The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

The contents of this manual are subject to change without notice to improve quality.

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Chapter 01
Before Using the Product

Safety Precautions

- **Warning**: A serious or fatal injury may result if instructions are not followed.
- **Caution**: Personal injury or damage to properties may result if instructions are not followed.
- Activities marked by this symbol are prohibited.
- Instructions marked by this symbol must be followed.

Cleaning

- Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.
- Take the following steps when cleaning.

1. Power off the product and computer.
2. Disconnect the power cord from the product.
   - Hold the power cable by the plug and do not touch the cable with wet hands. Otherwise, an electric shock may result.
3. Use water and a dry cloth to clean the protection glass.
   - Wipe with a clean wet cloth.
   - To remove tough stains, wipe using a cloth with a small amount of ethanol based cleaner.
   - Use a brush to remove any debris from the inlet and outlet opening.
   - To remove tough stains, wipe using a cloth with a small amount of ethanol based cleaner.
   - If washing with water, keep the pressure below 0.5 bar.
4. Connect the power cord to the product when cleaning is finished.
5. Power on the product and computer.

Storage

Due to the characteristics of high-glossy products, using a UV humidifier nearby may create white-colored stains on the product.

- Contact Customer Service Center if the inside of the product needs cleaning (service fee will be charged).
Electricity and Safety

**Warning**

Do not use a damaged power cord or plug, or a loose power socket.
- An electric shock or fire may result.

Do not use multiple products with a single power socket.
- Overheated power sockets may cause a fire.

Do not touch the power plug with wet hands. Otherwise, an electric shock may result.
- Insert the power plug all the way in so it is not loose.
- An unsecure connection may cause a fire.

Connect the power plug to a grounded power socket (type 1 insulated devices only).
- An electric shock or injury may result.

Do not bend or pull the power cord with force. Be careful not to leave the power cord under a heavy object.
- Damage to the cord may result in a fire or electric shock.

Do not place the power cord or product near heat sources.
- A fire or electric shock may result.

Clean any dust around the pins of the power plug or the power socket with a dry cloth.
- A fire may result.

**Caution**

Do not disconnect the power cord while the product is being used.
- The product may become damaged by an electric shock.

Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.
- A fire or electric shock may result.

Keep the power socket where the power cord is connected unobstructed.
- The power cord must be disconnected to cut off power to the product when an issue occurs.
- Note that the product is not completely powered down by using only the power button on the remote.

Hold the plug when disconnecting the power cord from the power socket.
- An electric shock or fire may result.
Installation

**Warning**

DO NOT PLACE CANDLES, INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT. DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.
- A fire may result.

Have a technician install the wall-mount hanger.
- Installation by an unqualified person can result in an injury.
- Only use approved cabinets.

Do not install the product in poorly ventilated spaces such as a bookcase or closet.
- An increased internal temperature may cause a fire.

When installing the product, keep it at a distance from the wall so that it is well ventilated.
- Refer to the Outdoor Installation Guide. (http://display.solutions.samsung.com)
- An increased internal temperature may cause a fire.

Keep the plastic packaging out of the reach of children.
- Children may suffocate.

Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)
- The product may fall and become damaged and/or cause an injury.
- Using the product in an area with excess vibration may damage the product or cause a fire.

Do not install the product within the reach of young children.
- The product may fall and injure children.
- As the front is heavy, install the product on a flat and stable surface.

Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Precautions during installation and storage
- After opening the cover, install the product within 1 hour under humidity of 60% or below. (P. 33)
- Keep the predefined humidity while opening the cover or assembling the housing (e.g. connection of external device, F/W update).
- During operation and storage of the product, be sure to attach the cover.

**Caution**

Do not drop the product while moving.
- Product failure or personal injury may result.

Do not set down the product on its front.
- The screen may become damaged.

When installing the product on a cabinet or shelf, make sure that the bottom edge of the front of the product is not protruding.
- The product may fall and become damaged and/or cause an injury.
- Install the product only on cabinets or shelves of the right size.

Set down the product gently.
- Product failure or personal injury may result.

If the product is installed in an unusual location, the surrounding environment may cause a serious quality problem. Therefore, be sure to contact Samsung Customer Service Center before installation.
- Places where many fine dusts are generated, places where chemicals are used, places with too high or low temperatures, places with a lot of moisture or water, transportation equipment such as vehicles, airports and stations used continuously for a long time, and more.
Operation

Warning

There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.

• A fire or electric shock may result.

• Contact Samsung Customer Service Center for repairs.

Before moving the product, turn off the power switch and disconnect the power cable and all other connected cables.

• Otherwise, the power cord may be damaged and a fire or electric shock may result.

If the product generates abnormal sounds, a burning smell or smoke, disconnect the power cord immediately and contact Samsung Customer Service Center.

• An electric shock or fire may result.

Do not let children hang from the product or climb on top of it.

• Children may become injured or seriously harmed.

If the product is dropped or the outer case is damaged, turn off the power switch and disconnect the power cord. Then contact Samsung Customer Service Center.

• Continued use can result in a fire or electric shock.

Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

• The product or heavy objects may fall as children try to reach for the toys or sweets resulting in a serious injury.

Do not drop objects on the product or apply impact.

• A fire or electric shock may result.

Do not move the product by pulling the power cord or any cable.

• Product failure, an electric shock or fire may result from a damaged cable.

If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

• Sparks can cause an explosion or fire.

Do not lift or move the product by pulling the power cord or any cable.

• Product failure, an electric shock or fire may result from a damaged cable.

Do not use or keep combustible spray or an inflammable substance near the product.

• An explosion or fire may result.

Ensure the vents are not blocked by tablecloths or curtains.

• An increased internal temperature may cause a fire.

Do not insert metallic objects (chopsticks, coins, hairpins, etc) or objects that burn easily (paper, matches, etc) into the product (via the vent or input/output ports, etc).

• Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.

• Product failure, an electric shock or fire may result.

Do not block the vent on the product. The product may not function properly due to potential overheating.

Do not attempt to insert your fingers or objects into the vents.

• Product failure or personal injury may result.
Caution

Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.

• Activate power-saving mode or a moving-picture screen saver if you will not be using the product for an extended period of time.

Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc).

• Dust accumulation combined with heat can cause a fire, electric shock or electric leakage.

Use the product at the recommended resolution and frequency.

• Your eyesight may deteriorate.

Do not hold the product upside-down or move it by holding the stand.

• The product may fall and become damaged or cause an injury.

Looking at the screen too close for an extended period of time can deteriorate your eyesight.

Rest your eyes for more than 5 minutes for every 1 hour of product use.

• Eye fatigue will be relieved.

Do not touch the screen when the product has been turned on for an extended period of time as it will become hot.

Store small accessories out of the reach of children.

Exercise caution when adjusting the product angle or stand height.

• Your hand or finger may get stuck and injured.

• Tilting the product at an excessive angle may cause the product to fall and an injury may result.

Do not place heavy objects on the product.

• Product failure or personal injury may result.

When using headphones or earphones, do not turn the volume too high.

• Having the sound too loud may damage your hearing.

Be careful that children do not place the battery in their mouths when removed from the remote control.

Place the battery in a location that children or infants cannot reach.

• If children have had the battery in their mouths, consult your doctor immediately.

When replacing the battery, insert it with the right polarity (+, -).

• Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.

Use only the specified standardized batteries, and do not use a new battery and a used battery at the same time.

• Otherwise, the batteries may be damaged or cause fire, personal injury or damage due to a leakage of the internal liquid.

The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

• The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.
Contact the vendor where you purchased the product if any components are missing.

- The pictures may look different from the actual components.

- A stand is not provided with the product. To install a stand, you can purchase one separately.

## Checking the Components

### Components

- **QUICK SETUP GUIDE**
- **Warranty card** (Not available in some locations)
- **Regulatory guide**
- **Power cord**

- **Batteries** (Not available in some locations)
- **Remote Control**
### Parts

The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

<table>
<thead>
<tr>
<th>Parts</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote sensor</td>
<td>Press a button on the remote control pointing at the sensor on the front of the product to perform the corresponding function.</td>
</tr>
<tr>
<td></td>
<td>Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.</td>
</tr>
</tbody>
</table>

Use the remote control within 7 m to 10 m from the sensor on the product at an angle of 30° from the left and right.

- Store used batteries out of reach of children and recycle.
- Do not use a new and used battery together. Replace both batteries at the same time.
- Remove batteries when the remote control is not to be used for an extended period of time.
## Reverse Side

The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

<table>
<thead>
<tr>
<th>Port</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS232C IN</td>
<td>Connects to MDC using an RS232C adapter.</td>
</tr>
<tr>
<td>RS232C OUT</td>
<td></td>
</tr>
<tr>
<td>AUDIO OUT</td>
<td>Outputs sound to an audio device via an audio cable.</td>
</tr>
<tr>
<td>USB</td>
<td>Connect to a USB memory device.</td>
</tr>
</tbody>
</table>
| RJ45 (LAN OUT)     | - Wired LAN connection port used to connect an external device such as a laptop to connect to the Internet.  
                      - Connects to MDC using a LAN cable.                                      |
| HDBT (LAN IN)      | - Sends the HDMI signal to a connected LAN cable using an HDBaseT transmitter.  
                      - Connects to MDC using a LAN cable.                                        |
| HDMI IN 1, HDMI IN 2| Connects to a source device using a HDMI cable or HDMI-DVI cable.            |
Anti-theft Lock

An anti-theft lock allows you to use the product securely even in public places.

The locking device shape and locking method depend on the manufacturer. Refer to the user guide provided with your anti-theft locking device for details.

The following images are for reference only. Real-life situations may differ from what is shown in the images.

To lock an anti-theft locking device:

1. Fix the cable of your anti-theft locking device to a heavy object such as a desk.
2. Put one end of the cable through the loop on the other end.
3. Insert the locking device into the anti-theft lock slot at the back of the product.
4. Lock the locking device.

An anti-theft locking device can be purchased separately.

Refer to the user guide provided with your anti-theft locking device for details.

Anti-theft locking devices can be purchased at electronics retailers or online.
Remote Control

- Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.
- A button without a description in the image below is not supported on the product.

Remote control button functions may differ for different products.
- Remove batteries when the remote control is not to be used for an extended period of time.

Power on the product.
Power off the product.
Number buttons
Enter the password in the OSD menu.
Mute the sound.
Unmuting the sound: Press MUTE again or press the volume control (+ VOL -) button.
Player Launch Button.
Display or hide the onscreen display menu, or return to the previous menu.
Adjust the volume.
Change the input source.
Quickly select frequently used functions by pressing it while a USB content is playing.

Return to the previous menu.

If multiple products are connected through the Video Wall feature, press the SET button and enter a Device ID using the numeric buttons. Control the product using the remote control.

Cancel a value that has been set using the SET button and control all connected products using the remote control.

Display information about the current input source.

Move to the upper, lower, left or right menu, or adjust an option's setting. Confirm a menu selection.

Exit the current menu.

Manually select a connected input source from HDMI 1 and HDMI 2.

It sets safe lock function.

To place batteries in the remote control.
Before Installing the Product
(Installation Guide)

To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

- Ensure that an authorized installation company installs the wall mount.
- Otherwise, it may fall and cause personal injury.
- Make sure to install the specified wall mount.

Tilting Angle and Rotation

- Contact Samsung Customer Service Center for further details.
- The product can be tilted at a maximum angle of 15° from a perpendicular wall surface.
- To use the product vertically (portrait), turn it clockwise so that the LED is pointing down.

Ventilation

Installation on a Perpendicular Wall

- Minimum 50 mm
- Ambient temperature: Under 50°C
- When installing the product on a perpendicular wall, allow at least 50 mm of space between the product and wall surface for ventilation and ensure that the ambient temperature is kept below 50°C.
- Do not block the vent on the product.
- Refer to the Outdoor Installation Guide. (http://displaysolutions.samsung.com)
Installation on an Indented Wall

Contact Samsung Customer Service Center for further details.

Plane view
A Minimum 50 mm
B Minimum 50 mm
C Ambient temperature: Under 50°C

When installing the product on an indented wall, allow at least the space specified above between the product and wall for ventilation and ensure that the ambient temperature is kept below 50°C.

Refer to the Outdoor Installation Guide. (http://displaysolutions.samsung.com)
Installing the Wall Mount

The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

Installing the Wall Mount Kit

The wall mount kit (sold separately) allows you to mount the product on the wall.

For detailed information on installing the wall mount, see the instructions provided with the wall mount.

We recommend you contact a technician for assistance when installing the wall mount bracket.

Samsung Electronics is not responsible for any damage to the product or injury to yourself or others if you select to install the wall mount on your own.

Wall Mount Kit Specifications

Install your wall mount on a solid wall perpendicular to the floor. If you install the product on a slanted wall, it may fall and result in severe personal injury.

Before attaching the wall mount to surfaces other than plaster board, please contact your nearest service center for additional information.

• Samsung wall mount kits contain a detailed installation manual and all parts necessary for assembly are provided.
• Do not use screws that are longer than the standard length or do not comply with the VESA standard screw specifications. Screws that are too long may cause damage to the inside of the product.
• For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on the wall mount specifications.
• Do not fasten the screws too firmly. This may damage the product or cause the product to fall, leading to personal injury. Samsung is not liable for these kinds of accidents.
• Samsung is not liable for product damage or personal injury when wall mount is used or the consumer fails to follow the product installation instructions.
• Do not mount the product at more than a 15 degree tilt.
• Always have two people mount the product on a wall.
• Standard dimensions for wall mount kits are shown in the table below.

Unit: mm (inches)

<table>
<thead>
<tr>
<th>Model name</th>
<th>Screw hole specs (A * B) in millimeters</th>
<th>Standard Screw</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>OH46F</td>
<td>995 x 500 (39.2 x 19.7)</td>
<td>M8</td>
<td>4</td>
</tr>
<tr>
<td>OH55F</td>
<td>1186 x 560 (46.7 x 22.0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do not install your Wall Mount Kit while your product is turned on. It may result in personal injury due to electric shock.
Remote Control (RS232C)

Cable Connection

<table>
<thead>
<tr>
<th>RS232C Cable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
</tr>
<tr>
<td>Pin</td>
</tr>
<tr>
<td>Bit rate</td>
</tr>
<tr>
<td>Data bits</td>
</tr>
<tr>
<td>Parity</td>
</tr>
<tr>
<td>Stop bit</td>
</tr>
<tr>
<td>Flow control</td>
</tr>
<tr>
<td>Maximum length</td>
</tr>
</tbody>
</table>

Pin assignment

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Detect data carrier</td>
</tr>
<tr>
<td>2</td>
<td>Received data</td>
</tr>
<tr>
<td>3</td>
<td>Transmitted data</td>
</tr>
<tr>
<td>4</td>
<td>Prepare data terminal</td>
</tr>
<tr>
<td>5</td>
<td>Signal ground</td>
</tr>
<tr>
<td>6</td>
<td>Prepare data set</td>
</tr>
<tr>
<td>7</td>
<td>Send request</td>
</tr>
<tr>
<td>8</td>
<td>Clear to send</td>
</tr>
<tr>
<td>9</td>
<td>Ring indicator</td>
</tr>
</tbody>
</table>
- RS232C cable
  Connector: 9-Pin D-Sub to Stereo Cable

LAN Cable
- Pin assignment

<table>
<thead>
<tr>
<th>Pin No</th>
<th>Standard Color</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White and orange</td>
<td>TX+</td>
</tr>
<tr>
<td>2</td>
<td>Orange</td>
<td>TX-</td>
</tr>
<tr>
<td>3</td>
<td>White and green</td>
<td>RX+</td>
</tr>
<tr>
<td>4</td>
<td>Blue</td>
<td>NC</td>
</tr>
<tr>
<td>5</td>
<td>White and blue</td>
<td>NC</td>
</tr>
<tr>
<td>6</td>
<td>Green</td>
<td>RX-</td>
</tr>
<tr>
<td>7</td>
<td>White and brown</td>
<td>NC</td>
</tr>
<tr>
<td>8</td>
<td>Brown</td>
<td>NC</td>
</tr>
</tbody>
</table>
- Connector: RJ45

Direct LAN cable (PC to HUB)

<table>
<thead>
<tr>
<th>Signal</th>
<th>P1</th>
<th>P2</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX+</td>
<td>1</td>
<td>1</td>
<td>TX+</td>
</tr>
<tr>
<td>TX-</td>
<td>2</td>
<td>2</td>
<td>TX-</td>
</tr>
<tr>
<td>RX+</td>
<td>3</td>
<td>3</td>
<td>RX+</td>
</tr>
<tr>
<td>RX-</td>
<td>6</td>
<td>6</td>
<td>RX-</td>
</tr>
</tbody>
</table>

Cross LAN cable (PC to PC)

<table>
<thead>
<tr>
<th>Signal</th>
<th>P1</th>
<th>P2</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX+</td>
<td>1</td>
<td>3</td>
<td>RX+</td>
</tr>
<tr>
<td>TX-</td>
<td>2</td>
<td>6</td>
<td>RX-</td>
</tr>
<tr>
<td>RX+</td>
<td>3</td>
<td>1</td>
<td>TX+</td>
</tr>
<tr>
<td>RX-</td>
<td>6</td>
<td>2</td>
<td>TX-</td>
</tr>
</tbody>
</table>
Connection

Ensure you connect each of the adapters to the correct RS232C IN or OUT port on the product.

