

# QuadHD84

User Manual

020-000671-01

## NOTICES

### COPYRIGHT AND TRADEMARKS

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### REGULATORY

The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.

CAN ICES-3 (A) / NMB-3 (A).

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### GENERAL

Every effort has been made to ensure accuracy, however in some cases changes in the products or availability could occur which may not be reflected in this document. Christie reserves the right to make changes to specifications at any time without notice. Performance specifications are typical, but may vary depending on conditions beyond Christie's control such as maintenance of the product in proper working conditions. Performance specifications are based on information available at the time of printing. Christie makes no warranty of any kind with regard to this material, including, but not limited to, implied warranties of fitness for a particular purpose. Christie will not be liable for errors contained herein or for incidental or consequential damages in connection with the performance or use of this material.

The product is designed and manufactured with high-quality materials and components that can be recycled and reused.

This symbol  means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!

Canadian manufacturing facility is ISO 9001 and 14001 certified.

### GENERAL WARRANTY STATEMENTS

For complete information about Christie's limited warranty, please contact your Christie dealer. In addition to the other limitations that may be specified in Christie's limited warranty, the warranty does not cover:

- a. Problems or damage occurring during shipment, in either direction.
- b. Projector lamps (See Christie's separate lamp program policy).
- c. Problems or damage caused by use of a projector lamp beyond the recommended lamp life, or use of a lamp supplied by a supplier other than Christie.
- d. Problems or damage caused by combination of a Product with non-Christie equipment, such as distribution systems, cameras, video tape recorders, etc., or use of a Product with any non-Christie interface device.
- e. Problems or damage caused by the use of any lamp, replacement part or component purchased or obtained from an unauthorized distributor of Christie lamps, replacement parts or components including, without limitation, any distributor offering Christie lamps, replacement parts or components through the internet (confirmation of authorized distributors may be obtained from Christie).
- f. Problems or damage caused by misuse, improper power source, accident, fire, flood, lightning, earthquake or other natural disaster.
- g. Problems or damage caused by improper installation/alignment, or by equipment modification, if by other than Christie service personnel or a Christie authorized repair service provider.
- h. Problems or damage caused by use of a Product on a motion platform or other movable device where such Product has not been designed, modified or approved by Christie for such use.
- i. Problems or damage caused by use of a projector in the presence of an oil-based fog machine.
- j. For LCD projectors, the warranty period specified applies only where the LCD projector is in "normal use." "Normal use" means the LCD projector is not used more than 8 hours a day, 5 days a week. For any LCD projector where "normal use" is exceeded, warranty coverage under this warranty terminates after 6000 hours of operation.
- k. Image retention on LCD flat panels.
- l. Failure due to normal wear and tear.

### PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Please see the Maintenance section for specific maintenance items as they relate to your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.

Please read these safety precautions carefully before using the display.

**Warning**

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

## Electrical Power Related Precautions

**Warning**

- **Use only the power cord supplied with the unit or another manufacturer's authorized cord.**
  - Failure to do so may result in fire or electrical shock or damage to the display.
- **Use only a properly grounded plug and receptacle.**
  - If you do not, you may be electrocuted or injured. Or the display might be damaged.
- **Do not use a damaged or loose plug.**
  - This may cause electrical shock or fire.
- **Operate the display only from a power source (i.e. voltage) indicated in the product specification.**
  - Otherwise, the display can be damaged, fire can occur or you may be electrocuted. If you are not sure what type of power supply you have, consult a certified electrician.
- **In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous.**
  - It can cause electric shock.
- **Do not connect several extension cords, electrical appliances or electrical heaters to a single outlet. Use a power bar with a grounding terminal designed for exclusive use with the display.**
  - A fire can break out due to overheating.
- **Do not touch the power plug with wet hands. Additionally, if the cord pin is wet or covered with dust, dry the power plug completely or wipe dust off before plugging in the cord.**
  - You may be electrocuted due to excess moisture.
- **If you do not intend to use the display for a long time, unplug the power cord from the display.**
  - Covering dust can cause a fire, or insulation deterioration can cause electric leakage, electric shock or fire.
- **Insert the power plug firmly so it cannot come loose.**
  - A loose connection can cause fire. Hold the plug when pulling out the power cord.
- **Do not pull the plug out by the wire. Do not bend the power cord with excessive force or put heavy objects on the power cord.**
  - The power line can be damaged, which may cause electric shock or fire.
- **Do not insert metal or other conductive materials into the display openings. Additionally, do not touch the power cord right after plugging the cable into the wall input terminal.**
  - You may be electrocuted.
- **The power supply cord is used as the main disconnection device. The socket-outlet shall be installed near the equipment and shall be easily accessible.**
- **Do not unplug the power cord while the display is in use.**
  - Electrical shock can damage the product.
- **As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if the unit is turned off.**

## Precautions in Installing the Display

### Warning

- **Keep away from heat sources like heaters or open flames.**
  - Electrical shock, fire, malfunction or deformation may occur.
- **Keep the packing anti-moisture material or vinyl packing out of the reach of children.**
  - Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.
- **Do not put heavy objects on the display or sit upon it.**
  - If the display collapses or is dropped, you may be injured. Children must pay particular attention.
- **Do not leave the power or signal cable where someone can trip over it.**
  - The passerby can falter, which can cause electrical shock, fire, display breakdown, or injury.
- **Install the display in a neat and dry place. Do not use near water.**
  - Dust or moisture can cause electrical shock, fire, or display damage.
- **Do not add accessories that have not been designed for this display.**
- **If you smell smoke or other odors or hear a strange sound from the display, unplug the power cord and contact Customer Service.**
  - If you continue to use without taking proper measures, electrical shock or fire can occur.
- **If you dropped the display or the case is broken, turn off the display and unplug the power cord.**
  - If you continue to use without taking proper measures, electrical shock or fire can occur. Contact Customer Service.
- **Do not drop an object on or apply impact to the display. Do not throw any toys or objects at the display.**
  - It can cause injury to humans, problems to the display, and damage the display.
- **Keep out of reach of children and do not place toys near the display.**
- **Make sure the display ventilation hole is not blocked. Install the display more than 10cm away from the wall.**
  - If you install the display too close to the wall, it may be deformed or fire can break out due to internal heat build-up.
- **Do not cover the display with cloth or other material (eg. plastic) while plugged in.**
  - The display can be deformed or fire can break out due to internal overheating.
- **Place the display on a flat and stable surface that is large enough to support the display.**
  - If the display is dropped, you may be injured or the display may be broken.
- **Install the display where no Electromagnetic Interference occurs.**
- **Keep the display away from direct sunlight.**
  - The display can be damaged.
- **Do not place the display on the floor.**
  - Small children and others may trip over it.

## ● Precautions in Moving the Display

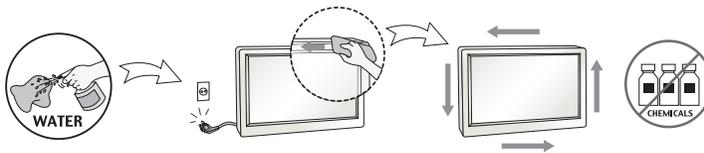
### ⚠ Warning

- **Make sure to turn off the display.**
  - You may be electrocuted or the display can be damaged.
- **Make sure to remove all cables before moving the display.**
  - You may be electrocuted or the display can be damaged.
- **Do not shock the display when moving it.**
  - You may be electrocuted or the display can be damaged.
- **Make sure the display faces forward and hold it with both hands to move.**
  - If you drop the display, the damaged display can cause electric shock or fire.
- **Do not place the display face down.**
  - This may damage the display.

## ● Precautions in Using/Cleaning the Display

### ⚠ Warning

- **Do not attempt to disassemble, repair, or modify the display yourself.**
  - Fire or electric shock can occur.
  - Contact Customer Service for repair.
- **When cleaning the display, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not clean with a wet cloth or spray water or other liquids directly onto the display. An electric shock may occur. (Do not use chemicals such as benzene, paint thinners, or alcohol)**
- **Keep the display away from water.**
  - Fire or electric shock accident can occur.
- **Avoid high temperatures and humidity.**
- **Do not put or store flammable substances near the display.**
  - There is a danger of explosion or fire.
- **Keep the display clean at all times.**
- **Do not press on the display with a hand or sharp object such as nail, pencil or pen, or make a scratch on it.**
- **Keep proper distance from the display and rest from time-to-time.**
  - Your vision may be impaired if you look at the display too closely or for too long.
- **Keep small accessories out of the reach of children.**
- **Leaving a fixed image on the display for a long time may cause damage to the display and cause image retention. Make sure to use a screen saver on the display. Burn-in and related problems are not covered by the warranty on this display.**
- **Spray water onto a soft cloth 2 to 4 times, and use it to clean the front frame; wipe in one direction only. Too much moisture may cause staining.**



## ● On Disposal (Only, Hg lamp used Display)

- The fluorescent lamp used in this display contains a small amount of mercury.
- Do not dispose of this display with general household waste.
- Disposal of this display must be carried out in accordance to the regulations of your local authority.

## ● Precautions for Image Sticking

To optimize display lifetime and function, pay attention on the following operation usages:

### ■ Normal operating condition

- Operating Temperature: 0°C to 35°C
- Operating Ambient Humidity: 20% to 90%
- Display Pattern: dynamic pattern (real display)

**Note:** Long-term static display can cause image sticking.

### ■ Operating usages under abnormal condition

- a. Ambient condition
  - Well-ventilated place is recommended to set up the system.
- b. Power and screen saver
  - Periodical power-off or screen saver is needed after long-term display.

### ■ Operating usages to protect against image sticking due to long-term static display

- a. Suitable operating time
  - Under 18 hours a day.
- b. Static information display recommended to use with moving image
  - Cycling display between 5 minutes information (static) display and 10 seconds moving image.
- c. Background and character (image) color change
  - Use different colors for background and character, respectively.
  - Change colors themselves periodically.
- d. Avoid combination of background and character with large different luminance

#### **Note:**

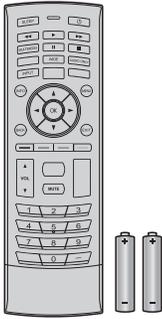
- 1) Abnormal condition just means conditions except normal condition.
- 2) Black image or moving image is strongly recommended as a screen saver.

