutdown after ten seconds.

- The feature is set to [On] or [Off].
- When set to [On], the product turns off if there is no signal for ten seconds.
- When set to [Off], the feature for forcing shutdown after ten seconds is disabled.
- It is recommended that the feature be set to [Off] when the product is to be used for a long time since it is a power-off function.

[No IR Power Off (4hour)]

Set whether or not to enable the feature for forcing shutdown after four hours.

- The feature is set to [On] or [Off].
- When set to [On], the product turns off when there is no input from the remote control for four hours.
- When set to [Off], the feature for forcing shutdown after four hours is disabled.
- It is recommended that the feature be set to [Off] when the product is to be used for a long time because it is a power-off function.

[Network Settings]

[Wired Connection (Ethernet)]

- Wired Connection: Connects the monitor to a local area network (LAN) via the LAN port and configures wired network settings. Only wired network connections are supported. After setting up a physical connection, the display will automatically connect without any adjustments on most networks. A small number of networks may require the display settings to be adjusted. For detailed information, contact your Internet provider or consult your router manual.

[Wi-Fi Connection]

If you have set your monitor up for a wireless network, you can view and connect to available wireless Internet networks.

- [Add a Hidden Wireless Network]: You can add a wireless network by manually typing in its name.
- [Connect via WPS PBC]: Press the button on the wireless router that supports PBC to easily connect to the router.
- [Connect via WPS PIN]: Enter the PIN number in the web page of the PIN-supporting wireless router to connect to the router in a simple manner.
- [Advanced Wi-Fi Settings]: When there is no available wireless network displayed on the screen, you can connect to the wireless network by entering the network information directly.

NOTE

- IPv6 connection only supports automatic connection.

[LG Connect]

- Sets the [LG Connect] function to On or Off.
- You can connect device via Promota, Calman API and WebApp API.
- Default setting is 'Off'.

[Multi View]

You can split the screen and use external input apps simultaneously.

- Multi View provide the following detailed features.
  - Change View Type: Change the Multi View mode(Side by Side / Picture in Picture).
  - Select App: You can add/change/delete the app to use in Multi View.
  - Quit App: Closes the app.
  - Sound Output: You can select the app to output sound.
  - Move: You can move the position of the sub-screen(Picture in Picture mode only).

NOTE

- There may be restrictions on running Multi View in some contents.
- The supported combinations of external input apps are as follows.

Main Screen Input	Sub screen Input List
HDMI1	SDI1, SDI2, SDI3, SDI4, SFP+
SDI1, SDI2, SDI3, SDI4, SFP+	HDMI1

[Change Device Password]

Change the password used in the Settings menu. (Initial Password: 000000)

[Factory Reset]

All settings in [Settings] and internal memory files are reset.

Calibration

[CalMan Support]

The 65EP5Q supports automated color calibration using CalMan software by Portrait Displays, Inc. (purchased separately: *https://www.portrait.com/calman-calibration-software/*). CalMan uto-calibration adjusts the monitor's internal 1D and 3D LUTs for precise color calibration.

Ensure the monitor and PC with CalMan are connected to the same local area network (LAN). Select the "Display Specific → Autocal – LG" workflow in CalMan and follow CalMan's instructions to calibrate the monitor. Connecting to CalMan will require the 65EP5Q's IP Address. Once the monitor is connected to LAN, navigate in the 65EP5Q menu to "Advanced → Network Settings" to view the IP Address.

Each of the 65EP5Q's 10 Profiles can be calibrated separately, in both SDR and HDR mode, by selecting the profile number in CalMan. Once a profile has been calibrated, it can be selected through the monitor's menu under "Advanced → Profile". Profile selection may also be assigned to a Function Key.

NOTE

- CalMan does not support connections via IPv6.

[Colorimeter Profiling]

When a colorimeter is used to measure displays, best practice is to calibrate the colorimeter to each individual display using a more accurate device. This practice called colorimeter profiling. The typical method of colorimeter profiling uses a 3x3 correction matrix to account for errors in the colorimeter's spectral response to a display's three primary light elements. Colorimeter profiling functionality is often included in software provided with the measurement device and in display calibration software.

The 65EP5Q panel uses a white sub-pixel in addition to red, green, and blue sub-pixels. Because the panel has four light elements, the traditional method of colorimeter profiling using a single 3x3 matrix can cause large measurement errors when used with the 65EP5Q. When profiling a colorimeter for the 65EP5Q, an approach called the Three-Matrix Method (or "Bodner Method") should be used to achieve accurate measurements. This approach is supported in CalMan with the "Tools → Meter Profiling" workflow, by selecting "Bodner Method (RGBW OLED)" for the "Generate Profile Matrix" setting on the "Create Meter Profile" page.