- Connection 1

- Connection 2

- Connection 3
Control Codes

Viewing control state (Get control command)

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>Command type</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Controlling (Set control command)

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Data</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>Command type</td>
<td>1</td>
<td>Value</td>
<td></td>
</tr>
</tbody>
</table>

Command

<table>
<thead>
<tr>
<th>No.</th>
<th>Command type</th>
<th>Command</th>
<th>Value range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power control</td>
<td>0x11</td>
<td>0–1</td>
</tr>
<tr>
<td>2</td>
<td>Volume control</td>
<td>0x12</td>
<td>0–100</td>
</tr>
<tr>
<td>3</td>
<td>Input source control</td>
<td>0x14</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Screen mode control</td>
<td>0x18</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Screen size control</td>
<td>0x19</td>
<td>0–255</td>
</tr>
<tr>
<td>6</td>
<td>Video wall mode control</td>
<td>0x5C</td>
<td>0–1</td>
</tr>
<tr>
<td>7</td>
<td>Safety Lock</td>
<td>0x5D</td>
<td>0–1</td>
</tr>
<tr>
<td>8</td>
<td>Video Wall On</td>
<td>0x84</td>
<td>0–1</td>
</tr>
<tr>
<td>9</td>
<td>Video Wall User Control</td>
<td>0x89</td>
<td>-</td>
</tr>
</tbody>
</table>

- All communications take place in hexadecimals. The checksum is calculated by adding up all values except the header. If a checksum adds up to be more than 2 digits as shown below (11+FF+01+01=112), the first digit is removed.

E.g. Power On & ID=0

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>ID</th>
<th>Data length</th>
<th>Data 1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x11</td>
<td></td>
<td>1</td>
<td>“Power”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>ID</th>
<th>Data length</th>
<th>Data 1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x11</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

- To control all devices connected by a serial cable simultaneously irrespective of IDs, set the ID as ”0xFE” and transmit commands. Commands will be executed by each device but ACK will not respond.
### Power control

- **Function**
  - A product can be powered on and off using a PC.
- **Viewing power state (Get Power ON / OFF Status)**
  
<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x11</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

- **Setting power ON/Off (Set Power ON / OFF)**
  
<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Data</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x11</td>
<td>1</td>
<td>&quot;Power&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*Power*: Power code to be set on a product.
1: Power ON
0: Power OFF

- **Ack**
  
<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'A'</td>
<td>0x11</td>
<td>&quot;Power&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*Power*: Power code to be set on a product.

- **Nak**
  
<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'N'</td>
<td>0x11</td>
<td>&quot;ERR&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*ERR*: A code showing what error has occurred.

### Volume control

- **Function**
  - The volume of a product can be adjusted using a PC.
- **Viewing volume state (Get Volume Status)**
  
<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x12</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

- **Setting the volume (Set Volume)**
  
<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Data</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x12</td>
<td>1</td>
<td>&quot;Volume&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*Volume*: Volume value code to be set on a product. (0-100)

- **Ack**
  
<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'A'</td>
<td>0x12</td>
<td>&quot;Volume&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*Volume*: Volume value code to be set on a product. (0-100)

- **Nak**
  
<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'N'</td>
<td>0x12</td>
<td>&quot;ERR&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*ERR*: A code showing what error has occurred.
## Input source control

- **Function**
  
The input source of a product can be changed using a PC.

- **Viewing input source state (Get Input Source Status)**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command</th>
<th>ID</th>
<th>Data length</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x14</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Setting the input source (Set Input Source)**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command</th>
<th>ID</th>
<th>Data length</th>
<th>Data</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x14</td>
<td>1</td>
<td></td>
<td>&quot;Input Source&quot;</td>
<td></td>
</tr>
</tbody>
</table>

"Input Source": An input source code to be set on a product.

<table>
<thead>
<tr>
<th>Header</th>
<th>Command</th>
<th>ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'A'</td>
<td></td>
<td>0x14</td>
<td>&quot;Input Source&quot;</td>
<td></td>
</tr>
</tbody>
</table>

"Input Source": An input source code to be set on a product.

- **Ack**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command</th>
<th>ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td></td>
<td>'N'</td>
<td>0x14</td>
<td>&quot;ERR&quot;</td>
<td></td>
</tr>
</tbody>
</table>

"ERR": A code showing what error has occurred.

- **Nak**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command</th>
<th>ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>&quot;ERR&quot;</td>
<td></td>
</tr>
</tbody>
</table>

HDMI1_PC and HDMI2_PC cannot be used with the Set command. They only respond to "Get" commands.

Available input sources may vary depending on the model.

MagicInfo is only available with models that contain the MagicInfo function.
Screen mode control

- **Function**
  The screen mode of a product can be changed using a PC.
  Screen mode cannot be controlled when the Video Wall function is enabled.

- **Viewing screen status (Get Screen Mode Status)**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x18</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

- **Setting the picture size (Set Picture Size)**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Data</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x18</td>
<td>1</td>
<td>&quot;Screen Mode&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*Screen Mode*: A code that sets the product status

- 0x01  16:9
- 0x04  Zoom
- 0x31  Wide Zoom
- 0x0B  4:3

- **Ack**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'A'</td>
<td>0x18</td>
<td>&quot;Screen Mode&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*Screen Mode*: A code that sets the product status

- **Nak**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'N'</td>
<td>0x18</td>
<td>&quot;ERR&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*ERR*: A code showing what error has occurred

Screen size control

- **Function**
  The screen size of a product can be changed using a PC.

- **Viewing the screen size (Get Screen Size Status)**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x19</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

- **Ack**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'A'</td>
<td>0x19</td>
<td>&quot;Screen Size&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*Screen Size*: product screen size (range: 0 – 255, unit: inch)

- **Nak**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
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</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'N'</td>
<td>0x19</td>
<td>&quot;ERR&quot;</td>
<td></td>
</tr>
</tbody>
</table>

*ERR*: A code showing what error has occurred
**Video Wall Mode Control**

- **Function**
  Video Wall mode can be activated on a product using a PC. This control is only available on a product whose Video Wall is enabled.

- **Viewing video wall mode (Get Video Wall Mode)**
  ```
  Header | Command | ID | Data length | Checksum
  0xAA  | 0x5C    | 0 |            | 0
  ```

- **Setting the video wall (Set Video Wall Mode)**
  ```
  Header | Command | ID | Data length | Data | Checksum
  0xAA  | 0x5C    | 1 |            | "Video Wall Mode" | 0
  ```

*Video Wall Mode*: A code used to activate Video Wall mode on a product
1: Full
0: Natural

- **Ack**
  ```
  Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum
  0xAA  | 0xFF    | 3 |            | 'A'     | 0x5C  |       | 0
  ```

*Video Wall Mode*: A code used to activate Video Wall mode on a product

- **Nak**
  ```
  Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum
  0xAA  | 0xFF    | 3 |            | 'A'     | 0x5D  |       | 0
  ```

*ERR*: A code showing what error has occurred

**Safety Lock On**

- **Function**
  PC can be used to turn the Safety Lock On function on or off on a product. This control is available regardless of whether or not the power is turned on.

- **Viewing the safety lock state (Get Safety Lock Status)**
  ```
  Header | Command | ID | Data length | Checksum
  0xAA  | 0x5D    | 0 |            | 0
  ```

- **Enabling or disabling safety lock (Set Safety Lock Enable / Disable)**
  ```
  Header | Command | ID | Data length | Data | Checksum
  0xAA  | 0x5D    | 1 |            | "Safety Lock" | 0
  ```

*Safety Lock*: Safety lock code to be set on a product
1: ON
0: OFF

- **Ack**
  ```
  Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum
  0xAA  | 0xFF    | 3 |            | 'A'     | 0x5D  |       | 0
  ```

*Safety Lock*: Safety lock code to be set on a product

- **Nak**
  ```
  Header | Command | ID | Data length | Ack/Nak | r-CMD | Val1 | Checksum
  0xAA  | 0xFF    | 3 |            | 'N'     | 0x5D  |       | 0
  ```

*ERR*: A code showing what error has occurred
### Video Wall On

- **Function**
  
  Turn Video Wall on or off on the product from your computer.

- **Get Video Wall On/Off Status**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x84</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

- **Set Video Wall On/Off**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Data</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x84</td>
<td>1</td>
<td>V.Wall_On</td>
<td></td>
</tr>
</tbody>
</table>

- **V.Wall_On**: Video Wall code to be assigned to the product

  1: Video Wall ON
  
  0: Video Wall OFF

- **Ack**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'A'</td>
<td>0x84</td>
<td>V.Wall_On</td>
<td></td>
</tr>
</tbody>
</table>

  V.Wall_On: Same as above

- **Nak**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'N'</td>
<td>0x84</td>
<td>ERR</td>
<td></td>
</tr>
</tbody>
</table>

*ERR*: A code showing what error has occurred

---

### Video Wall User Control

- **Function**

  Turn the Video Wall function on or off on the product from your computer.

- **Get Video Wall Status**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0x89</td>
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</table>

- **Set Video Wall**

<table>
<thead>
<tr>
<th>Header</th>
<th>Command ID</th>
<th>Data length</th>
<th>Val1</th>
<th>Val2</th>
<th>Checksum</th>
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<tbody>
<tr>
<td>0xAA</td>
<td>0x89</td>
<td>2</td>
<td>Wall_Div</td>
<td>Wall_SNo</td>
<td></td>
</tr>
</tbody>
</table>

  Wall_Div: Video Wall Divider code assigned to the product
### 10x10 Video Wall Model

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
<th>7</th>
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<th>15</th>
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<td>0x6D</td>
<td>0x6E</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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</tr>
</tbody>
</table>
Wall_SNo: Product Number code assigned to the product

10x10 Video Wall Model : (1 ~ 100)

<table>
<thead>
<tr>
<th>Set Number</th>
<th>Data</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
<td>0x02</td>
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<tr>
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<tr>
<td>99</td>
<td>0x63</td>
</tr>
<tr>
<td>100</td>
<td>0x64</td>
</tr>
</tbody>
</table>

• Ack

<table>
<thead>
<tr>
<th>Header</th>
<th>Command</th>
<th>ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Val2</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>4</td>
<td>'A'</td>
<td>0x89</td>
<td>Wall_Div</td>
<td>Wall_SNo</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• Nak

<table>
<thead>
<tr>
<th>Header</th>
<th>Command</th>
<th>ID</th>
<th>Data length</th>
<th>Ack/Nak</th>
<th>r-CMD</th>
<th>Val1</th>
<th>Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>0xAA</td>
<td>0xFF</td>
<td>3</td>
<td>'N'</td>
<td>0x89</td>
<td>ERR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“ERR”: A code showing what error has occurred
Chapter 03
Connecting and Using a Source Device

Before Connecting

Pre-connection Checkpoints

— Before connecting a source device, read the user manual provided with it. The number and locations of ports on source devices may differ from device to device.
— Do not connect the power cable until all connections are completed. Connecting the power cable during connection may damage the product.
— Check the types of ports at the back of the product you want to connect.
Before connecting cables

The Color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

1. Unfasten the screws, then remove the cover.

2. Remove the appropriate silicone bar for the thickness of the cable to connect.
   Different hole sizes and corresponding cable thickness for each:
   * JACK
     - 7 Ø hole x 2: Insert the 7 Ø cable
     - 5.5 Ø hole x 6: Insert the 5.5 Ø cable
     - 3 Ø hole x 4: Insert the 3 Ø cable
   * POWER INLET
     - 7 Ø hole x 1: Insert the 7 Ø cable

3. Insert the appropriate cable into the hole from which the silicone bar was removed.

4. The cable should be connected as shown.

5. Close the cover, then fasten the screws.
   - After all the cables are connected, make sure to close the cover and fasten the screws to ensure it is water tight.
   - Recommended torque: 10 - 12 kgf.cm
Connecting to a PC

- Do not connect the power cable before connecting all other cables. Ensure you connect a source device first before connecting the power cable.
- A PC can be connected to the product in a variety of ways. Select a connection method suitable for your PC.
  ~ Connecting parts may differ in different products.

Connection Using an HDMI-DVI Cable

After connecting a computer to the product with an HDMI-DVI cable, make sure to configure the settings as shown below to enable the video and audio from the computer.
  ~ The appearance may differ depending on the product.
  ~ Connecting parts may differ in different products.
Connecting to a Video Device

- Do not connect the power cable before connecting all other cables. Ensure you connect a source device first before connecting the power cable.
- You can connect a video device to the product using a cable. Connecting parts may differ in different products. Press the SOURCE button on the remote control to change the source.

Connection Using an HDMI-DVI Cable

Supported resolutions include 1080p (50/60Hz), 720p (50/60Hz), 480p, and 576p. The appearance may differ depending on the product. Connecting parts may differ in different products.

Connection Using an HDMI Cable

- The appearance may differ depending on the product.
- Connecting parts may differ in different products.

Using an HDMI cable or HDMI to DVI Cable (up to 1080p)

- For better picture and audio quality, connect to a digital device using an HDMI cable.
- An HDMI cable supports digital video and audio signals, and does not require an audio cable.
- The picture may not display normally (if at all) or the audio may not work if an external device that uses an older version of HDMI mode is connected to the product. If such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade.
- Be sure to use an HDMI cable with a thickness of 14 mm or less.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- A basic high-speed HDMI cable or one with ethernet is recommended. This product does not support the ethernet function via HDMI.
Connecting the HDBase-T

- The appearance may differ depending on the product.
- Connecting parts may differ in different products.
- HDBase-T (Tx) transmits data from an external device to HDBase-T (Rx). Make sure to connect them directly using a LAN cable.
- Data transmission is not available if HDBase-T (Rx) is connected to HDBase-T (Tx) through a hub.
- HDBase-T works with unshielded twisted pair (UTP) or shielded twisted pair (STP) cables; but, to ensure CE compliance, STP cables and STP Connectors are required. Shielded cable and connectors are recommended to safeguard against unpredictable environmental electrical noise which may impact performance. It is recommended to use an STP cable to maximize performance. Using a UTP cable or patch may decrease performance.
Connecting to an Audio System

- The appearance may differ depending on the product.
- Connecting parts may differ in different products.

Connecting the LAN Cable

- The appearance may differ depending on the product.
- Connecting parts may differ in different products.