# Accessories

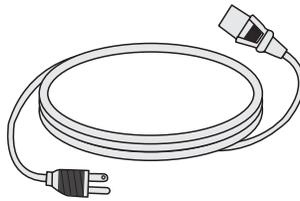
## ● Included Accessories

Thank you for your purchase. Ensure that the following accessories are included with your display. If an accessory is missing, please contact the dealer where you purchased the display.

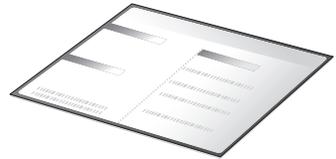
❖ The accessories included may differ from the images shown below.



Remote Control & Batteries (AAA × 2)



Power Cord



Quick Start Guide

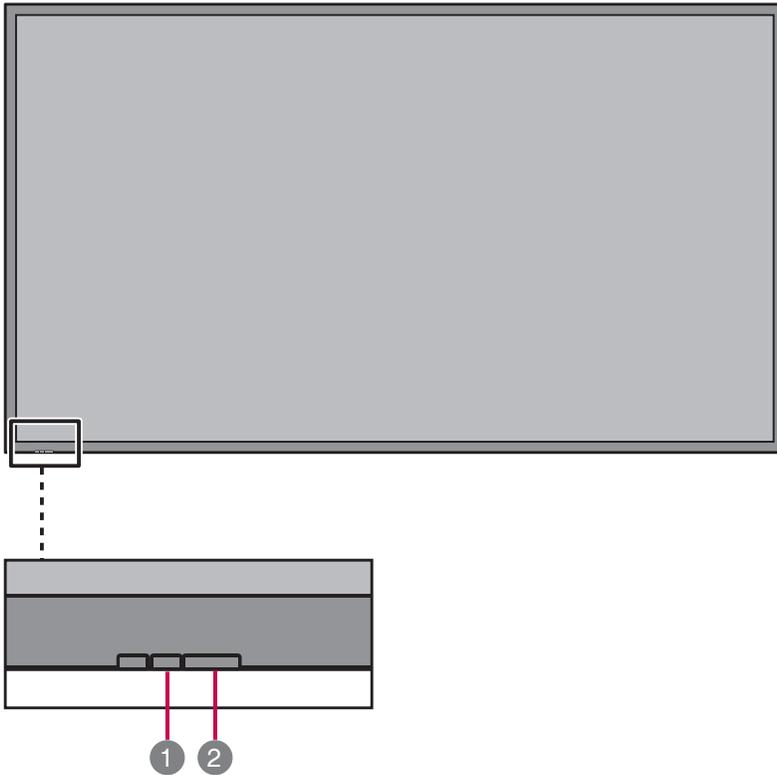


CD-ROM (User's Manual)

# Name and Function of the Parts

\* The image shown in the user's guide could be different from the actual image.

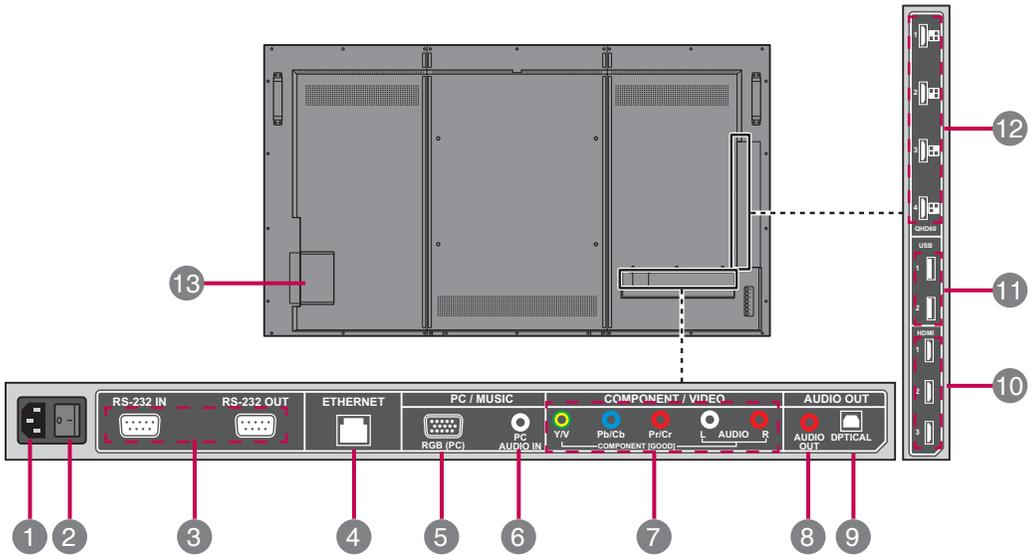
## ● Front View



No.	Item	Description
1	<b>Power indicator</b>	Indicate power on or sleep mode status. - Power on: LED lights up. - Power off: LED off.
2	<b>IR Receiver</b>	Receive incoming remote control commands.

# Name and Function of the Parts

● **Rear View**



No.	Item	Description
1	<b>AC Power Input Connector</b>	Connect the power cord.
2	<b>AC Switch</b>	Switch the power supply on/off.
3	<b>RS-232C Serial Ports</b>	Connect several displays with serial port.
4	<b>Ethernet Port</b>	Connect to a local area network (LAN) using an Ethernet cable.
5	<b>RGB Port</b>	Connect to a PC VGA port.
6	<b>PC Audio Input Port</b>	Connect to a PC's line / audio port.
7	<b>Component/Video Input Ports</b>	Connect to an external device, such as a VCR, STB, or a DVD player.
8	<b>Stereo Audio Line Out</b>	Connect an external audio system or headphones.

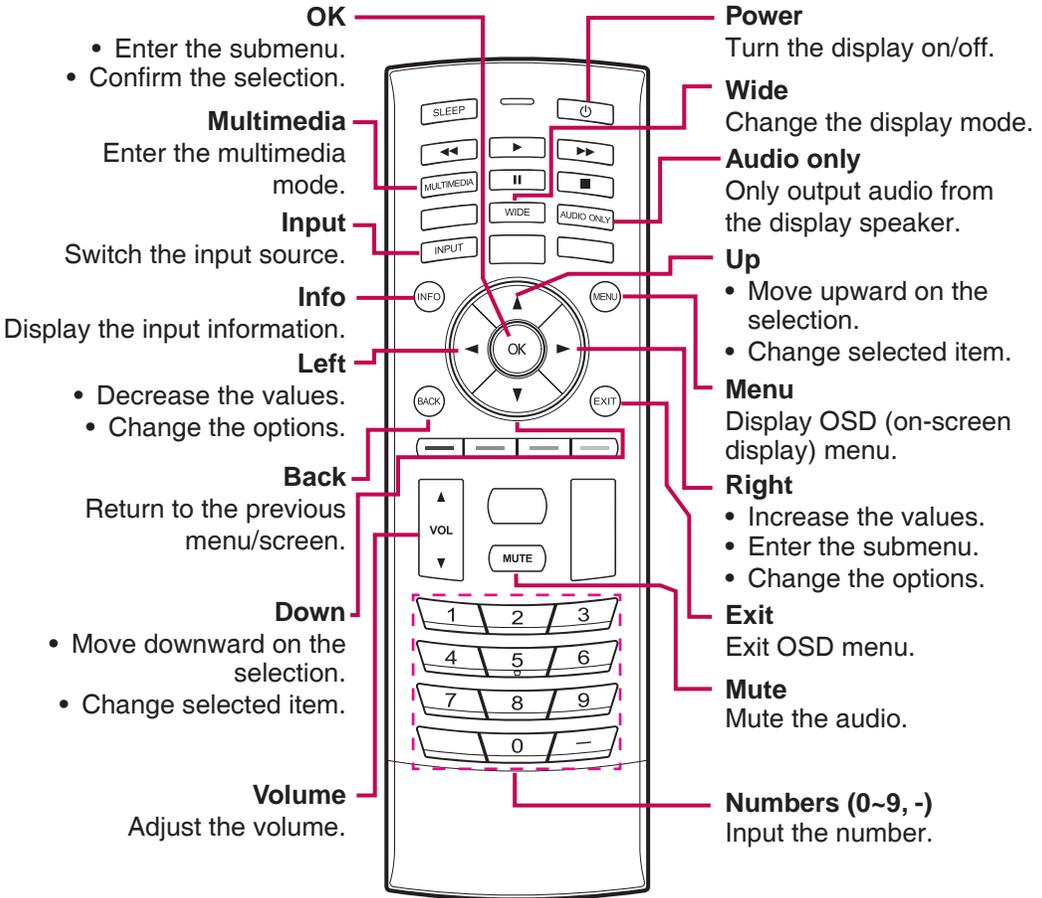
# Name and Function of the Parts

## ● Rear View (continue)

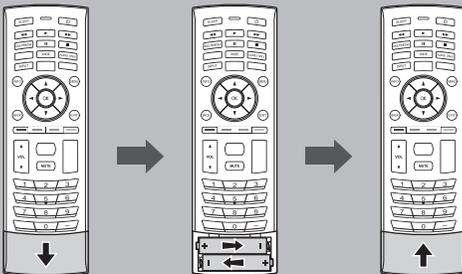
No.	Item	Description
9	<b>Optical Audio Out</b>	Connect an audio amplifier.
10	<b>HDMI Ports</b>	Connect an HDMI equipment or an HDMI-DVI adapter cable to devices such as a DVD player or set-top box. ❖ HDMI Supports High Definition input and HDCP (High-bandwidth Digital Content Protection). Some devices require HDCP in order to display HD signals.
11	<b>USB Ports</b>	Connect to a USB device such as a USB flash drive or USB hard disk drive.
12	<b>QHD60 Ports</b>	Connect an HDMI equipment such as a computer, camcorder, or multimedia player which are able to output 4x HDMI with individually 1080p@60Hz resolution and compose to a QHD@60Hz resolution.
13	<b>OPS Module Slot</b>	Connect an OPS module device.