[Metameric Offset]

The perceived white point of the 65EP5Q may not match the measured white point. The mismatch is a result of observer metamerism, which affects all wide color gamut displays in this way. Two calibrated displays may visually appear to have different white points despite having the same measured chromaticity, due to a difference in their spectral emittance. White points that visually match between displays for one person may be a visual mismatch for a different person.

To account for observer metamerism, the white point of the 65EP5Q can be fine-tuned after calibration to visually match the white point of second monitor using these steps:

- Calibrate the 65EP5Q in Calman, using the same target white point and luminance as the second monitor
- Display a white patch on both the 65EP5Q and the second monitor
- In the 65EP5Q menu, navigate to the "Picture → Color" menu
- Change the "Color Temp" setting to "VAR Temp"
- Adjust the "R-Gain", "G-Gain", and "B-Gain" settings until the white point of the 65EP5Q visually matches the white point of the second monitor
- Adjusting the RGB Offset controls is not recommended for white point adjustment

TROUBLESHOOTING

» Each model may have different points to check.
» For information on your PC settings, refer to the Windows Help.

Issues Related to Use

- The power won't turn on.
  - Check if the power cord is correctly plugged into the power outlet.
  - Try turning the power on after disconnecting the AC adapter and cleaning the contacting port.
- The 'Unknown Product' message appears when the product is connected.
  - Check if the driver of PC (graphics card) has been installed.
  - Check if the plug and play function is supported by the PC (graphics card) user manual.

Issues Related to Screen (Video)

- A message saying 'No signal' or 'Invalid Format' appears.
  - The signal cable is not connected between the PC and the product, or the cable connection status is unstable. Check the signal cable.
  - Access the input menu to check the input signal.
  - The signal from the PC (Graphics card) is out of the vertical or horizontal frequency range of the product. Adjust the frequency range by referring to the specifications in this manual.
- The position of the screen is incorrect.
  - Check if the graphics card resolution and frequency are supported by the product. If the frequency exceeds the supported range, use PC settings to set the resolution to the recommended value.
- The screen is displayed abnormally.
  - Connect the signal cable that matches with the source input signal.
- Images are flickering or fluttering on the screen.
  - If you turn the monitor on when it is cold, the screen may flicker. This is normal.
  - Make sure that the current resolution and frequency settings of the graphics card are supported by the monitor.

Issues Related to Screen (Color)

- Screen has poor Color resolution (16 Colors).
  - Use PC settings to set the Color to 24 bits (True Color) or above.
- Screen Color is unstable or mono-Colored.
  - Check the connection status of the signal cable. Or, re-insert the PC graphics card.
- Black spots or bright spots appear on the screen.
  - Some pixels (red, green, blue, black) are visible on the screen due to the unique characteristics of the display panel. This is not a malfunction of the product.
- The screen's brightness seems dark.
  - Adjust brightness and contrast again.

Issues Related to Sound

- There is no sound output.
  - Adjust the volume of the product or external device.
  - See if the sound is set properly.
- Sound is too low.
  - Adjust the volume of the product or external device.
- For some models, you will need to purchase external speakers separately since they do not have speakers built-in.

Other Issues

- The power suddenly turned off.
  - Check if the auto-off function is activated on the settings related time.
  - Power source has not being supplied properly. See if the product power cord is connected properly.
  - Check the power control settings.

OLED Image sticking

- Since after-image can occur when a specific fixed screen is used for a long time, to reduce after-images, it is recommended not to exceed the recommended daily operation time set for the screen size and to display the video content with a small number of fixed characters or logos.

  Recommended daily operation time (65 inches: 12 hours)
- [Pixel Refresher]: Correct issues that may arise on the screen when it is turned on for a long period of time.
- A few horizontal lines may appear on the screens while running the [Pixel Refresher] feature. This is normal, so there is no need for concern. If the power is turned on or a power failure occurs while the [Pixel Refresher] feature is running, the feature may not work properly.
- Turn power on seven minutes after running [Pixel Refresher].
- The external speakers connected to the product may make a sound while you are running the [Pixel Refresher] feature.
- Use screen protection mode settings([TPC Auto-dimming], [Screen Shift], [Logo Luminance Adjustment], [GSR Auto-dimming], [Convex Power Control]) feature in [OLED Panel Settings] to effectively prevent the formation of an after-image.
- Using the product for a long time under the following conditions may damage the screen and leave an afterimage, so please use it with caution.
  - Specific fixed screen
  - Image adjusting screen such as Color bar
  - When activating features such as Markers, Safety area, Audio Level Meter
  - Image with frame (including multi-view screen)
- The afterimage phenomenon occurs in the same way as other third-party OLED products. The damage mentioned above is not covered by product warranty.