- Use Cat7(*STP Type) cable for the connection. (10/100 Mbps)
- *Shielded Twist Pair
Changing the Input source

Source

SOURCE → Source

Source allows you to select a variety of sources and change source device names. You can display the screen of a source device connected to the product. Select a source from source list to display the screen of the selected source.

The input source can also be changed by using the SOURCE button on the remote control.

The screen may not display correctly if an incorrect source is selected for the source device you want to convert to.

Edit

SOURCE → Source → → Edit → ENTER

Edit the name and device type of a connected external device.

- The list can include the following source devices. Source devices on the list differ depending on the selected source.
  - HDMI 1 / HDMI 2 / HDBT / Cable Box / Game Console / PC / Blu-ray player
- You cannot edit the following sources.
  - MagicInfo S / URL Launcher / Web Browser
Web Browser

SOURCE → Source → Web Browser → ENTER

The displayed image may differ depending on the model.
Connect a LAN cable to access Internet from the product, similar to accessing the Internet from a computer.

Settings
SOURCE → Source → Web Browser → Settings → ENTER

General

Hide Tabs and Toolbar automatically
If the browser tabs, menu or toolbar are not used for a while, they will automatically disappear. To make them appear again, move the pointer or focus to the top of the screen.
• Use / Do not use

Pop-up Blocker
Make your browsing experience more pleasant by blocking pop-up windows.
• Use / Do not use

Reset Settings
All your customized web Browser settings will be reset to their default values. Your bookmarks and history won't be affected.

Search Engine
If you enter a keyword in the URL/keyword input field, Web Browser will open the Search Results page. Choose the search engine you want to use.
• Google / Bing
Privacy & Security

Security Mode
Provides warnings about unsafe pages or blocks access to enhance Web Browser security. This may slow the Web Browser down.
• Use / Do not use

Private Browsing
When Private Browsing is active, your browsing history won't be recorded.
• Use / Do not use

Do Not Track
Ask websites not to track you.
• Use / Do not use

JavaScript
Allow all sites to run JavaScript for a better browsing experience.
• Use / Do not use

Clear History
Clear your entire browsing history.
• Clear History

Delete browsing data
Delete all browsing data such as cookies, cached images and data. Your bookmarks and history won't be affected.
• Delete browsing data

Blocked pages

Blocked pages
Blocks access to pages that you have listed in Blocked pages.
• Use / Do not use

Approved pages

Approved pages
Enables web access only to pages that you have approved.
• Use / Do not use

Password for Approved pages
Set a password for managing Approved pages.
• Set Password

Approved Pages
Approve specific pages or remove them from Approved pages.
• Add
Encoding

Choose an encoding method for web pages. The current setting is Auto.

• Auto / Manual (Current : Unicode)

Refresh Options

SOURCE → Source → Web Browser → ▲ → Refresh Options → ENTER

Refresh Interval

Set the time for the web browser to wait before returning to the home page.

• Off / 5 min. / 10 min. / 15 min. / 30 min.

Zoom

Set the zoom scale to apply when the web browser is refreshed.

• 50% / 75% / 100% / 125% / 150%

Home Page

Set the website to display when the web browser is refreshed.

• Samsung Display / Custom

Custom

Enter the URL to set as the home page.

• Enter URL

Available only when Home Page is set to Custom.
Multiple display control "MDC" is an application that allows you to easily control multiple display devices simultaneously using a PC.
- For details on how to use the MDC program, refer to Help after installing the program. The MDC program is available on the website.

Chapter 04
Using MDC

MDC Program Installation/Uninstallation

Installation

- MDC installation can be affected by the graphics card, mother board and network conditions.

1. Click the MDC Unified installation program.
2. Select a language for installation. Next, click "OK".
3. When the "Welcome to the InstallShield Wizard for MDCUnified" screen appears, click "Next".
4. In the "License Agreement" window displayed, select "I accept the terms in the license agreement" and click "Next".
5. In the displayed "Customer Information" window, fill out all the information fields and click "Next".
6. In the displayed "Destination Folder" window, select the directory path you want to install the program in and click "Next".
   - If the directory path is not specified, the program will be installed in the default directory path.
7. In the displayed "Ready to Install the Program" window, check the directory path to install the program in and click "Install".
8. Installation progress will be displayed.
9. Click "Finish" in the displayed "InstallShield Wizard Complete" window.
   - Select "Launch MDC Unified" and click "Finish" to run the MDC program immediately.
10. The MDC Unified shortcut icon will be created on the desktop after installation.
   - The MDC execution icon may not be displayed depending on the PC system or product specifications.
   - Press F5 if the execution icon is not displayed.

Uninstallation

1. Select Settings > Control Panel on the Start menu and double-click Add/Delete Program.
2. Select MDC Unified from the list and click Change/Remove.
Connecting to MDC

Using MDC via RS-232C (serial data communications standards)

An RS-232C serial cable must be connected to the serial ports on the PC and monitor.  
* The appearance may differ depending on the product.

Using MDC via Ethernet

Enter the IP for the primary display device and connect the device to the PC. Display devices can be connected to each other using a LAN cable.

**Connection using a direct LAN cable**

* The appearance may differ depending on the product.

* Multiple products can be connected using the RJ45 (LAN OUT) port on the product and the LAN ports on the HUB.
Connection using a cross LAN cable

- The appearance may differ depending on the product.
- Multiple products can be connected using the RS232C IN / OUT port on the product.
Chapter 05
Player feature
Accessible using the HOME button on the remote control.

Player

HOME ➔ Player ➔ ENTER ➔
Play a range of content such as channels with schedules assigned, templates or files.

---

The displayed image may differ depending on the model.

To use the Player feature, set Play via to MagicInfo in System.

---

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select between internal or external memory.</td>
</tr>
</tbody>
</table>
| 2   | Play content, templates and schedules configured on the server. 
  - You can view whether the server is connected (approval) in the Player screen. To view whether the server is connected when a Network Channel is running, press INFO on the remote. |
| 3   | Select Network Channel from the Player screen. The No channel. message appears if no channel has been registered in Network Channel. |
| 4   | Network Channel will run. |
| 5   | Select a content type as criterion to search for a desired content list. |
| 6   | Set different options for Player. |

Viewing content

1. Select either internal or external memory. The files saved in the selected memory appear.
2. Select the desired file. The content appears on the screen. (For more information on compatible file formats, see the “File formats compatible with Player” section.)
When content is running

**Control buttons on the remote**

You can use buttons on your remote control to play, pause, or skip between content on the playlist.

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOOLS</td>
<td>Brings up the menu bar.</td>
</tr>
<tr>
<td>INFO</td>
<td>Displays the information of the content.</td>
</tr>
<tr>
<td>►</td>
<td>Goes to next file or page.</td>
</tr>
<tr>
<td>◄</td>
<td>Goes to previous file or page.</td>
</tr>
<tr>
<td>◄ / ► / III</td>
<td>Plays or pauses slide show or video content.</td>
</tr>
<tr>
<td>■</td>
<td>Stops displaying content and goes to the <strong>Player</strong> screen.</td>
</tr>
<tr>
<td>◄◄◄</td>
<td>Rewinds the video content.</td>
</tr>
<tr>
<td>◄►►</td>
<td>Fast forwards the video content.</td>
</tr>
</tbody>
</table>

**Available menu**

Press the TOOLS button on the remote control during content playback to configure settings.

<table>
<thead>
<tr>
<th>Menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playlist</td>
<td>View a list of content items currently playing.</td>
</tr>
<tr>
<td>Picture Mode</td>
<td>Customizes the screen settings for the content currently playing.</td>
</tr>
<tr>
<td>Sound Mode</td>
<td>Customizes the audio settings for the content currently playing.</td>
</tr>
<tr>
<td>Repeat</td>
<td>Set the repeat mode.</td>
</tr>
<tr>
<td>Background Music</td>
<td>Set the background music to be played when content is running.</td>
</tr>
<tr>
<td>Reset</td>
<td>Reset the background music.</td>
</tr>
<tr>
<td>Pause</td>
<td>Pause the background music.</td>
</tr>
<tr>
<td>Prev</td>
<td>Play the previous background music on the list.</td>
</tr>
<tr>
<td>Next</td>
<td>Play the next background music on the list.</td>
</tr>
</tbody>
</table>

*Reset, Pause, Prev, Next only appear when the background music is set.*
File Formats Compatible with Player

- Supported file systems include FAT32 and NTFS.
- A file with a vertical and horizontal resolution larger than the maximum resolution cannot be played. Check the vertical and horizontal resolution of the file.
- Check the supported video and audio Codec types and Versions.
- Check the supported file versions.
  - PowerPoint version up to 97 – 2007 is supported
- Only the last USB device that was connected is recognized.

Sound output restrictions

- More than one sound output cannot be used.
- Playback priority: network BGM > local BGM > video file in the main frame selected by the user
  - Network BGM: Settings can be configured in step 1 when creating a server schedule.
  - Local BGM: BGM settings can be configured using the tools displayed after the TOOLS button is pressed during Player playback.
  - User-selected main frame: Main frame settings can be configured in step 2 when creating a server schedule.

Template files and LFD(.lfd) files

Playback restrictions

- A maximum of two video files (Video) can be played simultaneously.
- In portrait playback mode, only one video file can be played at a time.
- For Office files (PPT and Word files) and PDF files, only one file type is supported at a time.
- LFD(.lfd) files are not supported.

Sound output restrictions

- More than one sound output cannot be used.
- Playback priority: network BGM > local BGM > video file in the main frame selected by the user

Network Schedule Multiframe

Playback restrictions

- A maximum of two video files (Video) can be played simultaneously.
- In portrait playback mode, only one video file can be played at a time.
- For Office files (PPT and Word files) and PDF files, only one file type is supported at a time.
- LFD(.lfd) files are not supported.

Sound output restrictions

- More than one sound output cannot be used.
- Playback priority: network BGM > local BGM > video file in the main frame selected by the user

Restrictions

- Ensure a distributed folder (content / schedules) exists in Internal / USB memory.

Playback restrictions

- A maximum of two video (Video) files can be played.
- For Office files (PPT and Word files) and PDF files, only one file type is supported at a time.
- Multiple videos (Video) cannot be played on a single display of a video wall simultaneously.

Sound output restrictions

- More than one sound output cannot be used.
- Playback priority: network BGM > local BGM > video file in the main frame selected by the user
<table>
<thead>
<tr>
<th>File Extension</th>
<th>Container</th>
<th>Video Codec</th>
<th>Resolution</th>
<th>Frame rate (fps)</th>
<th>Bit rate (Mbps)</th>
<th>Audio Codec</th>
</tr>
</thead>
<tbody>
<tr>
<td>*.avi</td>
<td>AVI</td>
<td>H.264 BP/MP/HP</td>
<td>4096x2160</td>
<td>4096X2160: 24</td>
<td>40</td>
<td>AC3</td>
</tr>
<tr>
<td>*.mkv</td>
<td>MKV</td>
<td>HEVC (H.265 - Main, Main10, Main4:2:2:10)</td>
<td>3840X2160: 30</td>
<td>60</td>
<td>80</td>
<td>LPCM</td>
</tr>
<tr>
<td>*.asf</td>
<td>ASF</td>
<td>Motion JPEG</td>
<td>30</td>
<td>80</td>
<td></td>
<td>ADPCM(IMA, MS)</td>
</tr>
<tr>
<td>*.wmv</td>
<td>MP4</td>
<td>MVC</td>
<td>1920 x 1080</td>
<td>60</td>
<td>20</td>
<td>AAC</td>
</tr>
<tr>
<td>*.mp4</td>
<td>MOV</td>
<td>Divx 3.11 / 4 / 5 / 6</td>
<td>30</td>
<td>30</td>
<td></td>
<td>HE-AAC</td>
</tr>
<tr>
<td>*.mov</td>
<td>3GP</td>
<td>MVPEG4 SP/ASP</td>
<td></td>
<td>20</td>
<td></td>
<td>WMA</td>
</tr>
<tr>
<td>*.3gp</td>
<td>VOB</td>
<td>Window Media Video v9 (VC1)</td>
<td></td>
<td>20</td>
<td></td>
<td>DD+</td>
</tr>
<tr>
<td>*.vrc</td>
<td>PS</td>
<td>MPEG2</td>
<td></td>
<td>20</td>
<td></td>
<td>MPEG(MP3)</td>
</tr>
<tr>
<td>*.mpg</td>
<td>TS</td>
<td>MPEG1</td>
<td></td>
<td>20</td>
<td></td>
<td>DTS (Core, LBR)</td>
</tr>
<tr>
<td>*.mpeg</td>
<td>SVAF</td>
<td>Microsoft MPEG-4 v1, v2, v3</td>
<td></td>
<td>20</td>
<td></td>
<td>G.711(A-Law, μ-Law)</td>
</tr>
<tr>
<td>*.ts</td>
<td></td>
<td>Window Media Video v7(WMV1),v8(WMV2)</td>
<td></td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.tp</td>
<td></td>
<td>H 263 Sorenson</td>
<td></td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.trp</td>
<td></td>
<td>VP6</td>
<td></td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.mov</td>
<td></td>
<td>VP8</td>
<td>1920x1080</td>
<td>90</td>
<td>20</td>
<td>Vorbis</td>
</tr>
<tr>
<td>*.flv</td>
<td></td>
<td>VP9</td>
<td>4096x2160</td>
<td>4096X2160: 24</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>*.vob</td>
<td></td>
<td></td>
<td>3840X2160: 30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.svi</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.m2ts</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.mts</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.divx</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*.webm</td>
<td>WebM</td>
<td>VP8</td>
<td>1920x1080</td>
<td>90</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>*.rmvb</td>
<td>RMVB</td>
<td>RV8/9/10 (RV30/40)</td>
<td>1920x1080</td>
<td>60</td>
<td>20</td>
<td>RealAudio 6</td>
</tr>
</tbody>
</table>
### Video
- 3D video is not supported.
- Content with a resolution larger than the resolution specified in the table above is not supported.
- Video content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy video during playback.
- Video content will not play, or not play correctly, if there is an error in the content or the container.
- Some USB/digital camera devices may not be compatible with the player.
- Supports up to H.264, Level 4.1
- H.264 FMO / ASO / RS, VC1 SP / AP L4 and AVCHD are not supported.
- For all Video codecs except MVC, VP8, VP6:
  - Below 1280 x 720: 60 frame max
  - Above 1280 x 720: 30 frame max
- GMC 2 or higher is not supported.
- Supports only BD MVC Spec.
- Only one video file can play at a time if video files on the monitor use incompatible codecs or the resolution is 1080 x 1920.
- When a single video file is playing, Seamless mode is not supported under the following conditions:
  - Incompatible codec (MVC, VP3, MJPEG) ↔ Incompatible codec
  - Incompatible codec ↔ Compatible codec
  - The resolution is different from that of the monitor
  - The frequency is different from that of the monitor

### Audio
- Audio content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy audio during playback.
- Audio content will not play, or not play correctly, if there is an error in the content or the container.
- Some USB/digital camera devices may not be compatible with the player.
- Supports up to WMA 10 Pro 5.1 channel. WMA lossless audio is not supported.
- QCELP, AMR NB/WB are not supported.