# Using the Remote Control

## ● Name of the Remote Control Buttons



## ● Installing Batteries into the Remote Control



- 1. Open the battery cover.**
- 2. Install the batteries matching the correct polarity.**
  - Install two 1.5V AA batteries.
- 3. Close the battery cover.**
  - Dispose the used batteries in the recycle bin to prevent environmental pollution.

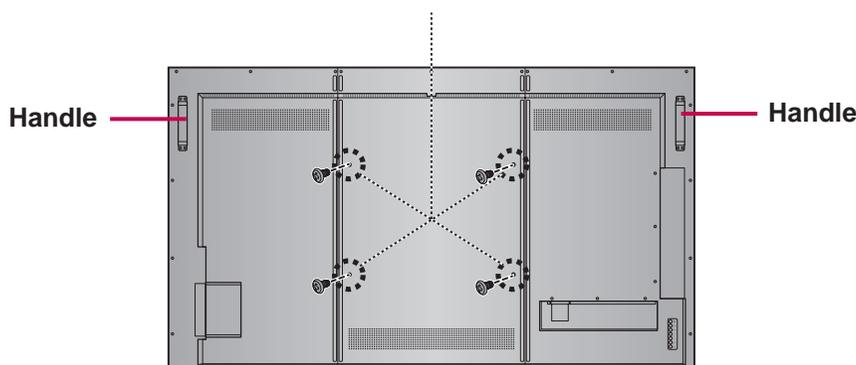
# Mounting on a Wall

## ● VESA FDMI Wall Mounting

This display supports a VESA FDMI compliant mounting interface. These mounts are purchased separately. Refer to the instructions included with the wall mount for more information.

❖ The handles are designed for carrying.

VESA-compatible wall bracket (WxH)	Screw type	Mount holes number
600 x 400 mm	M8	4



## ● Mounting the display

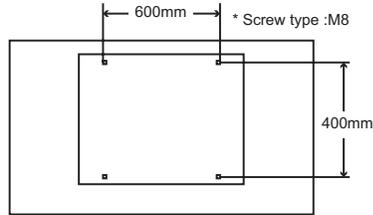
You can install the display on a vertical surface with a suitable wall mounting bracket or on a horizontal surface with a table stand. Please pay attention to the following notes during installation:

- ❖ This display should be installed by at least two adult persons. Attempting to install this display by only one person may result in danger and injuries.
- ❖ Refer the installation to qualified technicians. Improper installation may cause the display to fall or malfunction.

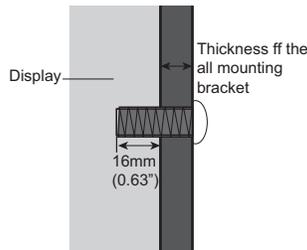
# Mounting on a Wall

## ● Installing the display on a wall

1. Place a clean, dry and lint-free cloth on a flat, horizontal and object-free surface. Make sure that the size of the cloth is larger than the display.
2. Gently lay the display on the cloth with the LCD screen facing down.
3. Identify the wall mounting screw holes on the back of the display as shown in the illustration.

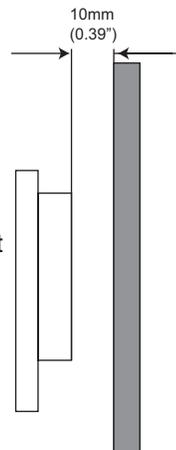


4. Install the wall mounting bracket on the display and attach the display to the wall according to the mounting bracket's instructions. The length of the screw should exceed the thickness of the wall mounting bracket by at least 16 mm. Make sure that all screws are tightened and secured properly. (Recommended torque: 470 – 635N-cm). The mounting means should be strong enough to bear the weight of the display.



**Note:**

- ❖ To maintain proper ventilation, keep at least 10 mm of clear space from the back cover of the display to the wall.
- ❖ Please consult a professional technician for wall mount installations. The manufacturer accepts no liability for installations not performed by a professional technician.
- ❖ The mounting means should be strong enough to bear the weight of the display.
- ❖ The wall mounting bracket should have UL or related approval.



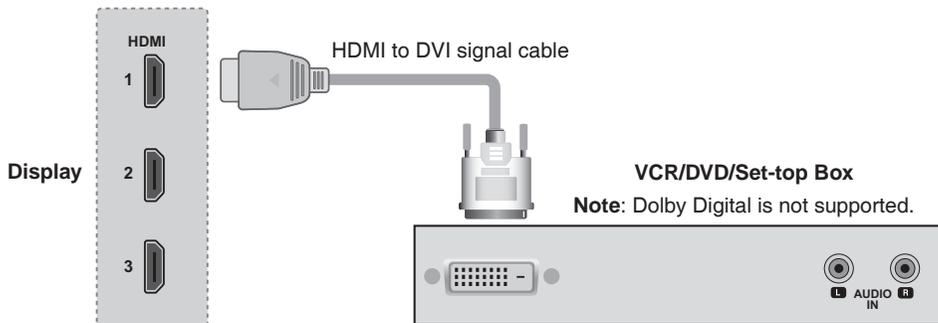
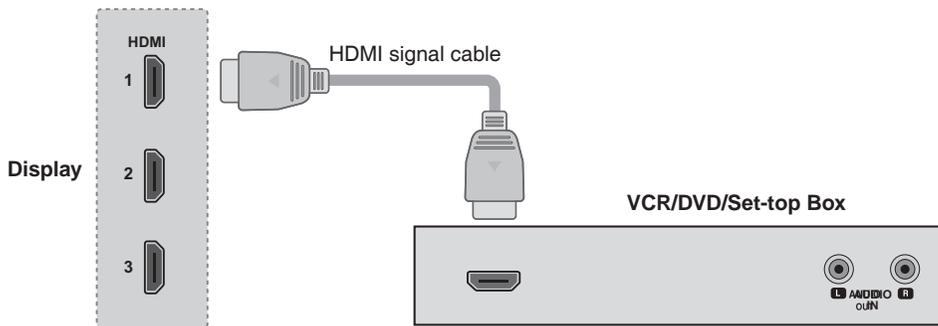
# Connecting to External Devices

## Recommended Connection, Resolution & Picture Mode

HDMI Connection, 3840 x 2160@30Hz, dynamic

### ● HDMI Connection (480p, 576p, 720p, 1080i, 1080p, UHD@24Hz/30Hz)

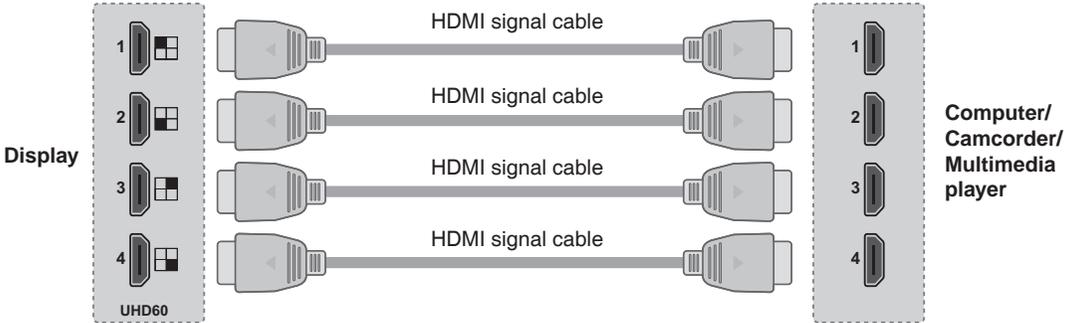
HDMI supports ultra high definition (UHD) input, high definition input, and HDCP (High-bandwidth Digital Content Protection). Some devices require HDCP in order to display HD signals.



# Connecting to External Devices

## ● HDMI-QHD60 Connection (3840 x 2160 @60Hz)

Four HDMI ports form a UHD 60Hz. Each connection transmits 1080P @60Hz.



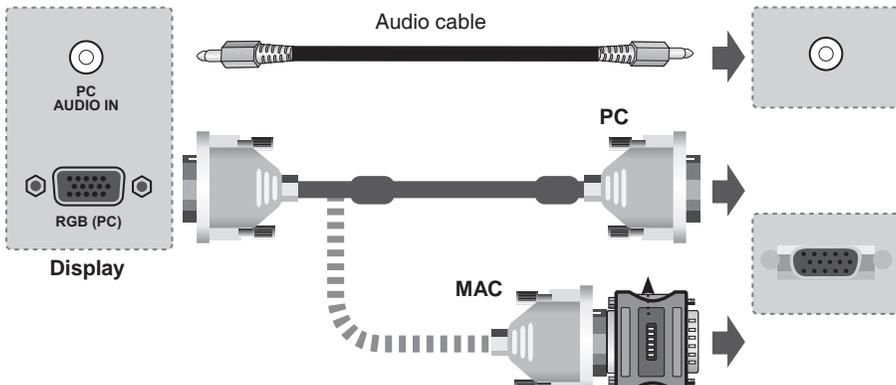
## ● PC Connection

Check that the computer, display, and the peripherals are turned off. Then, connect the signal input cable.

### A. Connecting with an HDMI Signal Input Cable



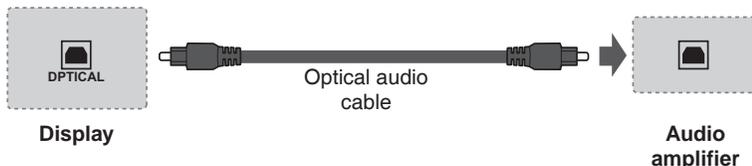
### B. Connecting with a D-sub(VGA) Signal Input Cable



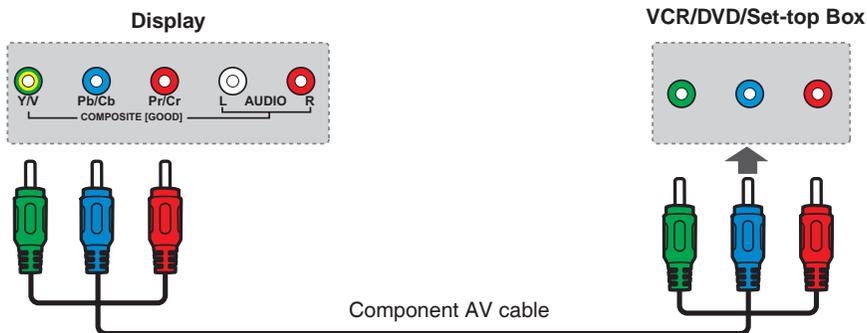
**Macintosh Adapter**  
 Use only the standard Macintosh adapter.  
 Do not use other adapter type that is compatible with different signaling system.