### Image
- Compatible image file format: JPEG, PNG, BMP
  - 32-bit, 24-bit and 8-bit BMP files are supported.
- Supported maximum resolution: 4096 x 4096
- Supported maximum file size: 20MB
- Supported image effects: 9 effects
  (Fade1, Fade2, Blind, Spiral, Checker, Linear, Stairs, Wipe, Random)
<table>
<thead>
<tr>
<th>Power Point</th>
<th>PDF</th>
<th>WORD</th>
</tr>
</thead>
</table>
| - Compatible document file formats  
  - Extension: ppt, pptx  
  - Version: Office 97 ~ Office 2007  
- Functions not supported  
  - Animation effect  
  - 3D shapes (which will be displayed in 2D)  
  - Header and footer (some subitems are not supported)  
  - Word Art  
  - Align  
    - A group alignment error may occur  
  - Office 2007  
    - SmartArt is not fully supported. 97 out of 115 subitems are supported.  
  - Object insertion  
  - Half-width characters  
  - Letter spacing  
  - Charts  
  - Vertical text  
    - Some subitems are not supported  
  - Slide notes and handout | 
| - Compatible document file formats  
  - Extension: .pdf | - Compatible document file formats  
  - Extension: .doc, .docx  
- Functions not supported  
  - Page background effect  
  - Some paragraph styles  
  - Word Art  
  - Align  
    - A group alignment error may occur  
  - 3D shapes (which will be displayed in 2D)  
  - Office 2007  
    - SmartArt is not fully supported. 97 out of 115 subitems are supported.  
  - Charts  
  - Half-width characters  
  - Letter spacing  
  - Vertical text  
    - Some subitems are not supported  
  - Slide notes and handout |
<table>
<thead>
<tr>
<th>Template files</th>
<th>LFD</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Creation/editing/playback are only available in Template.</td>
<td>• Supported in Network Channel</td>
</tr>
<tr>
<td></td>
<td>• Compatible document file formats</td>
</tr>
<tr>
<td></td>
<td>– Extension: .lfd</td>
</tr>
</tbody>
</table>
You can check the content’s playback schedule on the server, imported from an external storage, or on a mobile device.

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select between server and external memory.</td>
</tr>
<tr>
<td>2</td>
<td>View weekly schedule of content playback. Select to view detailed information of each event.</td>
</tr>
<tr>
<td>3</td>
<td>View a thumbnail image and brief information of the content.</td>
</tr>
</tbody>
</table>

The displayed image may differ depending on the model.
Clone Product

HOME → Clone Product → ENTER

Export settings on the product to an external storage device. You can also import settings from an external storage device. This option is useful when assigning the same settings to several products.

When a duplicate file is not found on the external storage device
1. Connect the external storage device, then run the Clone Product function.
2. The No cloning file found on the external storage device. Export this device's settings to the external storage device? message appears.
3. Select Export to export the settings.

When a duplicate file is found on the external storage device
1. Connect the external storage device, then run the Clone Product function.
2. The Cloning file found. Please select an option. message appears.
   Run the Import from External Storage or Export to External Storage function.
   - Import from External Storage: Copy settings saved on an external storage device to the product.
   - Export to External Storage: Copy settings on the product to an external storage device.

After configuration is complete, the product is rebooted automatically.

* The displayed image may differ depending on the model.
Assign an ID to a set.

Device ID

Enter the ID number of the product connected to the input cable for input signal reception. (Range: 0~224)
- Press ▲/▼ to select a number, and press E.
- Enter the number you want using the number buttons on the remote control.

Device ID Auto Set

This feature automatically allots an ID number to a device connected via an RS232C cable. When multiple devices are connected, enable the feature on either the first or last device.
- This function is only available on the first device within an RS-232C daisy chain.

PC Connection Cable

Select a method to connect to MDC to receive the MDC signal.
- RS232C cable
  Communicate with MDC via the RS232C-stereo cable.
- RJ-45 (LAN)/Wi-Fi Network
  Communicate with MDC via the RJ45 cable or a Wi-Fi network.
- For the models (LH550HFPVBC, LH460HFPVBC) that do not support wireless communication, only the RJ-45(LAN) menu appears.
Video Wall

HOME → Video Wall → ENTER

The displayed image may differ depending on the model.

Customize the layout of multiple displays that are connected to form a video wall.

In addition, display part of a whole picture or repeat the same picture on each of the connected multiple displays.

To display multiple images, refer to MDC Help or the MagicInfo user guide. Some models may not support the MagicInfo function.

**Video Wall**

You can activate or deactivate **Video Wall**.

To organize a video wall, select **On**.

- **Off / On**

**Horizontal x Vertical**

This feature automatically splits a videowall display based on a videowall matrix configuration.

Enter the videowall matrix.

The videowall display is split based on the configured matrix. The number of vertical or horizontal display devices can be set within the range 1 and 15.

- A videowall display can be split into a maximum of 100 screens.
- The **Horizontal x Vertical** option is only enabled when **Video Wall** is set to **On**.

**Screen Position**

To rearrange split screens, adjust the number for each product in the matrix using the **Screen Position** feature.

Selecting **Screen Position** will display the videowall matrix with the numbers assigned to the products that form the videowall.

To rearrange products, use the direction buttons on the remote control to move a product to another desired number. Press the **button**.

- **Screen Position** allows you to split the screen into a maximum of 100 views (15x15).
- The **Screen Position** option is only enabled when **Video Wall** is set to **On**.
- To use the function, make sure **Horizontal x Vertical** is configured.
Format

Select how to display images on the videowall display.

- **Full**: Display images in full screen with no margin.
- **Natural**: Display images in the original aspect ratio without enlarging or reducing the size.

---

The **Format** option is only enabled when **Video Wall** is set to **On**.
Network Status

Check the current network and Internet connection.

The displayed image may differ depending on the model.
Select a picture mode (Picture Mode) suitable for the environment where the product will be used. Video/Image mode improves the picture quality of the video device. Text mode improves the picture quality of the computer.

- **Shop & Mall**
  Suitable for shopping malls.
  - Select either Video/Image or Text depending on the picture mode.

- **Office & School**
  Suitable for offices and schools.
  - Select either Video/Image or Text depending on the picture mode.

- **Terminal & Station**
  Suitable for bus terminals and train stations.
  - Select either Video/Image or Text depending on the picture mode.

- **Video Wall**
  Suitable for environments where videowall display are used.
  - Select either Video/Image or Text depending on the picture mode.

- **Calibration**
  In this mode, the brightness, color, gamma and uniformity settings customized using the color calibration program Color Expert are applied.
  - To apply the Calibration mode properly, make sure you configure the picture quality settings, such as brightness, color, gamma and uniformity, using the color calibration program Color Expert.
  - To download the Color Expert program, visit www.samsung.com/displaysolutions.

---

The displayed image may differ depending on the model.
On/Off Timer

HOME → On/Off Timer → ENTER

On Timer

Set On Timer so that your product turns on automatically at a time and on a day of your choosing. The power is turned on with the specified volume or input source.

On Timer: Set the on timer by making a selection from one of the seven options. Ensure you set the current time first.

(On Timer 1 ~ On Timer 7)

- Setup: Select Off, Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun or Manual. If you select Manual, you can choose the days you want On Timer to turn on your product.
  - Time: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.
- Volume: Set the desired volume level. Use the up and down arrow buttons to change the volume level.
- Source: Select the input source of your choice.
- Content (when the Source is set to Internal/USB): From the USB device or internal memory, select a file (e.g. music, photo, or video) to play just after the product is turned on.
  - This function is available only when a USB device is connected.
  - If there is no music file on the USB device or you don’t select a folder containing a music file, the Timer function does not operate correctly.
  - If there is only one photo file in the USB, the Slide Show will not play.
  - If a folder name is too long, the folder cannot be selected.
  - Each USB you use is assigned its own folder. When using more than one of the same type of USB, make sure the folders assigned to each USB have different names.
  - We recommend that you use a USB memory stick and a multi card reader when using On Timer.
  - The On Timer function may not work with USB devices with a built-in battery, MP3 players, or PMPs made by some manufacturers because the product can take too long to recognize these devices.

You must set Clock Set before you can use this feature.
Off Timer

Set the off timer (Off Timer) by making a selection from one of the seven options. (Off Timer 1 ~ Off Timer 7)

- **Setup**: Select Off, Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun or Manual. If you select Manual, you can choose the days you want Off Timer to turn off your product.
  - The check mark indicates days you’ve selected.
- **Time**: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.

Holiday Management

Timer will be disabled during a period specified as a holiday.

- **Add Holiday**: Specify the period you want to add as a holiday.
  - Select the start and end dates of the holiday you want to add using the ▲/▼ buttons, and click the Done button.
  - The period will be added to the list of holidays.
  - **Start**: Set the start date of the holiday.
  - **End**: Set the end date of the holiday.
- **Delete**: Delete selected items from the list of holidays.
- **Edit**: Select a holiday item and then change the date.
- **Set Applied Timer**: Set the On Timer and Off Timer to not activate on public holidays.
  - Press 📅 to select the On Timer and Off Timer settings you do not want to activate.
  - The selected On Timer and Off Timer will not activate.
Ticker

HOME  →  Ticker  →  ENTER

Input text while a video or image is displayed and display the text on the screen.

- **Off / On**
- **Message**: Enter a message to display on the screen.
- **Time**: Set the **Start Time** and **End Time** to display a **Message**.
- **Font Options**: Specify the text font and color for the message.
- **Position**: Select an orientation to display a **Message**.
- **Scroll**: Specify the scroll **Direction** and **Speed** for the message.
- **Preview**: Preview configured caption settings.

The displayed image may differ depending on the model.
For details on how to use the URL Launcher feature, contact the dealer the product was purchased from.

To use the URL Launcher feature, set Play via to URL Launcher in System.

The displayed image may differ depending on the model.
URL Launcher Settings

- **Install Web App**: Enter URL to install the web application.
- **Install from USB Device**: Install the web application from the USB storage device.
- **Uninstall**: Remove the installed web application.
- **Timeout Setting**: Set the timeout period for connecting to the URL.
- **Developer Mode**: Enable developer mode.

---

The displayed image may differ depending on the model.
Approving a connected device from the server

First configure the server **Server Network Settings** before device approval.

1. Access the server you have assigned to your device.
2. Enter your ID and password to log in.
3. Select **Device** from the top menu bar.
4. Select **Unapproved** from the sub-menus.
5. Select the device from the list and click the **Approve** button.
6. Enter the information required to approve the device.
   - **Device Name**: Enter the device name.
   - **Device Group**: Select to specify the group.
   - **Location**: Enter the current location of the device.
   - **Expired**: Set expiry date for the device’s approval. If you do not want to set the expiry date, select **Never expired**.

Pressing the INFO button on the remote when a network schedule is running will display the details of the schedule. Check that the correct device has been selected by viewing the device ID in the details.
Select the All menu to check that the device has been registered.

When the device is approved by the server, the schedule registered in the selected group will be downloaded to the device. The schedule will run after it is downloaded.

* For further details on how to configure a schedule, refer to the <MagicInfo Lite Server user’s manual>.
* If a device is deleted from the list of devices approved by the server, the device will reboot to reset its settings.

Setting the current time

A schedule may not run if the time set on the device is different from the server’s current time.

1. Select Device from the side menu bar.
2. Select your device.
4. Select Time Zone.

* When connecting to the server for the first time, the time on the product is set using the GMT time of the region where the server is installed.
* The time on the product can be changed from the server as shown in step 3.
* Turning the product off and then on again will restore the time setting on the product to the last time that was set from the server.
* For further details on how to manage the time (scheduling, holiday management, etc.), refer to the <MagicInfo Lite Server user’s manual>. 
Chapter 06
Screen Adjustment

Configure the Picture settings (Backlight, Color Tone, etc.).
The layout of the Picture menu options may vary depending on the product.

Picture Mode

MENU → Picture → Picture Mode → ENTER

<table>
<thead>
<tr>
<th>Picture Mode</th>
<th>Shop &amp; Mall</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Backlight</td>
<td>100</td>
</tr>
<tr>
<td>· Contrast</td>
<td>70</td>
</tr>
<tr>
<td>· Brightness</td>
<td>45</td>
</tr>
<tr>
<td>· Sharpness</td>
<td>65</td>
</tr>
<tr>
<td>· Color</td>
<td>50</td>
</tr>
<tr>
<td>· Tint (G/R)</td>
<td>G50</td>
</tr>
</tbody>
</table>

Select a picture mode (Picture Mode) suitable for the environment where the product will be used.

Video/Image mode improves the picture quality of the video device. Text mode improves the picture quality of the computer.

- **Shop & Mall**
  Suitable for shopping malls.
  - Select either Video/Image or Text depending on the picture mode.

- **Office & School**
  Suitable for offices and schools.
  - Select either Video/Image or Text depending on the picture mode.

- **Terminal & Station**
  Suitable for bus terminals and train stations.
  - Select either Video/Image or Text depending on the picture mode.

- **Video Wall**
  Suitable for environments where videowall display are used.
  - Select either Video/Image or Text depending on the picture mode.

- **Calibration**
  In this mode, the brightness, color, gamma and uniformity settings customized using the color calibration program Color Expert are applied.
  - To apply the Calibration mode properly, make sure you configure the picture quality settings, such as brightness, color, gamma and uniformity, using the color calibration program Color Expert.
  - To download the Color Expert program, visit www.samsung.com/displaysolutions.

---

The displayed image may differ depending on the model.
Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R)

Your product has several options for adjusting picture quality.

- When you make changes to Backlight, Contrast, Brightness, Sharpness, Color or Tint (G/R), the OSD will be adjusted accordingly.
- You can adjust and store settings for each external device you have connected to an input on the product.
- Lowering picture brightness reduces power consumption.

The displayed image may differ depending on the model.
Color Temperature

![Picture Color Temperature 16000K](image)

- The displayed image may differ depending on the model.

It sets color temperature. The value and temperature increase simultaneously, so the ratio of blue color rises. (Range: 2800K–16000K)

- Enabled when **Color Tone** is set to **Off**.
- **Color Temperature** is disabled if **Picture Mode** is set to **Calibration**.

White Balance

![Picture White Balance](image)

- The displayed image may differ depending on the model.

2 Point

Adjust the color temperature for a more natural picture.

- **R-Offset / G-Offset / B-Offset**: Adjust each color’s (red, green, blue) darkness.
- **R-Gain / G-Gain / B-Gain**: Adjust each color’s (red, green, blue) brightness.
- **Reset**: Suitable for environments where videowall display are used.

10 Point

Controls the white balance in 10 point interval by adjusting the red, green, and blue brightness.

- **Off / On**
- **Interval**: Select interval to adjust.
- **Red**: Adjust the red level.
- **Green**: Adjust the green level.
- **Blue**: Adjust the blue level.
- **Reset**: Suitable for environments where videowall display are used.

- Some external devices may not support this function.
- Enabled when **Picture Mode** is set to **Office & School (Video/Image)**.
Gamma

Adjust the primary color intensity.

* If Picture Mode is set to Calibration, Gamma is disabled.

Calibrated Value

Select whether to apply the brightness, color, gamma and uniformity settings customized using the color calibration program Color Expert to the Information and Advertisement modes.

- Don't Apply / Apply

* To download the Color Expert program, visit www.samsung.com/displaysolutions.
* If Picture Mode is set to Calibration, Calibrated Value is disabled.
Advanced Settings

MENU → Picture → Advanced Settings → ENTER

<table>
<thead>
<tr>
<th>Advanced Settings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic Contrast</td>
<td>High</td>
</tr>
<tr>
<td>Black Tone</td>
<td>Darkest</td>
</tr>
<tr>
<td>Flesh Tone</td>
<td>0</td>
</tr>
<tr>
<td>RGB Only Mode</td>
<td>Off</td>
</tr>
<tr>
<td>Color Space</td>
<td>Native</td>
</tr>
<tr>
<td>HDMI UHD Color</td>
<td></td>
</tr>
<tr>
<td>Motion Lighting</td>
<td>On</td>
</tr>
</tbody>
</table>

The displayed image may differ depending on the model.

If Picture Mode is set to Calibration, Advanced Settings is disabled.

Dynamic Contrast

Adjust the screen contrast.
- Off / Low / Medium / High

Black Tone

Select the black level to adjust the screen depth.
- Off / Dark / Darker / Darkest

Flesh Tone

Emphasize pink Flesh Tone.

RGB Only Mode

Displays the Red, Green and Blue color for making fine adjustments to the hue and saturation.
- Off / Red / Green / Blue

Color Space

Adjusts the range and variety of colors (the color space) available to create images.
- Auto / Native / Custom

To adjust Color, Red, Green, Blue and Reset, set Color Space to Custom.
**Advanced Settings**

- Dynamic Contrast: High
- Black Tone: Darkest
- Flesh Tone: 0
- RGB Only Mode: Off
- Color Space: Native

**HDMI UHD Color**

Enable to optimize picture quality for HDMI UHD connection.
- HDMI1 (Off / On)
- HDMI2 (Off / On)

**Motion Lighting**

Reduces power consumption by reducing screen brightness when the picture on the screen is in motion.
- Off / On

- Enabled when Picture Mode is set to Shop & Mall (Text).

---

*The displayed image may differ depending on the model.*
Picture Options

MENU → Picture → Picture Options → ENTER

<table>
<thead>
<tr>
<th>Color Tone</th>
<th>Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Clean View</td>
<td>Auto</td>
</tr>
<tr>
<td>HDMI Black Level</td>
<td>Auto</td>
</tr>
<tr>
<td>Film Mode</td>
<td>Off</td>
</tr>
<tr>
<td>Dynamic Backlight</td>
<td>Off</td>
</tr>
</tbody>
</table>

The displayed image may differ depending on the model.

Color Tone

If Picture Mode is set to Text
- Off / Cool / Standard / Warm

If Picture Mode is set to Video/Image
- Off / Cool / Standard / Warm1 / Warm2

If Picture Mode is set to Calibration, Color Tone is disabled.

**Settings can be adjusted and stored for each external device connected to an input on the product.**

Digital Clean View

Reduce picture noise to avoid distractions such as flickering.
- Off / Auto
<table>
<thead>
<tr>
<th>Picture Options</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Tone</td>
<td>Off</td>
</tr>
<tr>
<td>Digital Clean View</td>
<td>Auto</td>
</tr>
<tr>
<td>HDMI Black Level</td>
<td>Auto</td>
</tr>
<tr>
<td>Film Mode</td>
<td>Off</td>
</tr>
<tr>
<td>Dynamic Backlight</td>
<td>Off</td>
</tr>
</tbody>
</table>

**HDMI Black Level**

Selects the black level on the screen to adjust the screen depth.
- **Auto / Low / Normal**

— Available only in **HDMI 1** and **HDMI 2** mode (AV Timing : 480p, 576p, 720p, 1080i, 1080p).

**Film Mode**

Make frame transitions from older video sources smoother. This function is only available when the input signal is TV, AV, Component (480i, 1080i), or HDMI (1080i).
- **Off / Auto1 / Auto2**

**Dynamic Backlight**

Automatically adjust the backlight to provide the best possible screen contrast under the current conditions.
- **Off / On**
choose size and aspect ratio picture displayed on screen.

### Picture Size

Different screen adjustment options are displayed depending on the current input source.

---

Available ports may differ depending on the model.

- **16:9 Standard**: Sets the picture to 16:9 Standard wide mode.
- **Custom**: Changes the resolution to suit the user's preferences.
- **4:3**: Sets the picture to basic (4:3) mode.

Do not set your product to 4:3 format for a long time. The borders displayed on the left and right, or top and bottom of the screen may cause image retention (screen burn) which is not covered by the warranty.

### Fit to Screen

Adjusts the picture position. When selected, the full program image will be displayed. No part of the image will be cut off.

- **Off / On / Auto**

### Zoom/Position

Adjusts the picture zoom and position. This option is available when the input source is set to HDMI 1, HDMI 2 (1080i/1080p).

**Picture Size** must be set to Custom for the option to be available.

If you want to reset the picture to its original position, select **Reset** in the Zoom/Position screen. The picture will be set to its default position.

---

* The displayed image may differ depending on the model.
Picture Off

MENU  →  Picture  →  Picture Off  →  ENTER

Selecting Picture Off switches off the screen. The volume is not disabled. To switch the screen on, press any button other than the volume button.

Reset Picture

MENU  →  Picture  →  Reset Picture  →  ENTER

Resets your current picture mode to its default settings.

* The displayed image may differ depending on the model.
Onscreen Display

Onscreen Menu Orientation
Configure the menu screen.
- Landscape: Display the menu in landscape mode (default).
- Portrait: Display the menu in portrait mode on the right side of the product screen.

Source Content Orientation
Rotate the product screen orientation.
- Landscape: Display the screen in landscape mode (default).
- Portrait: Display the screen in portrait mode.

Aspect Ratio
Set the rotated screen to be either full screen or original.
- Full Screen: Display the rotated screen in full screen.
- Original Ratio: Display the rotated screen in the original aspect ratio.

--- The displayed image may differ depending on the model.
Screen Protection

Auto Protection Time
If the screen displays a still image for a certain period of time you define, the product activates the screen saver to prevent the formation of burnt in ghost images on the screen.

- Off / 2 hours / 4 hours / 8 hours / 10 hours

Screen Burn Protection
To reduce the possibility of screen burn, this unit is equipped with Screen Burn Protection screen burn prevention technology. Screen Burn Protection moves the picture slightly on the screen. The Screen Burn Protection Time setting allows you to program the time between movements of the picture in minutes.

Pixel Shift
Minimize image retention by finely moving pixels horizontally or vertically.

- Pixel Shift (Off / On)
  - Horizontal, Vertical and Time are enabled only when Pixel Shift is set to On.
- Horizontal: Sets how many pixels the screen moves horizontally.
- Vertical: Sets how many pixels the screen moves vertically.
- Time: Set the time interval for performing the horizontal or vertical movement, respectively.

Available Pixel Shift Settings and Optimum Settings.

<table>
<thead>
<tr>
<th></th>
<th>Available Settings</th>
<th>Optimum Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal (pixels)</td>
<td>0 – 4</td>
<td>4</td>
</tr>
<tr>
<td>Vertical (pixels)</td>
<td>0 – 4</td>
<td>4</td>
</tr>
<tr>
<td>Time (minute)</td>
<td>1 min. – 4 min.</td>
<td>4 min.</td>
</tr>
</tbody>
</table>

The Pixel Shift value may differ depending on the product size (inches) and mode.

Displaying a still image or a 4:3 output for an extended period of time may cause image retention. This is not a defect in the product.
Screen Burn Protection

Pixel Shift

Timer

Immediate Display Off

---

The displayed image may differ depending on the model.

---

**Timer**

You can set the timer for **Screen Burn Protection**.

The **Screen Burn Protection** feature stops automatically after a specified period of time.

**Timer**

- **Off**
- **Repeat**: Display the image retention-preventive pattern set in **Mode** at specified time intervals (Period).
- **Interval**: Display the image retention-preventive pattern set in **Mode** for a specified period of time (from **Start Time** to **End Time**).

- **Mode**, **Period**, **Time**, **Start Time** and **End Time** are enabled only when **Timer** is set to **Repeat** or **Interval**.

- **Mode**: Select a screen protective pattern to display.
  - **Pixel**: Pixels on the screen alternate black continuously.
  - **Rolling Bar**: A vertical bar moves left to right.
  - **Fading Screen**: The entire screen becomes brighter, then darker.

- The **Rolling Bar** and **Fading Screen** patterns appear only once regardless of the specified repeat period or time.

- **Period**: Specify the time interval to activate the **Screen Burn Protection** function.
  - The option is enabled when **Repeat** is selected for **Timer**.

- **Time**: Specify the duration to keep the **Screen Burn Protection** function on.
  - Enabled when **Timer** is set to **Repeat** and **Mode** is set to **Pixel**.

- **Start Time**: Set the start time to activate the screen protection function.
  - The option is enabled when **Interval** is selected for **Timer**.

- **End Time**: Set the end time to deactivate the screen protection function.
  - The option is enabled when **Interval** is selected for **Timer**.
### Screen Burn Protection

<table>
<thead>
<tr>
<th>Feature</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Shift</td>
<td></td>
</tr>
<tr>
<td>Timer</td>
<td></td>
</tr>
<tr>
<td>Immediate Display</td>
<td>Off</td>
</tr>
</tbody>
</table>

---

The displayed image may differ depending on the model.

### Immediate Display

Select the screen saver you want to display immediately.

- Off / Pixel / Rolling Bar / Fading Screen
Message Display

MENU → OnScreen Display → Message Display → ENTER

<table>
<thead>
<tr>
<th>Message Display</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Info</td>
<td>On</td>
</tr>
<tr>
<td>No Signal Message</td>
<td>On</td>
</tr>
<tr>
<td>MDC Message</td>
<td>On</td>
</tr>
<tr>
<td>Download Status Message</td>
<td>Off</td>
</tr>
</tbody>
</table>

The displayed image may differ depending on the model.

Source Info
Select whether to display the source OSD when the input source changes.
- Off / On

No Signal Message
Select whether to display the no-signal OSD when no signal is detected.
- Off / On

MDC Message
Select whether to display the MDC OSD when the product is controlled by the MDC.
- Off / On

Download Status Message
Select to display the status when downloading content from a server or other device.
- Off / On
**Language**

MENU → OnScreen Display → Language → ENTER

OnScreen Display

| Language | English |

---

The displayed image may differ depending on the model.

**Reset OnScreen Display**

MENU → OnScreen Display → Reset OnScreen Display → ENTER

OnScreen Display

| Reset OnScreen Display |

---

This option returns the current settings under OnScreen Display to the default factory settings.

---

A change to the language setting will only be applied to the onscreen menu display. It will not be applied to other functions on your PC.

---

The displayed image may differ depending on the model.
Network Status

MENU  → Network → Network Status → ENTER  
You can check the current network and Internet status.

Open Network Settings

MENU  → Network → Open Network Settings → ENTER  
Configure network settings to use various smart hub features such as Internet search, content sharing through a home network and feature updates.

Network type

- Wireless / Wired

For the models (LH55OHFPVBC, LH46OHFPVBC) that do not support wireless communication, the Wired Network Settings menu appears.
Network Settings (Wired)

Connecting to a Wired Network

There are three ways to attach your product to your LAN using cable.

- You can attach your product to your LAN by connecting the LAN port on the back of your product to an external modem using a LAN cable. See the diagram below.

- You can attach your product to your LAN by connecting the LAN port on the back of your product to an IP Sharer which is connected to an external modem. Use LAN cable for the connection. See the diagram below.

- Depending on how your network is configured, you may be able to attach your product to your LAN by connecting the LAN port on the back of your product directly to a network wall outlet using a LAN cable. See the diagram below. Note that the wall outlet is attached to a modem or router elsewhere in your house.

If you have a Dynamic Network, you should use an ADSL modem or router that supports the Dynamic Host Configuration Protocol (DHCP). Modems and routers that support DHCP automatically provide the IP address, subnet mask, gateway, and DNS values your product needs to access the Internet so you do not have to enter them manually. Most home networks are Dynamic Networks.

Some networks require a Static IP address. If your network requires a Static IP address, you must enter the IP address, subnet mask, gateway, and DNS values manually on your product Cable Setup Screen when you set up the network connection. To get the IP address, subnet mask, gateway, and DNS values, contact your Internet Service Provider (ISP).

If you have a Windows computer, you can also get these values through your computer.

- You can use ADSL modems that support DHCP if your network requires a Static IP address.
- ADSL modems that support DHCP also let you use Static IP addresses.
Set the network connection to use Internet services such as perform software upgrades.

**Automatic Open Network Settings (Wired)**

Connect to the network using a LAN cable.
Make sure a LAN cable is connected first.

**How to set up automatically**

1. Set Network type to Wired from the Open Network Settings page.
2. Press the Connect button to start Open Network Settings.
   - The Connect button is only enabled when the LAN cable is properly connected.
3. The network test screen appears and verifies the network connection.
   - When the connection has been verified, the "Wired network and Internet connection completed." message appears.
   - If the connection process fails, check the LAN port connection.
   - If the automatic process cannot find the network connection values or if you want to set the connection manually, go to the next section, network setup.

**Manual Open Network Settings (Wired)**

Offices may use static IP addresses.
If this is the case, ask the network administrator for the IP address, subnet mask, gateway and DNS server address. Enter these values manually.

**Getting the Network Connection Values**

To view the Network connection values on most Windows computers, follow these steps.
1. Right click the Network icon on the bottom right of the screen.

2. In the pop-up menu that appears, click Status.
3. On the dialog that appears, click the Support tab.
4. On the Support Tab, click the Details button. The Network connection values are displayed.

**How to set up manually**

1. Set Network type to Wired from the Open Network Settings page.
2. Press the Connect button to start Open Network Settings.
   - The Connect button is only enabled when the LAN cable is properly connected.
3. The network test screen appears and the verification process starts. Press Stop. The verification process stops.
4. Select IP Settings on network connection screen. The IP Settings screen appears.
5. Select the field at the top, press E, and then set IP Settings to Enter manually. Repeat the entry process for each field in the IP Address.
   - Setting IP Settings to Enter manually automatically changes DNS Setting to Enter manually.
6. When done, select OK at the bottom of the page, and then press . The network test screen appears and the verification process starts.
7. When the connection has been verified, the "Wired network and Internet connection completed." message appears.
Network Setting (Wireless)

---
Models that do not support wireless communication: LH55OFPVBC, LH46OFPVBC

Connecting to a Wireless Network

- **Wireless IP sharer** (router having DHCP server)
- The LAN Port on the Wall
- **LAN Cable**

Samsung recommends using IEEE 802.11n. When you play video over a network connection, the video may not play smoothly.

- Select a channel for the wireless IP sharer that is not currently being used. If the channel set for the wireless IP sharer is currently being used by another device nearby, this will result in interference and communication failure.
- Your product supports only the following wireless network security protocols. If you select the Pure High-throughput (Greenfield) 802.11n mode and the Encryption type is set to WEP, TKIP or TKIP AES (WPS2Mixed) on your AP or wireless router, Samsung products will not support a connection in compliance with new Wi-Fi certification specifications.
- If your wireless router supports WPS (Wi-Fi Protected Setup), you can connect to the network via PBC (Push Button Configuration) or PIN (Personal Identification Number). WPS will automatically configure the SSID and WPA key in either mode.
- Connection Methods: You can setup the wireless network connection in three ways. Auto Setup (Using the Auto Network Search function), Manual Setup, WPS(PBC)

Automatic Network Setup (Wireless)

Most wireless networks have an optional security system that requires devices that access the network to transmit an encrypted security code called an Access or **Security key**. The **Security key** is based on a Pass Phrase, typically a word or a series of letters and numbers of a specified length you were asked to enter when you set up security for your wireless network. If you use this method of setting up the network connection, and have a **Security key** for your wireless network, you will have to enter the Pass Phrase during the the automatic or manual setup process.

How to set up automatically

1. Set **Network type** to **Wireless** from the **Open Network Settings** page.
2. The **Network** function searches for available wireless networks. When done, it displays a list of the available networks.
3. In the list of networks, press the ▲ or ▼ button to select a network, and then press the E button twice.
   - If the desired wireless router does not appear, select **Refresh** to search again.
   - If the router cannot be found after retrying, select the **Stop** button. The **Add Network** button appears.
4. If the **Enter password.** screen appears, go to step 5. If you select a wireless router that does not have security, go to step 7.
5. If the router has security, enter the **Enter password.** (Security key or PIN).
6. When done, use the right arrow button to move the cursor to **Done**, and then press the E button. The network connection screen appears and the verification process starts.
   - A connection with the router is established, but the Internet cannot be accessed.
7. When the connection has been verified, the “Your wireless network and Internet connection are setup and ready to use.” message appears.
Manual Network Setup (Wireless)

Offices may use static IP addresses. If this is the case, ask the network administrator for the IP address, subnet mask, gateway and DNS server address. Enter these values manually.