# Connecting to External Devices

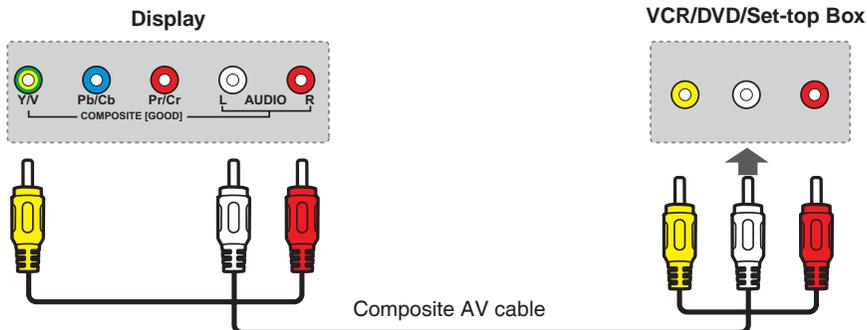
## ● Audio Out Connection



## ● Component Connection

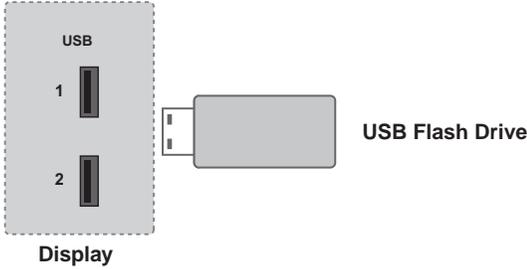


## ● Composite (Video) Connection

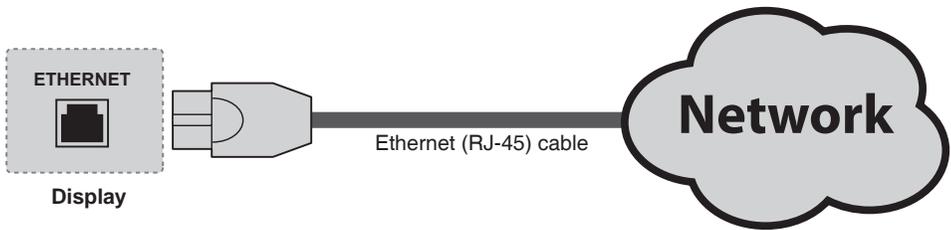


# Connecting to External Devices

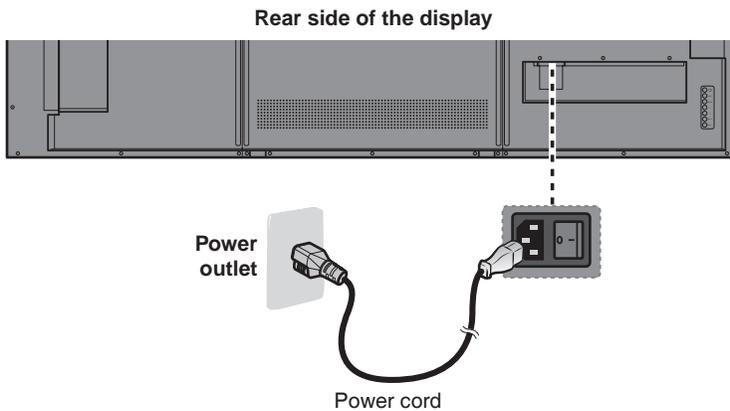
## ● USB Connection



## ● Ethernet Connection

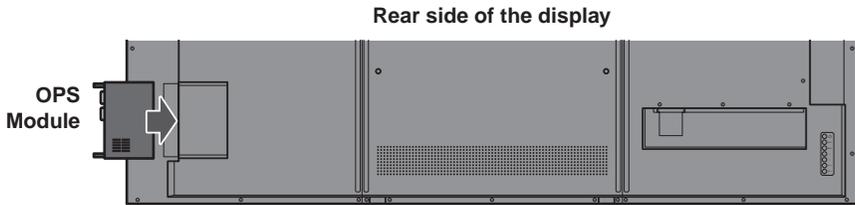


## ● Power Connection



# Connecting to External Devices

## ● Installing OPS Module (Optional)



**Note**



- Refer to the instructions included with the OPS Module for more information.
- Video interface supported is DVI and maximum resolution is 1080P
- DisplayPort is not supported
- Maximum power provide for OPS is 80W

### Digital Signage Open Pluggable Specification

Open Pluggable Specification (OPS) for Digital Signage

#### Highlights

- Enables easier installation, use and maintenance of digital signs.
- Makes digital signage devices more intelligent and connected.

#### Overview

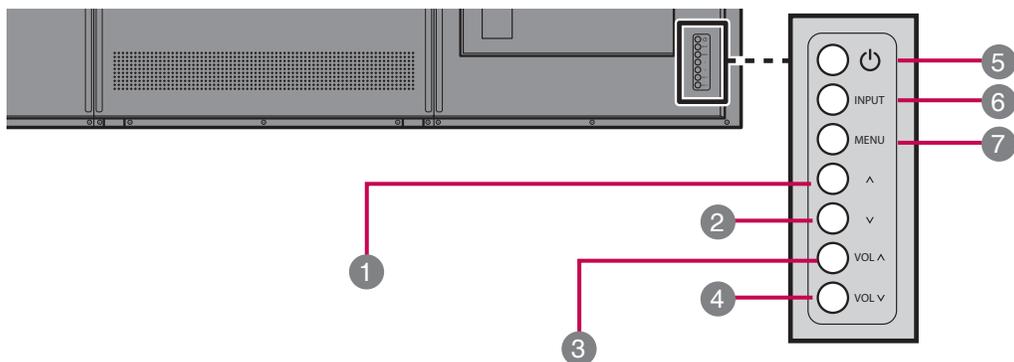
The open pluggable specification (OPS) helps standardize the design and development of digital signage devices and pluggable media players. Intel created OPS to address digital signage market fragmentation and simplify device installation, usage, maintenance and upgrades.

OPS enables digital signage manufacturers to deploy interchangeable systems faster.

Installing digital signage equipment based on Intel® architecture helps implement scalable digital signage applications that can network easily with other equipment. This simplifies interoperability and application upgrades designed to meet the digital signage requirements of individual customers, while helping to future-proof technology investments.

# OSD Menu

## ● Screen Adjustment Options (using the Control Panel)



No.	Item	Description
1	<b>Up</b>	Select menu item (move up).
2	<b>Down</b>	Select menu item (move down).
3	<b>Volume Up</b>	- Increase the volume level. - Adjust the settings (increase the value).
4	<b>Volume Down</b>	- Decrease the volume level. - Adjust the settings (decrease the value).
5	<b>Power</b>	Turn the display on/off.
6	<b>Input</b>	Switch the input source.
7	<b>Menu</b>	Display/hide the OSD (on-screen display) menu or return to the previous menu.

# OSD Menus

## ● Menu Options



Menu	Description
<b>Input</b>	Select the input source.
<b>Picture</b>	Adjust and refine the picture displayed on your display based on ambient room light and personal preferences.
<b>Audio</b>	Adjust the audio settings.
<b>Setup</b>	Adjust the general settings such as CEI setting, OSD language, and etc.
<b>Ethernet</b>	Configure the network settings.
<b>Wide</b>	Select how the picture displays on the screen.
<b>Sleep Timer</b>	Set the timer to turn the display off at the preset time.

**Note**

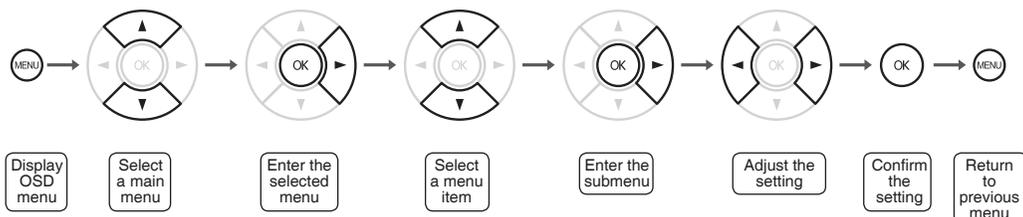
**OSD (On Screen Display)**

The OSD function enables you to adjust the screen status conveniently since it provides graphical presentation.



# OSD Menu

## ● Adjusting On-Screen Display (OSD) Settings



(\*operation using the remote control)

- 1 Press the **MENU** button to display the OSD menu.

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- 2 Use the ▲/▼ button to select the main menu.

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- 3 Press the **OK** or ► button to enter the selected menu screen.

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- 4 Use the ▲/▼ button to select the menu item.

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- 5 Press the **OK** or ► button to enter the submenu.

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- 6 Use the ◀/▶ button to adjust the setting/select the option.

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- 7 Use the **OK** button to confirm the setting.

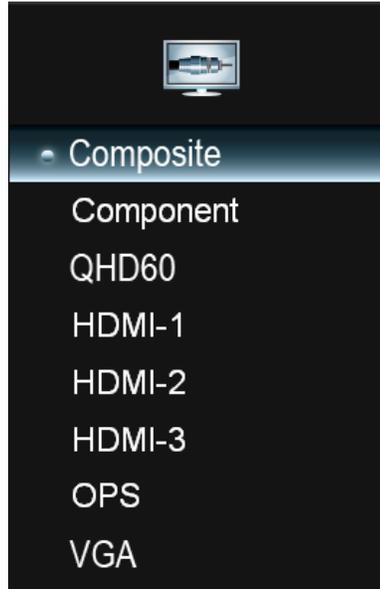
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- 8 Press the **MENU** button to return to the previous menu/exit the OSD menu.

# OSD Menu

## ● Input Menu

Select the proper input source.



### Note



- You can also access the Input menu by pressing the **INPUT** button on the remote control.
- The available menu options varies depending on the input source.
- If the menu items are appears in gray, this indicates that those functions are not available.