Getting the Network Connection Values

To view the Network connection values on most Windows computers, follow these steps.

1. Right click the Network icon on the bottom right of the screen.
2. In the pop-up menu that appears, click Status.
3. On the dialog that appears, click the Support tab.
4. On the Support Tab, click the Details button. The Network connection values are displayed.

How to set up manually

1. Set Network type to Wireless from the Open Network Settings page.
2. The Network function searches for available wireless networks. When done, it displays a list of the available networks.
3. In the list of networks, press the ▲ or ▼ button to select a network, and then press the Enter button twice.
   - If the desired wireless router does not appear, select Refresh to search again.
   - If the router cannot be found after retrying, select the Stop button.
4. If the Enter password screen appears, go to step 5. If you select a wireless router that does not have security, go to step 7.
5. When done, use the right arrow button to move the cursor to Done, and then press Enter. The network connection screen appears and the verification process starts.
6. Select Stop while network connections are being attempted. This will stop the connection.
7. Select IP Settings on network connection screen. The IP Settings screen appears.
8. Select the field at the top, press Enter, and then set IP Settings to Enter manually. Repeat the entry process for each field in the IP Address.
   - Setting IP Settings to Enter manually automatically changes DNS Setting to Enter manually.
9. When done, select OK at the bottom of the page, and then press Enter. The network test screen appears and the verification process starts.
10. When the connection has been verified, the “Your wireless network and Internet connection are setup and ready to use.” message appears.
WPS(PBC)

How to set up using WPS(PBC)

If your router has a WPS(PBC) button, follow these steps.

1. Set Network type to Wireless from the Open Network Settings page.
2. Select WPS(PBC), press Enter, and then press Enter again.
3. Press the WPS(PBC) button on your router within 2 minutes. Your product automatically acquires all the network setting values it needs and connects to your network.
4. The network connection screen appears, and network setup is done.
Server Network Settings

MENU → Network → Server Network Settings → ENTER

Connect to Server

To run Player connect to a network.

- Server Address / SSL / Port

   If the SSL option is enabled, the server is configured to use https and data transfer is encrypted.

   Enter the server IP address and port number. Use 7001 as the port number. (If unable to connect to the server using port number 7001, check with your server administrator to find the correct port number and then change the port number.)

MagicInfo Mode

Select the appropriate MagicInfo Mode depending on the environment where you are using the product.

- Lite / Premium

Server Access

Select a method to connect the server network.

- Allow / Deny

FTP Mode

Specify the FTP operating mode.

- Active / Passive

Proxy Server

Set up your proxy server connection and related functions.

- Address / Port / ID / Password

   Address / Port / ID and Password are enabled only when Proxy Server is set to On.
**Wi-Fi Direct**

To use this function, your mobile device should be supported by the **Wi-Fi Direct**.

---

**MENU** → **Network** → **Wi-Fi Direct** → **ENTER**

Set to connect the product to wireless mobile devices. Using this function, you can connect wireless mobile devices with your product directly without a router.

---

Models that do not support wireless communication: LH550HFPVBC, LH460HFPVBC

---

**To connect your mobile device with your product using Wi-Fi Direct, follow these steps:**

1. Go to **Wi-Fi Direct** screen. The product starts to search devices.
2. Turn on the **Wi-Fi Direct** function on your device. Select the desired Wi-Fi device.
   - **PBC (Push Button Configuration):** Press the **WPS(PBC)** button on your Wi-Fi device within 2 minutes. Your product automatically acquires all the network setting values it needs and connects to your network.
   - **PIN:** Input the displayed **PIN** on your device.

---

If you want to disconnect the device, select the connected Wi-Fi device, and then select **Disconnected**.
Mobile Device Manager

Allow other devices on your network, like smart phones and tablets, to share content with your product.

---

Models that do not support wireless communication: LH550HFPVBC, LH460HFPVBC

Access Notification

Display a notification when a device is connected for the first time.
Turn off Access Notification to connect devices automatically.

---

The Wi-Fi Direct feature is not supported currently.

• Off / First Time Only / Always On

Mobile Device List

View and manage connected devices.

Device Name

MENU → Network → Device Name → ENTER

Select or enter a device name.
This name can be shown on network remote controls over the network.

• [Signage]Display 1 – 6 / User Input
 Accessibility

MENU → System → Accessibility → ENTER

System
  Accessibility
  Start Setup
  Time
  Auto Source Switching
  Power Control
  Eco Solution
  Fan & Temperature

Voice Guide
Switch Voice Guide on or off. The language used for Voice Guide will be the same as the current menu language.
- Off / On

Menu Transparency
Adjust transparency of menu box.
- High / Low

High Contrast
Set the background and font to high-contrast colors in Menu. Menu transparencies become opaque when the option is selected.
- Off / On

Enlarge
Set whether to enlarge highlighted item in Menu.
- Off / On

The displayed image may differ depending on the model.
Go through the initial setup steps like you did the first time you used this product.

Enter your 4 digit PIN number. The default PIN number is "0-0-0-0".

If you want to change the PIN number, use the Change PIN function.
You can configure Clock Set or Sleep Timer. Configure various time-related settings.

Press the INFO button if you want to view the current time.

Clock Set

Select Clock Set. Select Date or Time, and then press Enter.
Use the number buttons to enter numbers or press the up and down arrow buttons. Use the left and right arrow buttons to move from one entry field to the next. Press Enter when done.

You can set the Date and Time directly by pressing the number buttons on the remote control.

NTP Settings

Set up the server URL and time zone to use the network time.

DST

Switches the DST (Daylight Saving Time) function on or off.

Off / On

- **Start Date**: Set the start date of Daylight Saving Time.
- **End Date**: Set the end date of Daylight Saving Time.
- **Time Offset**: Select the correct time offset your timezone.

Start Date, End Date and Time Offset are enabled only when DST is set to On.

Sleep Timer

Automatically shuts off the product after a preset period of time.

(Off / 30 min. / 60 min. / 90 min. / 120 min. / 150 min. / 180 min.)

Use the up and down arrows to select a period of time, and then press Enter. To cancel Sleep Timer, select Off.

Power On Delay

When connecting multiple products, adjust the power-on time for each product to prevent power overload (within the range 0–50 seconds).

---

The displayed image may differ depending on the model.
Turning on the display with **Auto Source Switching** On, and the previous video source selection is not active, the display will automatically search the different video input sources for active video.

### Auto Source Switching

When the **Auto Source Switching** is **On**, the display video source will automatically be searched for active video.

The **Primary Source** selection will be activated, if the current video source is not recognized.

**Secondary Source** selection will become active, if no primary video source is available.

If both the primary and secondary input sources are not recognized, the display will perform two searches for an active source, each search checking the primary and then secondary source. If both searches fail, the display will return to the first video source and display a message indicating that there is no signal.

### Primary Source Recovery

Select whether to restore the selected primary input source when a primary input source is connected.

> The **Primary Source Recovery** function is disabled if **Primary Source** is set to **All**.

### Primary Source

Specify **Primary Source** for the automatic input source.

### Secondary Source

Specify **Secondary Source** for the automatic input source.

> The **Secondary Source** function is disabled if **Primary Source** is set to **All**.
**Power Control**

**MENU → System → Power Control → ENTER**

<table>
<thead>
<tr>
<th>Power Control</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Power On</td>
<td>Off</td>
</tr>
<tr>
<td>Max. Power Saving</td>
<td>On</td>
</tr>
<tr>
<td>Standby Control</td>
<td>On</td>
</tr>
<tr>
<td>Network Standby</td>
<td>Off</td>
</tr>
<tr>
<td>Power Button</td>
<td>Power On Only</td>
</tr>
</tbody>
</table>

**Auto Power On**

This feature automatically turns on the product as soon as it is plugged in. Pressing the power button is not needed.
- Off / On

**Max. Power Saving**

Conserve power by turning off PC monitor when PC is not used for a certain time.
- Off / On

**Standby Control**

You can set the screen standby mode to be applied when an input signal is received.
- Auto
  - Power-saving mode will activate if no input signals are detected even though a source device is connected to the display.
  - The message **No Signal** will appear if no source device is connected.
- Off
  - The message **No Signal** will appear if no input signals are detected.
  
  If **No Signal** is displayed although a source device is connected, check the cable connection.

  If **No Signal Message** is set to Off, the **No Signal** message does not appear.
  - If this is the case, set **No Signal Message** to On.
- On
  - Power-saving mode will activate if no input signals are detected.

---

*The displayed image may differ depending on the model.*
Network Standby
This feature keeps the network power on when the product turns off.
- Off / On

Power Button
The power button on the remote control \( \text{\textcircled{1}} \) can be set to turn on the power or turn on or off the power.
- Power On Only: Set the power button on the remote control \( \text{\textcircled{1}} \) only to turn on the power.
- Power On/Off: Set the power button on the remote control \( \text{\textcircled{1}} \) to turn on or off the power.

- The displayed image may differ depending on the model.
## Energy Saving Mode

Reduce the power consumption by adjusting the screen brightness.

- Off / Low / Medium / High

---

## Eco Sensor

To enhance your power savings, the picture settings will automatically adapt to the light in the room.

- Off / On

  Adjusting the Backlight setting under Picture while Eco Sensor is on will disable the Off.

  If the screen contrast is not sufficient, set the Eco Sensor to Off. If the Eco Sensor is Off, it may not comply with energy standards.

---

### Min. Backlight

When Eco Sensor is On, you can manually adjust the minimum screen brightness. Min. Backlight is the darkest backlight mode. Make sure the Min. Backlight setting is lower than the Backlight setting.

- If Eco Sensor is On, the display brightness may change (become slightly darker or brighter) depending on the surrounding light intensity.

---

**The displayed image may differ depending on the model.**

---

### Eco Solution

<table>
<thead>
<tr>
<th>Feature</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Saving Mode</td>
<td>Off</td>
</tr>
<tr>
<td>Eco Sensor</td>
<td>Off</td>
</tr>
<tr>
<td>Screen Lamp Schedule</td>
<td>Off</td>
</tr>
<tr>
<td>No Signal Power Off</td>
<td>Off</td>
</tr>
<tr>
<td>Auto Power Off</td>
<td>Off</td>
</tr>
</tbody>
</table>
Eco Solution

<table>
<thead>
<tr>
<th>Feature</th>
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<tr>
<td>Energy Saving Mode</td>
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<tr>
<td>No Signal Power Off</td>
<td>Off</td>
</tr>
<tr>
<td>Auto Power Off</td>
<td>Off</td>
</tr>
</tbody>
</table>

---

The displayed image may differ depending on the model.

### Screen Lamp Schedule

**Screen Lamp Schedule**

Enable or disable the lamp schedule.

- Off / On

**Schedule1, Schedule2**

**Time**

The panel brightness will change to the brightness set in Lamp at a specified time.

**Lamp**

Adjust the panel brightness. A value closer to 100 makes the panel brighter.

- 0 ~ 100

### No Signal Power Off

Save power by turning the device off when no signal is received from any source.

- Off / 15 min. / 30 min. / 60 min.

---

* Disabled when an attached PC is in power saving mode.

* The product will automatically power off at a specified time. The time can be changed as required.

### Auto Power Off

The product will automatically turn off if you don’t press a button on the remote or touch a button on product front panel within select hours to prevent overheating.

- Off / 4 hours / 6 hours / 8 hours
Fan & Temperature

Protects the product by detecting the fan speed and internal temperature.

**Fan Control**

Selects auto or manual for the fan speed settings.

- **Auto / Manual**

**Fan Speed Setting**

Sets the fan speed within a range of 0 and 100.

- Enabled when **Fan Control** is set to **Manual**.

**Outdoor Mode**

To use the product at a low temperature below 0 °C, make sure to set **Outdoor Mode** to "On."

This feature keeps the internal temperature of the product steady so that the product can start properly when it is powered on.

- **Off / On**

- Do not disconnect the power cable when this feature is set to "On."

- The product consumes more power when it is turned off if this feature is set to "On" rather than to "Off."

**Temperature Control**

This function detects the internal temperature of the product. You can specify the temperature range that is acceptable.

The default temperature is set to 90 °C.

The recommended operating temperature for this product is 75 to 90 °C (based on an ambient temperature of 50 °C).

- The screen will become darker if the current temperature exceeds the specified temperature limit. If the temperature continues to rise, the product will power off to prevent overheating.

"The displayed image may differ depending on the model."
Input Device Manager

MENU → System → Input Device Manager → ENTER

1. Input Device Manager
2. Keyboard Language
3. Keyboard Type
4. Input Language Shortcut

Configure options for external input devices connected to the product.

Keyboard Language
Configure the key combination used to change the input language.

Keyboard Type
Specify the keyboard type.

Input Language Shortcut
Select shortcut keys for switching between input languages.

Play via

MENU → System → Play via → ENTER

1. System
2. Play via
3. MagicInfo

Select the appropriate Play via mode depending on the environment where you are using the product.

The home screen may be different depending on the setting.

- MagicInfo / URL Launcher

The displayed image may differ depending on the model.
The Change PIN screen will appear.
Choose any 4 digits for your PIN and enter it in Enter New PIN. Reenter the same 4 digits in Confirm New PIN.
The product has memorized your new PIN.
— Default password: 0 - 0 - 0 - 0
**Security**

**MENU → System → Security → ENTER**

<table>
<thead>
<tr>
<th>Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Lock On</td>
</tr>
<tr>
<td>Power On Button</td>
</tr>
<tr>
<td>USB Auto Play Lock</td>
</tr>
<tr>
<td>Mobile Connection Lock</td>
</tr>
<tr>
<td>Remote Management</td>
</tr>
</tbody>
</table>

---

**Safety Lock On**

Enter your 4 digit PIN number. The default PIN number is "0-0-0-0". If you want to change the PIN number, use the Change PIN function.

All the menus and buttons of the product and remote control, except for the LOCK button on the remote control, will be locked by the Safety Lock On function.

To unlock the menus and buttons, press the LOCK button and then enter the password (default password: 0-0-0-0).

**Power On Button**

Turn on this feature to enable the remote control's Power button to turn on the device while Safety Lock On is enabled.

* Off / On

**USB Auto Play Lock**

Select whether to automatically play MagicInfo content saved on a connected USB device.

* Off
  - Play MagicInfo content saved on the USB device automatically.
* On
  - Do not play MagicInfo content saved on the USB device automatically.

Connecting a USB device containing MagicInfo content displays "USB Auto Play Lock : On" for five seconds.

**Mobile Connection Lock**

Restrict other devices on your network, such as smart phones and tablets, to share content with your signage.

* Off / On

Models that do not support wireless communication: LH55OHFPVBC, LH46OHFPVBC

**Remote Management**

You can Allow or Deny external commands to access your device via a network.

* The changed setting remains even after the product is turned off and on using the Panel key or Power switch.
General

MENU → System → General → ENTER

Smart Security

The security provided to protect your display device and connected storage devices against viruses includes.

### Scan

Inspect your display device and connected storage devices to check for viruses.

### Isolated List

This is the list of items that have been isolated for containing viruses.

### Real-Time Monitoring

Scans for viruses by monitoring the display device in real time.

### Monitoring Results

Check the list of files, networks, and processes that have been blocked.

The displayed image may differ depending on the model.
### General

<table>
<thead>
<tr>
<th>Feature</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Security</td>
<td></td>
</tr>
<tr>
<td>Anynet+ (HDMI-CEC)</td>
<td>On</td>
</tr>
<tr>
<td>HDMI Hot Plug</td>
<td>On</td>
</tr>
<tr>
<td>Custom Logo</td>
<td></td>
</tr>
<tr>
<td>Game Mode</td>
<td>Off</td>
</tr>
<tr>
<td>Empty Storage</td>
<td></td>
</tr>
</tbody>
</table>

---

**Anynet+ (HDMI-CEC)**

Anynet+ is a function that enables you to control all connected Samsung devices that support Anynet+ with your Samsung product remote. The Anynet+ system can be used only with Samsung devices that have the Anynet+ feature. To be sure your Samsung device has this feature, check if there is an Anynet+ logo on it.

- **Off / On**
  - You can only control Anynet+ devices using the product remote control, not the buttons on the product.
  - The product remote control may not work under certain conditions. If this occurs, reselect the Anynet+ device.
  - Anynet+ works when the AV device supporting Anynet+ is in the standby or on status.
  - Anynet+ supports up to 12 AV devices in total. Note that you can connect up to 3 devices of the same type.

---

"The displayed image may differ depending on the model."
## Troubleshooting for Anynet+

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Solution</th>
</tr>
</thead>
</table>
| Anynet+ does not work. | • Check if the device is an Anynet+ device. The Anynet+ system supports Anynet+ devices only.  
• Check if the Anynet+ device power cord is properly connected.  
• Check the Anynet+ device's Video/Audio/HDMI cable connections.  
• Check whether Anynet+ (HDMI-CEC) is set to On in the System menu.  
• Check whether the remote control is Anynet+ compatible.  
• Anynet+ doesn't work in certain situations. (initial setup)  
• If you have removed and then reconnected the HDMI cable, please make sure to search devices again or turn your product off and on again.  
• Check if the Anynet+ function of the Anynet device is set on. |
| I want to start Anynet+. | • Check if the Anynet+ device is properly connected to the product and check if the Anynet+ (HDMI-CEC) is set to On in the System menu. |
| I want to exit Anynet+. | • Press the SOURCE button on the product remote control and select a non- Anynet+ device. |
| The message "Disconnecting Anynet+ device ..." appears on the screen. | • You cannot use the remote control when you are configuring Anynet+ or switching to a view mode.  
• Use the remote control after the product has completed Anynet+ configuration or has finished switching to Anynet+. |
| The Anynet+ device does not play. | • You cannot use the play function when initial setup is in progress. |
| The connected device is not displayed. | • Check whether or not the device supports Anynet+ functions.  
• Check whether or not the HDMI cable is properly connected.  
• Check whether Anynet+ (HDMI-CEC) is set to On in the System menu.  
• Search Anynet+ devices again.  
• Anynet+ requires an HDMI connection. Make sure the device is connected to your product with an HDMI cable.  
• Some HDMI cables may not support Anynet+ functions.  
• If the connection is terminated because there has been a power failure or the HDMI cable has been disconnected, please repeat the device scan. |
HDMI Hot Plug

This feature is used to activate the time delay to turn on a DVI/HDMI source device.

- Off / On

Custom Logo

You can download, select, and set the display time of a custom logo that appears when the product turns on.

- Custom Logo
  - You can select a custom logo (image/video) or turn off the custom logo display.
  - You must download the custom logo from an external USB device to set the custom logo.

- Logo Display Time
  - If the type of custom logo is Image, you can set the Logo Display Time.

- Download Logo File
  - You can download a custom logo into the product from an external USB device.
  - The file name of the custom logo you want to download must be saved as “samsung” in all small letters.
  - When there are multiple numbers of external USB connections, the product will attempt to download the custom logo from the last device that has been connected to the product.

Custom logo file restrictions

- For image type custom logo, only bitmap files (aRGB 32bpp format) are supported.
- The resolution of the image type custom logo must be between a minimum of 128x64 and the maximum screen resolution. (Horizontal/Vertical values of the resolution must be multiples of 4.)
- For video type custom logo, only TS Stream types are supported.
- The maximum supported video file is 150 MB. The recommended length of a video file is 20 seconds or less.
General

Smart Security
Anynet+ (HDMI-CEC) On
HDMI Hot Plug On
Custom Logo

<table>
<thead>
<tr>
<th>Game Mode</th>
<th>Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empty Storage</td>
<td>Delete files to make space for new content. Recently played files will not be deleted.</td>
</tr>
</tbody>
</table>

---

Game Mode

When connecting to a game console such as PlayStation™ or Xbox™, you can enjoy a more realistic gaming experience by selecting game mode.

- Off / On

Precautions and limitations for Game Mode

To disconnect the game console and connect another external device, set Game Mode to Off in the setup menu.

---

Empty Storage

Delete files to make space for new content. Recently played files will not be deleted.

---

Reset System

MENU → System → Reset System → ENTER

System

| Reset System |

---

The displayed image may differ depending on the model.
Software Update

MENU [ ] → Support → Software Update → ENTER

The Software Update menu lets you upgrade your product software to the latest version.

- Be careful not to turn off the power until the upgrade is complete. The product will turn off and on automatically after completing the software upgrade.
- When you upgrade software, all video and audio settings you have made will return to their default settings.
  We advise you to write down your settings so that you can easily reset them after the upgrade.

Update now

Update the software to the latest version.

- Current version: This is the software version already installed in the product.

Auto Update

This feature automatically updates the product when not in use.

- Off / On

Contact Samsung

MENU [ ] → Support → Contact Samsung → ENTER

View this information when your product does not work properly or when you want to upgrade the software.

You can find information regarding our call centers and how to download products and software.

- Contact Samsung and find the product Model Code and Software Version.

Reset All

MENU [ ] → Support → Reset All → ENTER

This option returns all the current settings for a display to the default factory settings.
Requirements Before Contacting Samsung Customer Service Center

Testing the Product

Check if your product is operating normally by using the product test function. If the screen remains blank while the power LED blinks even when the product is correctly connected to a PC, perform product testing.

1. Power off both the PC and product.
2. Disconnect all the cables from the product.
3. Power on the product.
4. If No Signal is displayed, the product is operating normally.

Checking the Resolution and Frequency

Not Optimum Mode will briefly be displayed if a mode that exceeds a supported resolution is selected (refer to Supported Resolutions).
Check the followings.

Installation issue (PC mode)

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The screen keeps switching on and off.</td>
<td>Check the cable connection between the product and PC, and ensure the connection is secure.</td>
</tr>
<tr>
<td>Blank spaces are found on all four sides of the screen when an HDMI or HDMI-DVI</td>
<td>Blank spaces found on the screen have nothing to do with the product.</td>
</tr>
<tr>
<td>cable is connected to the product and PC.</td>
<td>Blank spaces on the screen are caused by the PC or graphics card. To resolve the problem, adjust</td>
</tr>
<tr>
<td></td>
<td>the screen size in the HDMI or DVI settings for the graphics card.</td>
</tr>
<tr>
<td></td>
<td>If the graphics card settings menu does not have an option to adjust the screen size, update the</td>
</tr>
<tr>
<td></td>
<td>graphics card driver to the latest version.</td>
</tr>
<tr>
<td></td>
<td>(Please contact the graphics card or computer manufacturer for further details about how to adjust</td>
</tr>
<tr>
<td></td>
<td>the screen settings.)</td>
</tr>
</tbody>
</table>

Screen issue

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No Signal</strong> is displayed on the screen.</td>
<td>Check that the product is connected correctly with a cable.</td>
</tr>
<tr>
<td></td>
<td>Check that the device connected to the product is powered on.</td>
</tr>
<tr>
<td><strong>Not Optimum Mode</strong> is displayed.</td>
<td>This message is displayed when a signal from the graphics card exceeds the product’s maximum</td>
</tr>
<tr>
<td></td>
<td>resolution and frequency.</td>
</tr>
<tr>
<td></td>
<td>Refer to the Standard Signal Mode Table and set the maximum resolution and frequency according to</td>
</tr>
<tr>
<td></td>
<td>the product specifications.</td>
</tr>
<tr>
<td>The images on the screen look distorted.</td>
<td>Check the cable connection to the product.</td>
</tr>
<tr>
<td>The screen is not clear. The screen is blurry.</td>
<td>Set the resolution and frequency to the recommended level.</td>
</tr>
<tr>
<td>The screen appears unstable and shaky.</td>
<td>Check that the resolution and frequency of the PC and graphics card are set within a range</td>
</tr>
<tr>
<td></td>
<td>compatible with the product. Then, change the screen settings if required by referring to the</td>
</tr>
<tr>
<td></td>
<td>Additional Information on the product menu and the Standard Signal Mode Table.</td>
</tr>
<tr>
<td>There are shadows or ghost images left on the screen.</td>
<td></td>
</tr>
<tr>
<td>The screen is too bright. The screen is too dark.</td>
<td>Adjust <strong>Brightness</strong> and <strong>Contrast</strong>.</td>
</tr>
<tr>
<td>Screen color is inconsistent.</td>
<td>Go to <strong>Picture</strong> and adjust the <strong>Color Space</strong> settings.</td>
</tr>
<tr>
<td>White does not really look white.</td>
<td>Go to <strong>Picture</strong> and adjust the <strong>White Balance</strong> settings.</td>
</tr>
</tbody>
</table>
## Screen issue

<table>
<thead>
<tr>
<th>Issue</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is no image on the screen and the power LED blinks every 0.5 to 1 second.</td>
<td>The product is in power-saving mode. Press any key on the keyboard or move the mouse to return to the previous screen.</td>
</tr>
<tr>
<td>The product will turn off automatically.</td>
<td>Go to System and make sure Sleep Timer is set to Off.</td>
</tr>
<tr>
<td></td>
<td>If a PC is connected to the product, check the power status of the PC.</td>
</tr>
<tr>
<td></td>
<td>Make sure the power cable is connected properly to the product and power outlet.</td>
</tr>
<tr>
<td></td>
<td>If the signal from a connected device is not detected, the product automatically turns off after 10 to 15 minutes.</td>
</tr>
<tr>
<td>Picture quality of the product is different from the dealer shop where it was purchased.</td>
<td>Use an HDMI cable to obtain high-definition (HD) picture quality.</td>
</tr>
<tr>
<td>The screen display does not look normal.</td>
<td>Encoded video content may cause the display to appear corrupted in scenes featuring fast moving objects such as in a sports event or action video.</td>
</tr>
<tr>
<td></td>
<td>Low signal level or low picture quality may cause the display to appear corrupted. This does not mean the product is defective.</td>
</tr>
<tr>
<td></td>
<td>A cell phone within a distance of one-meter radius may cause static on analog and digital products.</td>
</tr>
<tr>
<td>The brightness and color do not look normal.</td>
<td>Go to Picture and adjust the screen settings such as Picture Mode, Color, Brightness and Sharpness.</td>
</tr>
<tr>
<td></td>
<td>Go to System and adjust the Energy Saving Mode settings.</td>
</tr>
<tr>
<td></td>
<td>Reset the screen settings to the default settings.</td>
</tr>
<tr>
<td>Lines (red, green or blue) are displayed on the screen.</td>
<td>These lines are displayed when there is a defect in DATA SOURCE DRIVER IC on the monitor. Contact a Samsung Service Center to resolve the issue.</td>
</tr>
<tr>
<td>The display looks unstable and then freezes.</td>
<td>The screen may freeze when a resolution other than the recommended resolution is used or if the signal is not stable. To resolve the issue, change the PC resolution to the recommended resolution.</td>
</tr>
<tr>
<td>The screen cannot be displayed in full screen.</td>
<td>A scaled SD (4:3) content file can cause black bars on both sides of an HD channel screen.</td>
</tr>
<tr>
<td></td>
<td>A video with an aspect ratio different from the product can cause black bars at the top and bottom of the screen.</td>
</tr>
<tr>
<td></td>
<td>Change the screen size setting to full screen on the product or source device.</td>
</tr>
</tbody>
</table>
### Remote control issue

<table>
<thead>
<tr>
<th>The remote control does not work.</th>
<th>Make sure that the batteries are correctly in place (+/-).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Check if the batteries are flat.</td>
</tr>
<tr>
<td></td>
<td>Check for power failure.</td>
</tr>
<tr>
<td></td>
<td>Make sure that the power cord is connected.</td>
</tr>
<tr>
<td></td>
<td>Check for any special lighting or neon signs switched on in the vicinity.</td>
</tr>
</tbody>
</table>

### Source device issue

| A beeping sound is heard when my PC is booting. | If a beeping sound is heard when your PC is booting, have your PC serviced. |

### Other issue

<table>
<thead>
<tr>
<th>The product smells like plastic.</th>
<th>The plastic smell is normal and disappears over time.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio or video cuts out intermittently.</td>
<td>Check the cable connection and connect it again if required.</td>
</tr>
<tr>
<td></td>
<td>Using a very hard or thick cable may corrupt audio and video files.</td>
</tr>
<tr>
<td></td>
<td>Make sure cables are flexible enough to ensure durability. When mounting the product onto a wall, it is recommended to use right-angle cables.</td>
</tr>
<tr>
<td>Small particles are found on the edges of the product.</td>
<td>The particles are part of the product design. The product is not defective.</td>
</tr>
<tr>
<td>When I try to change the PC resolution, a message The defined resolution is not currently supported. appears.</td>
<td>The message The defined resolution is not currently supported. appears if the input source resolution exceeds the maximum resolution of the display.</td>
</tr>
<tr>
<td></td>
<td>To resolve the issue, change the PC resolution to a resolution supported on the display.</td>
</tr>
<tr>
<td>HDMI Black Level is not functioning properly on an HDMI device with YCbCr output.</td>
<td>This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.</td>
</tr>
</tbody>
</table>
Other issue

There is no sound in HDMI mode.

- Displayed picture colors may not look normal. Video or sound may not be available. This can occur if a source device that only supports an older version of the HDMI standard is connected to the product.

- Some PC graphics cards may not automatically recognize HDMI signals that do not include sound. In this case, manually select a sound input.


<table>
<thead>
<tr>
<th>Sound input</th>
<th>Screen mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>Auto</td>
</tr>
<tr>
<td></td>
<td>PC settings</td>
</tr>
</tbody>
</table>

The IR sensor is not functioning.

- Make sure the sensor light turns on when a button is pressed on the remote control.

  - If the sensor light does not turn on, turn the power switch off and then on again on the back of the product.
  
    - (The power LED lights up red when the screen is switched off.)
  
    - If the sensor light still does not turn on after the power switch is turned off and then on again, an internal jack may be disconnected.
  
    - Contact your nearest service center to have the product serviced.

  - If the sensor light that is on does not flash red when a button is pressed on the remote control, the IR sensor may be defective.
  
    - Contact your nearest service center to have the product serviced.