# OSD Menu

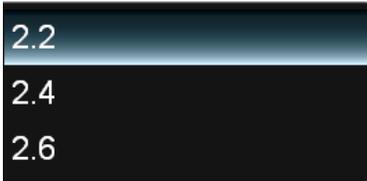
## ● Picture Menu



Menu Option	Description
<p><b>Picture Mode</b></p>	<p>Select a preset view option optimized for different viewing conditions.</p> <div data-bbox="515 1143 870 1483" style="text-align: center;"> </div> <ul style="list-style-type: none"> <li>• <b>Custom:</b> User can use the user-defined settings as they wish.</li> <li>• <b>Cinema:</b> This mode is normally used in movie. Soft image can be seen in this mode. The picture is somewhat darker than other mode.</li> </ul>

# OSD Menus

## ● Picture Menu (continue)

Menu Option	Description
<b>Picture Mode</b>	<ul style="list-style-type: none"> <li>• <b>Nature:</b> This mode shows normal and natural image.</li> <li>• <b>Sports:</b> This mode uses high contrast display for clear-cut images ideal for viewing sports events.</li> <li>• <b>Dynamic:</b> This mode is normally used in department store, Backlight and Sharpness is set to its maximum value. Saturation of Color becomes high. You can see very bright, clear, and sharp image.</li> <li>• <b>Game:</b> This mode increases the brightness and response time level for enjoying video games.</li> </ul> <p><b>Note</b>  “Picture Mode” option is not available if the input source is PC.</p>
<b>Gamma</b>	<p>Select the appropriate setting of dark scenery. With greater gamma value, dark scenery looks brighter.</p> 
<b>Backlight</b>	Adjust the backlight that affects the overall brilliance of the picture.
<b>Contrast</b>	Adjust the difference between the light and dark levels in the picture.
<b>Brightness</b>	Adjust the brightness setting.
<b>Color</b>	Adjust the color intensity of the picture.
<b>Tint</b>	Adjust the picture hue.
<b>Sharpness</b>	<p>Adjust the sharpness of the edges of elements in the picture.</p> <p><b>Note</b>  “Sharpness” option is not available if the input source is PC.</p>

# OSD Menus

## ● Picture Menu (continue)

Menu Option	Description
<b>Size &amp; Position</b>	<p data-bbox="302 430 615 460">Adjust the display settings.</p> <div data-bbox="302 478 669 733" style="border: 1px solid black; background-color: #333; color: white; padding: 5px;"> <p data-bbox="310 490 458 520">Auto Adjust</p> <p data-bbox="310 543 663 573">Horiz. Position <input type="text" value="0"/></p> <p data-bbox="310 590 663 620">Vertical Position <input type="text" value="0"/></p> <p data-bbox="310 638 663 668">Horizontal Size <input type="text" value="0"/></p> <p data-bbox="310 686 663 716">Fine Tune <input type="text" value="0"/></p> </div> <ul data-bbox="302 754 1066 1061" style="list-style-type: none"> <li data-bbox="302 754 940 784">• <b>Auto Adjust:</b> Synchronize the display automatically.</li> <li data-bbox="302 799 968 829">• <b>Horiz. Position:</b> Move the screen position horizontally.</li> <li data-bbox="302 843 960 873">• <b>Vertical Position:</b> Move the screen position vertically.</li> <li data-bbox="302 887 960 917">• <b>Horizontal Size:</b> Set the horizontal size of the screen.</li> <li data-bbox="302 931 892 961">• <b>Vertical Size:</b> Set the vertical size of the screen.</li> <li data-bbox="302 975 1066 1061">• <b>Fine Tune:</b> Adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen the image of characters.</li> </ul>

**Note**



- “**Size & Position**” menu is not available if the input source is HDMI-QHD60.
- The available menu options varies depending on the input source.

# OSD Menus

● **Picture Menu** (continue)

Menu Option	Description
<p><b>Color Temperature</b></p>	<p>Adjust the color settings.</p> <div data-bbox="510 474 865 848" style="background-color: black; color: white; padding: 5px; margin: 10px 0;"> <p>Color Temperature 6500K</p> <p>Red Gain <span style="float: right;">▬ 128</span></p> <p>Green Gain <span style="float: right;">▬ 128</span></p> <p>Blue Gain <span style="float: right;">▬ 128</span></p> <p>Red Offset <span style="float: right;">▬ 128</span></p> <p>Green Offset <span style="float: right;">▬ 128</span></p> <p>Blue Offset <span style="float: right;">▬ 128</span></p> <p>Reset Color Temperature</p> </div> <ul style="list-style-type: none"> <li>• <b>Color Temperature:</b> Select from the predetermined color temperatures.</li> <li>• <b>Red Gain / Green Gain / Blue Gain:</b> Adjust the red / green / blue gain settings to your preference.</li> <li>• <b>Red Offset / Green Offset / Blue Offset:</b> Adjust the red / green / blue offset settings to your preference.</li> <li>• <b>Reset Color Temperature:</b> Reset all <b>Color Temperature</b> settings to the factory default settings.</li> </ul>

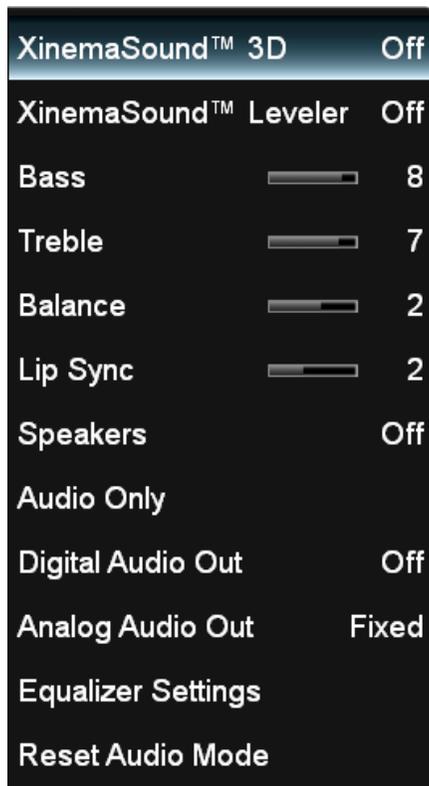
# OSD Menus

## ● Picture Menu (continue)

Menu Option	Description												
<p><b>Advanced Picture</b></p>	<p>Set advanced <b>Picture</b> settings.</p> <div data-bbox="508 467 869 807" style="border: 1px solid black; background-color: #1a1a1a; color: white; padding: 5px; margin: 10px 0;"> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="padding: 2px 5px;">Dynamic Contrast</td><td style="text-align: right; padding: 2px 5px;">Off</td></tr> <tr><td style="padding: 2px 5px;">Local Dimming</td><td style="text-align: right; padding: 2px 5px;">Off</td></tr> <tr><td style="padding: 2px 5px;">MEMC</td><td style="text-align: right; padding: 2px 5px;">On</td></tr> <tr><td style="padding: 2px 5px;">Noise Reduction</td><td style="text-align: right; padding: 2px 5px;">Off</td></tr> <tr><td style="padding: 2px 5px;">Digital NR</td><td style="text-align: right; padding: 2px 5px;">Off</td></tr> <tr><td style="padding: 2px 5px;">Film Mode</td><td style="text-align: right; padding: 2px 5px;">Off</td></tr> </table> </div> <ul style="list-style-type: none"> <li>• <b>Dynamic Contrast:</b> Adjust the brightness of the display to maximize the picture quality.</li> <li>• <b>Local Dimming:</b> Reduce the leakage and produce a darker picture.</li> <li>• <b>MEMC:</b> Reduce motion blur effect.</li> <li>• <b>Noise Reduction:</b> Reduce the noise level.</li> <li>• <b>Digital NR:</b> Reduce the noise level of digital signals.</li> <li>• <b>Film Mode:</b> Produce smoother motion picture when viewing movies from video players connected via HDMI.</li> </ul> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p><b>Note</b>  • “<b>Advanced Picture</b>” option is not available if the input source is PC.</p> <p>• Only “<b>Local Dimming</b>” and “<b>MEMC</b>” options are available if the input source is HDMI-UHD60.</p> </div>	Dynamic Contrast	Off	Local Dimming	Off	MEMC	On	Noise Reduction	Off	Digital NR	Off	Film Mode	Off
Dynamic Contrast	Off												
Local Dimming	Off												
MEMC	On												
Noise Reduction	Off												
Digital NR	Off												
Film Mode	Off												
<p><b>Reset Picture Settings</b></p>	<p>Reset all <b>Picture</b> settings to the factory default settings.</p> <div data-bbox="418 1340 965 1591" style="border: 1px solid black; background-color: #1a1a1a; color: white; padding: 10px; margin: 10px 0;"> <p style="text-align: center;">Do you wish to RESET Picture Settings to default?</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <span style="background-color: #333; color: white; padding: 5px 15px; border-radius: 3px;">OK</span> <span style="background-color: #444; color: white; padding: 5px 15px; border-radius: 3px;">Cancel</span> </div> </div> <p>Select <b>OK</b> to reset all settings.</p>												

# OSD Menus

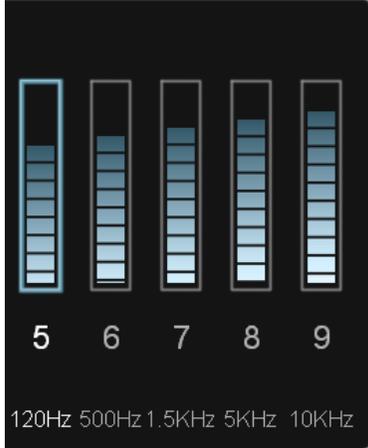
● **Audio Menu**



Menu Option	Description
<b>XinemaSound™ 3D</b>	Enable/Disable the multi-dimensional surrounding sound function.
<b>XinemaSound™ Leveler</b>	Enable/Disable the smooth and steady volume level function.
<b>Bass</b>	Adjust the bass level to your preference.
<b>Treble</b>	Adjust the treble level to your preference.
<b>Balance</b>	Adjust the sound balance between the left and right speakers.
<b>Lip Sync</b>	Adjust to match the movements and the lips of the person talking on the screen.
<b>Speakers</b>	Turn the built-in speakers on or off.