- This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How can I change the frequency?</td>
<td>Set the frequency on your graphics card.</td>
</tr>
<tr>
<td></td>
<td>• Windows XP: Go to Control Panel → Appearance and Themes → Display → Settings → Advanced → Monitor and adjust the frequency in Monitor Settings.</td>
</tr>
<tr>
<td></td>
<td>• Windows ME/2000: Go to Control Panel → Display → Settings → Advanced → Monitor and adjust the frequency in Monitor Settings.</td>
</tr>
<tr>
<td></td>
<td>• Windows Vista: Go to Control Panel → Appearance and Personalization → Personalize → Display Settings → Advanced Settings → Monitor and adjust the frequency in Monitor Settings.</td>
</tr>
<tr>
<td></td>
<td>• Windows 7: Go to Control Panel → Appearance and Personalization → Display → Adjust resolution → Advanced Settings → Monitor and adjust the frequency in Monitor Settings.</td>
</tr>
<tr>
<td></td>
<td>• Windows 8: Go to Settings → Control Panel → Appearance and Personalization → Display → Adjust resolution → Advanced Settings → Monitor and adjust the frequency in Monitor Settings.</td>
</tr>
<tr>
<td></td>
<td>• Windows 10: Go to Settings → System → Display → Advanced display settings → Display adapter properties → Monitor, and adjust Screen refresh rate under Monitor settings.</td>
</tr>
<tr>
<td>How can I change the resolution?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Windows XP: Go to Control Panel → Appearance and Themes → Display → Settings and adjust the resolution.</td>
</tr>
<tr>
<td></td>
<td>• Windows ME/2000: Go to Control Panel → Display → Settings and adjust the resolution.</td>
</tr>
<tr>
<td></td>
<td>• Windows Vista: Go to Control Panel → Appearance and Personalization → Personalize → Display Settings and adjust the resolution.</td>
</tr>
<tr>
<td></td>
<td>• Windows 7: Go to Control Panel → Appearance and Personalization → Display → Adjust Resolution and adjust the resolution.</td>
</tr>
<tr>
<td></td>
<td>• Windows 8: Go to Settings → Control Panel → Appearance and Personalization → Display → Adjust Resolution and adjust the resolution.</td>
</tr>
<tr>
<td></td>
<td>• Windows 10: Go to Settings → System → Display → Advanced display settings, and adjust the resolution.</td>
</tr>
</tbody>
</table>

– Refer to the user manual for your PC or graphics card for further instructions on adjustment.
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do I set powersaving mode?</td>
<td>• Windows XP: Set power-saving mode in Control Panel → Appearance and Themes → Display → Screen Saver Settings or BIOS SETUP on the PC.</td>
</tr>
<tr>
<td></td>
<td>• Windows ME/2000: Set power-saving mode in Control Panel → Display → Screen Saver Settings or BIOS SETUP on the PC.</td>
</tr>
<tr>
<td></td>
<td>• Windows Vista: Set power-saving mode in Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings or BIOS SETUP on the PC.</td>
</tr>
<tr>
<td></td>
<td>• Windows 7: Set power-saving mode in Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings or BIOS SETUP on the PC.</td>
</tr>
<tr>
<td></td>
<td>• Windows 8: Set power-saving mode in Settings → Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings or BIOS SETUP on the PC.</td>
</tr>
<tr>
<td></td>
<td>• Windows 10: Set power-saving mode in Settings → Personalization → Lock screen → Screen timeout settings → Power &amp; sleep or BIOS SETUP on the PC.</td>
</tr>
</tbody>
</table>
Chapter 12
Specifications

General

<table>
<thead>
<tr>
<th>Model Name</th>
<th>OH46F</th>
<th>OH55F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel Size</td>
<td>46 CLASS (45.9 inches / 116 cm)</td>
<td>55 CLASS (54.6 inches / 138 cm)</td>
</tr>
<tr>
<td>Display area</td>
<td>1018.08 mm (H) x 572.67 mm (V) / 40.1 inches (H) x 22.5 inches (V)</td>
<td>1209.6 mm (H) x 680.4 mm (V) / 47.6 inches (H) x 26.8 inches (V)</td>
</tr>
</tbody>
</table>

Power Supply
AC100-240V~ 50/60Hz
Refer to the label at the back of the product as the standard voltage can vary in different countries.

Environmental considerations

Operating
Temperature: -22 °F - 122 °F (-30 °C - 50 °C)
* For installing the enclosure, keep the internal temperature at 40 °C or below.
Humidity: 10% - 80%, non-condensing

Storage
Temperature: -22 °F - 122 °F (-30 °C - 50 °C)
Humidity: 5% - 95%, non-condensing

Plug-and-Play
This monitor can be installed and used with any Plug-and-Play compatible systems. Two-way data exchange between the monitor and PC system optimizes the monitor settings. Monitor installation takes place automatically. However, you can customize the installation settings if desired.

Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may appear brighter or darker on the panel. This does not affect product performance.

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

For detailed device specifications, visit the Samsung Electronics website.

(USA only)
Dispose unwanted electronics through an approved recycler.
To find the nearest recycling location, go to our website: www.samsung.com/recyclingdirect or call, 1-800-SAMSUNG
Preset Timing Modes

This product can be set to only one resolution for each screen size to obtain the optimum picture quality due to the nature of the panel. Using a resolution other than the specified resolution may degrade the picture quality. To avoid this, it is recommended that you select the optimum resolution specified for your product.

Check the frequency when you exchange a CDT product (connected to a PC) for an LCD product. If the LCD product does not support 85 Hz, change the vertical frequency to 60 Hz using the CDT product before you exchange it with the LCD product.

Model Name: OH46F / OH55F

<table>
<thead>
<tr>
<th>Synchronization</th>
<th>Horizontal Frequency</th>
<th>Vertical Frequency</th>
<th>Optimum Resolution</th>
<th>Maximum Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>30 – 81 kHz</td>
<td>48 – 75 Hz</td>
<td>1920 x 1080 @ 60 Hz</td>
<td>1920 x 1080 @ 60 Hz</td>
</tr>
</tbody>
</table>

The screen will automatically be adjusted if a signal that belongs to the following standard signal modes is transmitted from your PC. If the signal transmitted from the PC does not belong to the standard signal modes, the screen may be blank with the power LED on. In such a case, change the settings according to the following table by referring to the graphics card user manual.

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Horizontal Frequency (kHz)</th>
<th>Vertical Frequency (Hz)</th>
<th>Pixel Clock (MHz)</th>
<th>Sync Polarity (H/V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM, 720 x 400</td>
<td>31.469</td>
<td>70.087</td>
<td>28.322</td>
<td>-/+</td>
</tr>
<tr>
<td>MAC, 640 x 480</td>
<td>35.000</td>
<td>66.667</td>
<td>30.240</td>
<td>-/-</td>
</tr>
<tr>
<td>MAC, 832 x 624</td>
<td>49.726</td>
<td>74.551</td>
<td>57.284</td>
<td>-/-</td>
</tr>
<tr>
<td>MAC, 1152 x 870</td>
<td>68.681</td>
<td>75.062</td>
<td>100.000</td>
<td>-/-</td>
</tr>
<tr>
<td>VESA, 640 x 480</td>
<td>31.469</td>
<td>59.940</td>
<td>25.175</td>
<td>-/-</td>
</tr>
<tr>
<td>VESA, 640 x 480</td>
<td>37.861</td>
<td>72.809</td>
<td>31.500</td>
<td>-/-</td>
</tr>
<tr>
<td>VESA, 640 x 480</td>
<td>37.500</td>
<td>75.000</td>
<td>31.500</td>
<td>-/-</td>
</tr>
<tr>
<td>VESA, 800 x 600</td>
<td>37.879</td>
<td>60.317</td>
<td>40.000</td>
<td>+/-</td>
</tr>
</tbody>
</table>

- **Horizontal Frequency**
The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

- **Vertical Frequency**
The product displays a single image multiple times per second (like a fluorescent light) to display what the viewer sees. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.
<table>
<thead>
<tr>
<th>Resolution</th>
<th>Horizontal Frequency (kHz)</th>
<th>Vertical Frequency (Hz)</th>
<th>Pixel Clock (MHz)</th>
<th>Sync Polarity (H/V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VESA, 800 x 600</td>
<td>48.077</td>
<td>72.188</td>
<td>50.000</td>
<td>+/-</td>
</tr>
<tr>
<td>VESA, 800 x 600</td>
<td>46.875</td>
<td>75.000</td>
<td>49.500</td>
<td>+/-</td>
</tr>
<tr>
<td>VESA, 1024 x 768</td>
<td>48.363</td>
<td>60.004</td>
<td>65.000</td>
<td>-/-</td>
</tr>
<tr>
<td>VESA, 1024 x 768</td>
<td>56.476</td>
<td>70.069</td>
<td>75.000</td>
<td>-/-</td>
</tr>
<tr>
<td>VESA, 1024 x 768</td>
<td>60.023</td>
<td>75.029</td>
<td>78.750</td>
<td>+/-</td>
</tr>
<tr>
<td>VESA, 1152 x 864</td>
<td>67.500</td>
<td>75.000</td>
<td>108.000</td>
<td>+/-</td>
</tr>
<tr>
<td>VESA, 1280 x 720</td>
<td>45.000</td>
<td>60.000</td>
<td>74.250</td>
<td>+/-</td>
</tr>
<tr>
<td>VESA, 1280 x 800</td>
<td>49.702</td>
<td>59.810</td>
<td>83.500</td>
<td>-/-</td>
</tr>
<tr>
<td>VESA, 1280 x 1024</td>
<td>63.981</td>
<td>60.020</td>
<td>108.000</td>
<td>+/-</td>
</tr>
<tr>
<td>VESA, 1280 x 1024</td>
<td>79.976</td>
<td>75.025</td>
<td>135.000</td>
<td>+/-</td>
</tr>
<tr>
<td>VESA, 1366 x 768</td>
<td>47.712</td>
<td>59.790</td>
<td>85.500</td>
<td>+/-</td>
</tr>
<tr>
<td>VESA, 1440 x 900</td>
<td>55.935</td>
<td>59.887</td>
<td>106.500</td>
<td>-/-</td>
</tr>
<tr>
<td>VESA(RB), 1600 x 900</td>
<td>60.000</td>
<td>60.000</td>
<td>108.000</td>
<td>+/-</td>
</tr>
<tr>
<td>VESA, 1680 x 1050</td>
<td>65.290</td>
<td>59.954</td>
<td>146.250</td>
<td>-/-</td>
</tr>
<tr>
<td>VESA, 1920 x 1080</td>
<td>67.500</td>
<td>60.000</td>
<td>148.500</td>
<td>+/-</td>
</tr>
</tbody>
</table>
Responsibility for the Pay Service (Cost to Customers)

When the service is requested, in spite of in warranty, we may charge you for a visit from a service technician in the following cases.

Not a product defect
Cleaning of the product, Adjustment, Explanation, Re-installation and etc.
• If a service technician gives instructions on how to use product or simply adjusts options without disassembling product.
• If a defect is caused by external environmental factors (Internet, Antenna, Wired Signal, etc.)
• If a product is reinstalled or devices are connected additionally after installing the purchased product for the first time.
• If a product is reinstalled to move to a different spot or to move to a different house.
• If customer requests instructions on how to use because of another company's product.
• If customer requests instructions on how to use the network or another company’s program.
• If customer requests software installation and setup for the product.
• If a service technician removes/cleans dusts or foreign materials inside of the product.
• If customer requests an installation additionally after purchasing a product through home-shopping or online.

A Product damage caused by customer's fault
Product damage caused by customer's mishandling or wrong repair
If a product damage is caused by;
• External impact or drop.
• Use of supplies or separately sold product unspecified by Samsung.
• Repair from a person besides an engineer of outsourcing service company or partner of Samsung Electronics Co., Ltd.
• Remodeling or repairing the product by customer.
• Using it with incorrect voltage or non-authorized electrical connections.
• Not following the “cautions” in User Manual.

Others
• If product fails by natural disaster. (lightning, fire, earthquake, flood damage, etc)
• If consumable components are all used up. (Battery, Toner, Fluorescent lights, Head, Vibrator, Lamp, Filter, Ribbon, etc.)

If customer requests a service in case the product has no defect, service fee may be charged. So please read User Manual first.
Optimum Picture Quality and Afterimage Burn-in Prevention

Optimum Picture Quality

- Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may be brighter or darker on the panel. This does not affect product performance.
  - The number of sub-pixels by panel type: 6,220,800
- Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.
  - Activate power-saving mode or a dynamic screen saver if you will not be using the product for an extended period of time.

Prevention of Afterimage Burn-in

What is afterimage burn-in?

Afterimage burn-in should not occur when the LCD panel is operating normally. Normal operation refers to a continuously changing video pattern. If the LCD panel displays a fixed pattern for an extended period of time, a slight voltage difference may occur between the electrodes in pixels that control the liquid crystals.

Such a voltage difference between electrodes increases with time and makes the liquid crystals thinner. When this occurs, a previous image can remain on the screen when the pattern changes. To prevent this, the accumulated voltage difference should be reduced.

Afterimage burn-in should not occur when an LCD panel is operating in proper conditions.
Preventing afterimage burn-in

The best way to protect the product from afterimage burn-in is switching the power off or setting the PC or system to run a screen saver when not in use. Also, Warranty service may be limited depending on instruction guide.

- **Powering Off, Screen Saver and Power Saving Mode**
  - Power off the product for 2 hours after using it for 12 hours.
  - Go to Display Properties > Power Supply on your PC and set the product to power off as required.
  - Using a screen saver is recommended. It is best to use a single-color or moving-image screen saver.

- **Regular color Change**
  - Use 2 colors
    Switch between 2 colors every 30 minutes as shown above.

  ![Type 1](FLIGHT : TIME)
  ![Type 2](FLIGHT : TIME)

- Avoid combinations of a text color and background color of contrasting brightness.
  (Brightness: refers to the lightness or darkness of a color which varies depending on the amount of light emitted.)

- Avoid using gray as it may contribute to afterimage burn-in.

- Avoid using colors of contrasting brightness (black and white; gray).

  ![Regular Text color Change](FLIGHT : TIME)
  - Use bright colors of similar brightness.
  - Interval: Change text color and background color every 30 minutes

- Move and change text every 30 minutes as shown below.

  ![FLIGHT TIME](OZ348 : 20:30)

- Regularly display a moving image along with a logo.
  Interval: Display a moving image along with a logo for 60 seconds after using for 4 hours.

  ![FLIGHT TIME](OZ348 : 20:30)
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To play purchased DivX movies, first register your device at vod.divx.com. Find your registration code in the DivX VOD section of your device setup menu.
Covered by one or more of the following U.S. patents: 7,295,673; 7,460,668; 7,515,710; 8,656,183; 8,731,369; RE45,052.
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Terminology

480i / 480p / 720p / 1080i / 1080p

Each of the scanning rates above refers to the number of effective scanning lines that decides the screen resolution. The scanning rate may be indicated in i (interlaced) or p (progressive), depending on the scanning method.

- **Scanning**
  Scanning refers to a process of sending pixels that form an image progressively. A larger number of pixels will deliver a clearer and more vivid picture.

- **Progressive**
  In progressive scan mode, all lines of pixels are scanned one by one (progressively) on the screen.

- **Interlaced**
  In interlaced scan mode, every other line of pixels is scanned from top to bottom first and then the remaining lines of pixels (that were not scanned) are scanned.

Non-interlace Mode and Interlace Mode

Non-interlace mode (progressive scan) displays a horizontal line from the top to the bottom of a screen progressively. Interlace mode displays the odd number lines first and the even number lines next. Non-interlace mode is mainly used in monitors as it produces screen clarity and interlace mode is mainly used in TVs.

Vertical Frequency

The product displays a single image many times per second (like a fluorescent light that flickers) to display an image for a viewer to see. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

E.g. 60Hz refers to a single image being displayed 60 times in one second.

Dot Pitch

The screen consist of red, green and blue dots. A shorter distance between the dots produces a higher resolution. Dot pitch refers to the distance between the shortest distance between dots of the same color. Dot pitch is measured in millimeters.

Horizontal Frequency

The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

Source

Input source refers to a video source device connected to the product such as a camcorder or video or DVD player.

Plug & Play

Plug & Play is a function that allows the automatic exchange of information between a monitor and PC to produce an optimum display environment. The product uses VESA DDC (international standard) to execute Plug & Play.

Resolution

Resolution is the number of horizontal dots (pixels) and vertical dots (pixels) that form a screen. It represents the level of display detail. A higher resolution enables more data to be displayed on the screen and is useful to perform multiple tasks simultaneously.

E.g. A resolution of 1920 X 1080 consists of 1,920 horizontal pixels (horizontal resolution) and 1,080 vertical pixels (vertical resolution).

DVD (Digital Versatile Disc)

DVD refers to a CD-sized mass storage disk where you can save multimedia (audio, video or game) applications using MPEG-2 video compression technology.

HDMI (High Definition Multimedia Interface)

It is an interface that can be connected to a digital audio source as well as a high-definition video source by using a single cable without compression.

Multiple Display Control (MDC)

MDC (Multiple Display Control) is an application that allows multiple display devices to be controlled simultaneously using a PC. Communication between a PC and monitor takes place using RS232C (serial data transmission) and RJ45 (LAN) cables.