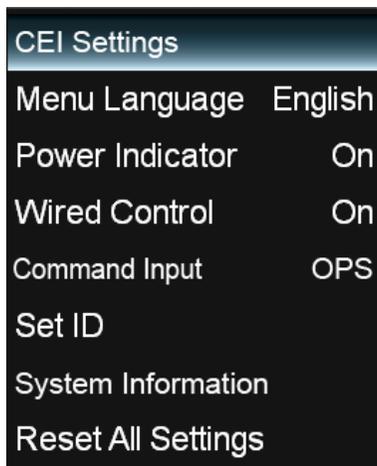
# OSD Menu

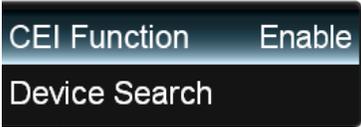
## ● Audio Menu (continue)

Menu Option	Description
<b>Audio Only</b>	Output audio from the speakers but turn off the display.
<b>Digital Audio Out</b>	Select the type of digital audio output to an external audio system.
<b>Analog Audio Out</b>	Select the analog audio mode.
<b>Equalizer Settings</b>	<p>Customize the equalizer settings.</p>  <p>To adjust the settings, do the following:</p> <ol style="list-style-type: none"> <li>Press the ◀/▶ button to select the option and select <b>OK</b> to enter the submenu.</li> <li>Press the ▲/▼ button to adjust the setting.</li> </ol>
<b>Reset Audio Settings</b>	<p>Reset all <b>Audio</b> settings to the factory default settings.</p>  <p>Select <b>OK</b> to reset all settings.</p>

# OSD Menus

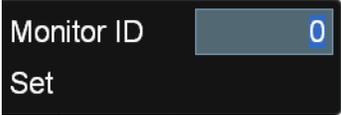
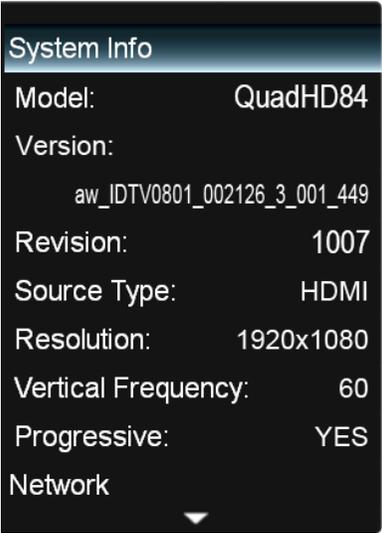
## ● Setup Menu



Menu Option	Description
<b>CEI Settings</b>	<p>Configure CEI settings.</p>  <ul style="list-style-type: none"> <li>• <b>CEI Function:</b> Enable/Disable CEI function.</li> <li>• <b>Device Search:</b> Search for CEI devices.</li> </ul> <p><b>Note</b>  “Device Search” option is only available if CEI function is enabled.</p>
<b>Menu Language</b>	<p>Select the on-screen menu language.</p> 
<b>Power Indicator</b>	<p>Enable or disable the power indicator on the front of the display when the display is turned on.</p>

# OSD Menus

## ● Setup Menu (continue)

Menu Option	Description
<b>Wired Control</b>	Specify the type of network connection.
<b>Command Input</b>	<p>Input source of Command Input via RS232 or OPS.</p> 
<b>Set ID</b>	<p>Assign a unique Set ID NO (name assignment) to each display when several displays are connected (via RS-232C) for display.</p>  <p>Enter the ID number and select <b>Set</b> to confirm the setting.</p>
<b>System Information</b>	<p>Display the system information of the display.</p>  <p>Select <b>System Information</b> to view the system information.</p>

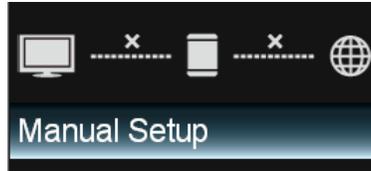
# OSD Menu

● **Setup Menu (continue)**

Menu Option	Description
<p><b>Reset All Settings</b></p>	<p>Return the display parameters on all menus to the factory default settings.</p> <div data-bbox="443 508 990 716" style="text-align: center; border: 1px solid black; padding: 10px;"> <p>Are you sure you would like to Restore Defaults?</p> <p>OK      Cancel</p> </div> <p>Select <b>OK</b> to reset all settings.</p>

# OSD Menu

## Ethernet Menu



Menu Option	Description																														
<p><b>Manual Setup</b></p>	<p>Configure the network settings.</p> <div data-bbox="530 631 895 1028" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <table border="1"> <thead> <tr> <th>Type</th> <th colspan="4">Static IP</th> </tr> </thead> <tbody> <tr> <td>IP Address</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Subnet Mask</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Def. Gateway</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Pref. DNS</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Alt. DNS</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>Connect</p> </div> <ul style="list-style-type: none"> <li>• <b>Type:</b> User can use the user-defined settings as they wish.</li> <li>• <b>IP Address / Subnet Mask / Def. Gateway / Pref. DNS / Alt. DNS:</b> Enter the respective network parameters.</li> <li>• <b>Connect:</b> Verify the network connection.</li> </ul> <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Check with your Information Technology Provider for the correct setting.</li> <li>• Be sure the RJ-45 cable is properly connected.</li> </ul> </div>	Type	Static IP				IP Address	0	0	0	0	Subnet Mask	0	0	0	0	Def. Gateway	0	0	0	0	Pref. DNS	0	0	0	0	Alt. DNS	0	0	0	0
Type	Static IP																														
IP Address	0	0	0	0																											
Subnet Mask	0	0	0	0																											
Def. Gateway	0	0	0	0																											
Pref. DNS	0	0	0	0																											
Alt. DNS	0	0	0	0																											

# OSD Menu

## ● Wide Menu

Select how the picture displays on the screen. As you select an option, you will see the screen adjusting to the different size.



### Note

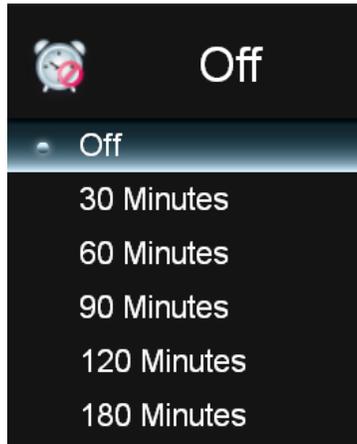


- The available menu options varies depending on the input source.
- “Wide” menu is not available if the input source is 4k2k.
- The option is either “Panoramic” or “Stretch” depend on input screen format:
  - Panoramic: Standard screen format (ex. 4:3)
  - Stretch: Wide screen format (ex. 16:9)

# OSD Menus

## ● Sleep Timer

Set the timer to turn the display off at the preset time.



**Note** You can also access the Sleep Timer menu by pressing the **SLEEP** button on the remote control.



# Multimedia Mode

## Multimedia Menu

This display is equipped with USB port that enables you to view photos, listen to music, or watch videos stored on a USB storage device.

## Multimedia support format

Container	Extensions	Audio/Video
ASF	.asf	Video
	.wmv	
AVI/DivX	.avi	Video/Audio
MPEG-2 PS (Program Stream), VOB, SVCD	.vob	Video/Audio
MP4	.mp4	
MP3	.mp3	
WAVE/WAV	.wav	Audio
JPEG	.jpeg	
	.jpg	

**Note** • There may be files with these extensions that do not play correctly due to Codec differences.



## Basic Operation

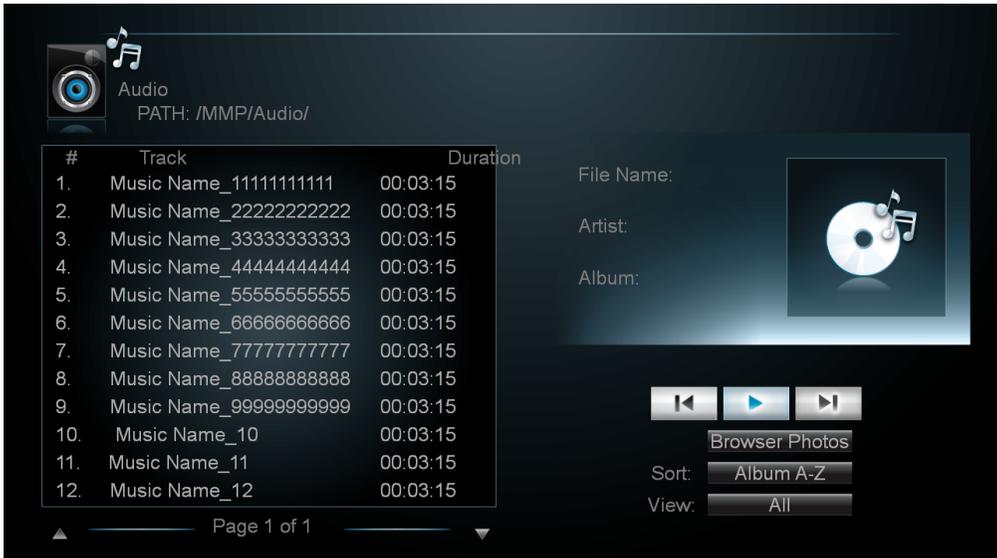
1. Turn on the display.
2. Plug a USB device to the USB port on the display.
3. Press the **MULTIMEDIA** button on the remote control.
4. Select the USB port that you want to access and press the **OK** button.
5. Select the media type of the file you wish to play and press the **OK** button.
6. Use the **▲/▼/◀/▶** button to browse the files, folders or menu options and press the **OK** button to confirm.



# Multimedia Mode

## Playback Music

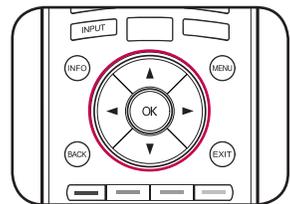
1. Select **Audio** and press the **OK** button to enter the main Music content browser.



2. In the main Music content browser, use the ▲/▼ button to select a song.

3. Press the **OK** button to play, and an automatic playback begins from the selected song.

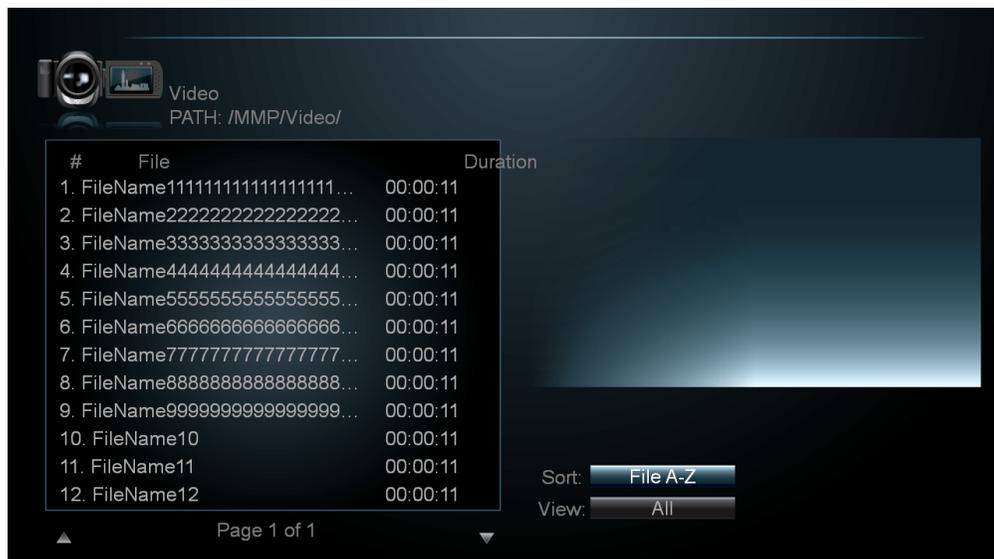
- Press the **||** icon to pause the selected song playback. Press the **▶** button to resume the playback.
- You can highlight the **▶** icon and press the **OK** button to skip to the next song.
- You can highlight the **◀** icon and press the **OK** button to skip to the previous song.
- Select **Sort** to specify the sorting method.
- Select **View** to change the type of file listing.
- Select **Browser Photos** to playback photos.



# Multimedia Mode

## Watching Videos

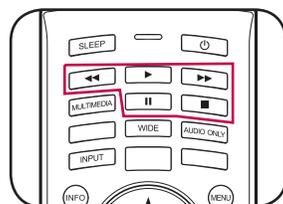
1. Select **Video** and press the **OK** button to enter the main Video content browser.



2. In the main Video content browser, use the ▲/▼ button to select a video.

3. Press the **OK** button to begin the video playback.

- Press the **||** icon to pause the selected video playback. Press the **▶** button to resume the playback.
- Press the **▶▶** button to fast-forward the video playback.
- Press the **◀◀** button to rewind the video playback.
- Press the **■** button to stop the playback.
- Select **Sort** to specify the sorting method.
- Select **View** to change the type of file listing.



# Multimedia Mode

## Viewing Photos

1. Select **Photo** and press the **OK** button to enter the main Photo content browser.



2. In the main Photo content browser, use the ▲/▼/◀/▶ button to select a photo.

3. Press the **OK** button to view in full screen.

4. To begin a slide show, select **Start Slideshow** and press the **OK** button. A slide show begins from the selected photo.

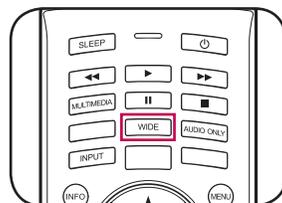
- Press the **||** button to pause the slide show, or press the **■** button to stop the slide show.
- Select **Sort** to specify the file sorting method.
- Select **View** to change the type of file listing.
- Select **Setting** to customize the slide show settings.
  - **Shuffle**: Enable/Disable the shuffle function.
  - **Speed**: Set the interval time between each slide display.
  - **Effect**: Select the transition effect between each slide displays.
- Select **Browser Music** to playback songs.



# Changing Display Mode

## ● Set Aspect Ratio

1. Turn on the display.
2. Press the **WIDE** button on the remote control.  
The Aspect Ratio menu appears on the screen.



3. Use the ▲/▼ button to select the aspect ratio of the display and press the **OK** button to confirm.

**Normal**



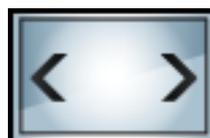
**Stretch**



**Wide**



**Panoramic**



**Zoom**



**Note**



- The available menu options varies depending on the input source.
- The option is either “Panoramic” or “Stretch” depend on input screen format:
  - Panoramic: Standard screen format (ex. 4:3)
  - Stretch: Wide screen format (ex. 16:9)

# Troubleshooting

## No image is displayed

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>● Is the power cord connected?</li> <li>● Is the power indicator light on?</li> <li>● Power is on, power indicator is blue but the screen appears extremely dark.</li> <li>● Is the power indicator amber?</li> <li>● Does the 'NO SIGNAL' message appear?</li> </ul> | <ul style="list-style-type: none"> <li>● See if the power cord is properly connected to the outlet.</li> <li>● See if the power switch is turned on.</li> <li>● Adjust brightness and contrast again.</li> <li>● Backlight may need repair.</li> <li>● If the display is in power saving mode, move the mouse or press any key.</li> <li>● Turn both devices off and then back on.</li> <li>● The signal cable between PC and display is not connected. Check the signal cable.</li> <li>● Press INPUT on the remote control to check the input signal.</li> </ul> |
|--|--|

## The screen image looks abnormal

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>● Is the screen positioned?</li> <li>● Do thin lines appear in the background?</li> <li>● Power is on, power indicator is blue but the screen appears extremely dark.</li> </ul> | <ul style="list-style-type: none"> <li>● D-SUB analog signal –Select <b>Auto Adjustment</b> in <b>Size &amp; Position</b> menu to automatically select the optimal screen status that fits the current mode.</li> <li>● D-SUB analog signal –Select <b>Auto Adjustment</b> in <b>Size &amp; Position</b> menu to automatically select the optimal screen status that fits the current mode. If the adjustment is not satisfactory, use the <b>Fine Tune</b> menu.</li> <li>● D-SUB analog signal —Select <b>Auto Adjustment</b> in <b>Size &amp; Position</b> menu to automatically select the optimal screen status that fits the current mode. If the adjustment is not satisfactory, use the <b>Fine Tune</b> menu.</li> </ul> |
|---|---|

# Troubleshooting

## After-image appears on the screen

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>● After-image appears when the previous image changed.</li> </ul> | <ul style="list-style-type: none"> <li>● If you display a fixed image for a long time, the pixels may be damaged quickly. Use the screen-saver function.</li> </ul> |
|--|---|

## Screen color is abnormal

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>● Screen has poor color resolution (16 colors).</li> <li>● Screen color is unstable or mono-colored.</li> <li>● Do black spots appear on the screen?</li> </ul> | <ul style="list-style-type: none"> <li>● Set the number of color to more than 24 bits (true color). Select <b>Control Panel –Display–Settings–Color Table</b> menu in Windows.</li> <li>● Check the connection status of the signal cable or re-insert the PC video card.</li> <li>● Several pixels (red, green, white, or black color) may appear on the screen, which can be attributable to the unique characteristics of the LCD Panel. This is not a malfunction of the LCD.</li> </ul> |
|--|--|

***If any of above instructions does not work, follow the instructions:***

- [1] Press **MENU**. Select **Setup > Reset All Settings**.
- [2] Enter the password.
- [3] Remove the AC power cord and wait for 10 seconds.
- [4] Connect the AC power cord and turn on the display.

# Specifications

The product specifications can change without prior notice for product improvement.

<b>LCD Panel</b>	Size	84"	
	Native Resolution	3840 x 2160	
	Aspect Ratio	16:9	
	Frame Rate	120Hz	
	Brightness	350 nits	
	Contrast Ratio	1400:1 (Typical)	
	Response Time	5ms (Typical)	
	Display Color	1.06 Billion	
<b>Power</b>	<b>Input Voltage</b>	100 ~ 240Vac	
	<b>Input Frequency</b>	50/60 Hz	
	<b>Power Consumption (Max)</b>	On	550W
		Standby	≤ 3W
		Controllable Standby	≤ 15W
<b>Dimensions &amp; Weight</b>	<b>Dimensions (Width x Height x Depth)</b>		
	1919.2mm x 1105.2mm x 67mm (without stand)		
	<b>Net Weight</b>		
		74.0kg +/- 2kg (without stand)	
<b>Video Signal</b>	<b>Maximum Resolution</b>	RGB: 1920 x 1080 @60 Hz	
		Single HDMI: 3840 x 2160 @23.98/24/25/29.97/30Hz 4x HDMI: 3840 x 2160 @50/60Hz Component: 1920 x 1080 I @50Hz Composite: 480i (NTSC)	
<b>Supported Color Format</b>	4K2K@30Hz / 4K2K@25Hz / 4K2K@24Hz: Up to RGB 4:4:4: 8 bit		
	≤ 1080P or 4K2K@50Hz / 4K2K@60Hz: Up to RGB 4:4:4 12 bit		
<b>Input Connector</b>	HDMI, HDMI QHD60, RGB (VGA), RS-232C, RJ-45, Component/ Composite		
<b>Environmental Conditions</b>	<b>Operational Condition</b>	Temperature: 0°C to 35°C, Humidity: 20% to 90%	
	<b>Storage Condition</b>	Temperature: -20°C to 60°C, Humidity: 10% to 90%	

# Specifications

## ● PC Mode (RGB) – Preset Mode

Mode No.	Resolution	Refresh rate
1	720 x 400	70Hz
2	640 x 480	60Hz
3	640 x 480	75Hz
4	800 x 600	60Hz
5	800 x 600	72Hz
6	800 x 600	75Hz
7	1024 x 768	60Hz
8	1024 x 768	70Hz
9	1024 x 768	75Hz
10	1280 x 1024	60Hz
11	1280 x 1024	75Hz
12	1920 x 1080	60Hz

## ● HDMI – Preset Mode

Single HDMI		
Mode No.	Resolution	Refresh rate
1	640 x 480 P	60Hz 4:3
2	720 x 480 P	59.94Hz
3	720 x 480 P	60Hz 16:9
4	720 x 576 P	50Hz
5	1280 x 720 P	50Hz
6	1280 x 720 P	60Hz 16:9
7	1920 x 1080 I	50Hz
8	1920 x 1080 I	60Hz 16:9
9	1920 x 1080 P	50Hz
10	1920 x 1080 P	59.94Hz
11	1920 x 1080 P	60Hz 16:9
12	1920 x 1080 P	23.98Hz
13	1920 x 1080 P	24Hz
14	1920 x 1080 P	30Hz 16.9

# Specifications

Single HDMI		
Mode No.	Resolution	Refresh rate
15	3840 x 2160	23.98Hz
16	3840 x 2160	24Hz
17	3840 x 2160	25Hz
18	3840 x 2160	29.97Hz
19	3840 x 2160	30Hz

UHD60 (4x HDMI)		
Mode No.	Resolution	Refresh rate
1	3840 x 2160	50Hz
2	3840 x 2160	60Hz

## ● Component Mode – Preset Mode

Mode No.	Resolution	Refresh rate
1	720 x 480 I	59.94Hz
2	720 x 480 P	59.94Hz
3	1280 x 720 P	60Hz
4	1920 x 1080 I	60Hz
5	720 x 576 I	50Hz
6	720 x 576 P	50Hz
7	1280 x 720 P	50Hz
8	1920 x 1080 I	50Hz

## ● Composite Mode – Preset Mode

Mode No.	Resolution
1	480i (NTSC)

# Daisy Chain Connection

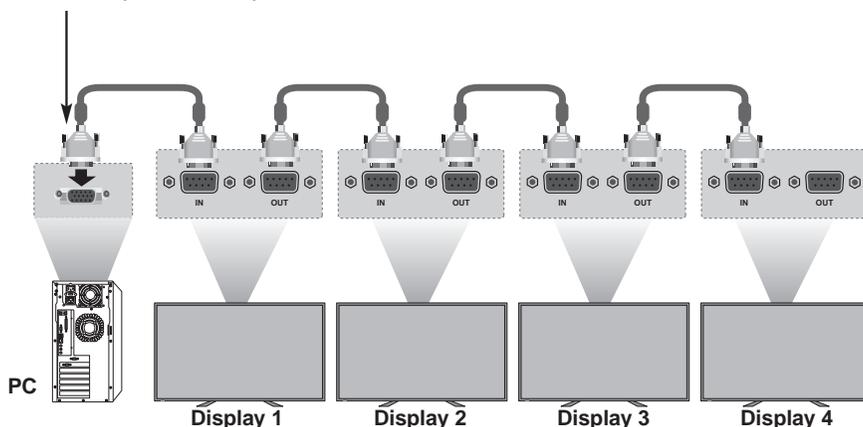
Use this method to connect several displays to a single PC.  
You can control several displays at a time by connecting them to a single PC.

## ● Connecting the cable

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

\* The RS-232C protocol is used for communication between the PC and display.  
You can turn the display on/off or adjust the OSD menu from your PC.

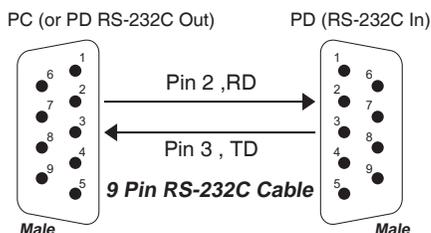
RS-232C cable (not included)



\*Maximum of Daisy Chain: 4 pcs

## ● RS-232C Configurations

### 2-Wire Configurations (Not Standard)



PC DB 9 Pin Male			
Pin No.	Designation	Description	Input/Output
1	DCD	Data carrier detect	Input
2	RxD	Receive data	Input
3	TxD	Transmit data	Output
4	DTR	Data terminal ready	Output
5	GND	Ground	-
6	DSR	Data set ready	Input
7	RTS	Request to send	Output
8	CTS	Clear to send	Input
9	RI	Incoming call	Input

## ● Communication Parameter

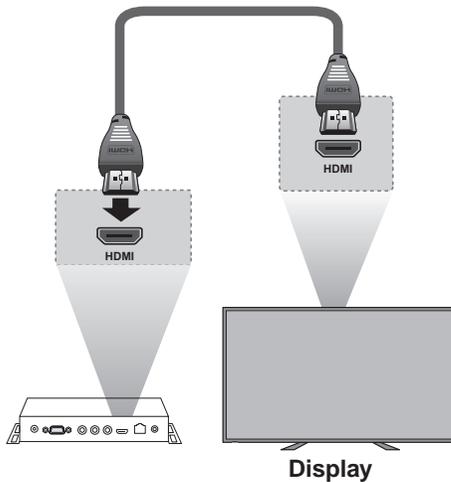
- ⇒ **Baud Rate:** 115200
- ⇒ **Data Length:** 8 Bit
- ⇒ **Parity Bit:** None
- ⇒ **Stop Bit:** 1 Bit
- ⇒ **Flow Control:** None
- ⇒ **Communication Code:** Hex Code
- ⇒ Use a DB 9 Pin Cable

# HDMI CEC Connection

With Consumer Electronics Interface (CEI) feature, you can command and control two or more CEC-enabled boxes, that are connected through HDMI, by using only one of their remote controls. (e.g. controlling a television set, set-top box and DVD player using only the remote control of the display).

## ● Connecting the cable

Connect the HDMI cable as shown in the illustration.



***\*Not support HDMI splitter or Daisy Chain connection, only support PC-Display 1:1 control.***

## ● HDMI CEC statement

Term	Description
One Touch Play	Turning on the HDMI source device cause the connected Display to be turned on and switch to HDMI Input automatically.
Routing Control	Switch (Remote control or Front key) Display Input to HDMI will cause the HDMI source device to be turned on.
System Standby	Turning off the Display will cause the HDMI Devices in the CEC net to be turned off.

# Controlling the Multiple Product

command	Header (5 bytes)					Payload (4 bytes)				Checksum (1byte)
	Prefix code #0	Prefix code #1	Set ID	Payload Type	# of payload bytes	Command	data #0	data #1	data #2	CS #0
Set Power	0xCC	0x33		0	4	0x10	0 : Off 1 : On	reserved (0x00)	reserved (0x00)	Header XOR Payload
Ack Set Power	0xCC	0x55		0	4	0x10	0xE0 : OK 0xE1 : NG	reserved (0xFF)	reserved (0xFF)	Header XOR Payload
Set Input Source	0xCC	0x33		0	4	0x11	0x30 : VGA1 0x40 : DVI1 0x50 : HDMI1 0x51 : HDMI2 0x52 : HDMI3 0x60 : Composite1 0x70 : YPbPr1 0x80 : Music Port 0x90 : TV1 0xA0 : HDMI-UHD60 0xB0 : OPS	reserved (0x00)	reserved (0x00)	Header XOR Payload
Ack Input Source	0xCC	0x55		0	4	0x11	0xE0 : OK 0xE1 : NG	reserved (0xFF)	reserved (0xFF)	Header XOR Payload
Read Input Source	0xCC	0x33		1	4	0x11	reserved (0x00)	reserved (0x00)	reserved (0x00)	Header XOR Payload
Ack Read Input Source	0xCC	0x55		1	4	0x11	0xE0 : OK 0xE1 : NG	0x30 : VGA1 0x40 : DVI1 0x50 : HDMI1 0x51 : HDMI2 0x52 : HDMI3 0x60 : Composite1 0x70 : YPbPr1 0x80 : Music Port 0x90 : TV1 0xA0 : HDMI-UHD60 0xB0 : OPS	reserved (0xFF)	Header XOR Payload

# Controlling the Multiple Product

## RS232C CheckSum

	Header (5 bytes)					Payload (4 bytes)			Checksum (1byte)	
command	Prefix code #0	Prefix code #1	Set ID	Payload Type	# of payload bytes	Command	data #0	data #1	data #2	CS #0
Set Power	0xCC	0x33		0	4	0x10	"0 : Off 1 : On"	reserved (0x00)	reserved (0x00)	Header XOR Payload



X	Y	○
0	0	0
0	1	1
1	0	1
1	1	0

XOR

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We can make CheckSum with Header (5 bytes) and Payload(4 bytes).

(Prefix code#0) XOR (Prefix code#1) XOR (Set ID) XOR (Command Payload Type) XOR (# of Payload bytes) XOR (Command) XOR (data #0) XOR (data #1) XOR (data#2) = CheckSum

For example:

(0xCC) XOR (0x33) XOR (0x01 = Set ID) XOR (0x00) XOR (0x04) XOR (0x10) XOR (0x01 = ON) XOR (0x00) XOR (0x00) = 0xEB

\* Full list of RS-232C / RJ-45 commands available on request.

Make sure to read the Safety Precautions before using the product.  
Keep the Owner's Manual(CD) in an accessible place for future reference.  
The model and serial number of the SET is located on the back and one side of the SET. Record it below should you ever need service.

MODEL  
SERIAL

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

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#### Corporate offices

USA – Cypress  
ph: 714-236-8610

Canada – Kitchener  
ph: 519-744-8005

#### Consultant offices

Italy  
ph: +39 (0) 2 9902 1161

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#### Worldwide offices

Australia  
ph: +61 (0) 7 3624 4888

Brazil  
ph: +55 (11) 2548 4753

China (Beijing)  
ph: +86 10 6561 0240

China (Shanghai)  
ph: +86 21 6278 7708

Eastern Europe and  
Russian Federation  
ph: +36 (0) 1 47 48 100

France  
ph: +33 (0) 1 41 21 44 04

Germany  
ph: +49 2161 664540

India  
ph: +91 (080) 6708 9999

Japan (Tokyo)  
ph: 81 3 3599 7481

Korea (Seoul)  
ph: +82 2 702 1601

Republic of South Africa  
ph: +27 (0)11 510 0094

Singapore  
ph: +65 6877-8737

Spain  
ph: + 34 91 633 9990

United Arab Emirates  
ph: +971 4 3206688

United Kingdom  
ph: +44 (0) 118 977 8000