



SAMSUNG

LFD DISPLAY User Manual

ED65C ED75C

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.

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Chapter 01

Before Using the Product

Copyright

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

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Microsoft, Windows are registered trademarks of Microsoft Corporation.

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Safety Precautions

Caution

RISK OF ELECTRIC SHOCK DO NOT OPEN

Caution : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. (OR BACK)

THERE ARE NO USER SERVICEABLE PARTS INSIDE.

REFER ALL SERVICING TO QUALIFIED PERSONNEL.



This symbol indicates that high voltage is present inside.

It is dangerous to make any kind of contact with any internal part of this product.



This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

Symbols

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.



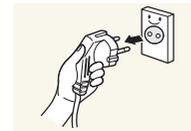
Activities marked by this symbol are prohibited.



Instructions marked by this symbol must be followed.

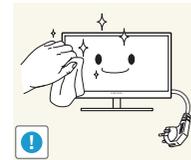
Cleaning

- Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.
- Take the following steps when cleaning.
- The following images are for reference only. Real-life situations may differ from what is shown in the images.

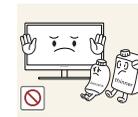


- 1 Power off the product and computer.
- 2 Disconnect the power cord from the product.

— Hold the power cable by the plug and do not touch the cable with wet hands. Otherwise, an electric shock may result.



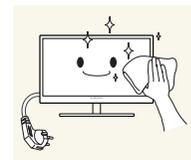
- 3 Wipe the product with a clean, soft and dry cloth.



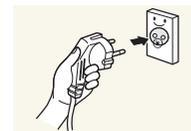
- Do not use detergents that contain alcohol, solvent or surface-active agents.



- Do not spray water or detergent directly on the product.



- 4 Wet a soft and dry cloth in water and wring thoroughly to clean the exterior of the product.



- 5 Connect the power cord to the product when cleaning is finished.
- 6 Power on the product and computer.

Storage

High-glossy models can develop white stains on the surface if an ultrasonic wave humidifier is used nearby.

— Contact Customer Service Center if the inside of the product needs cleaning (service fee will be charged).

Electricity and Safety

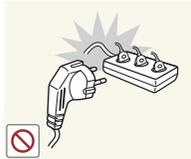
— The following images are for reference only. Real-life situations may differ from what is shown in the images.

Warning



Do not use a damaged power cord or plug, or a loose power socket.

- An electric shock or fire may result.

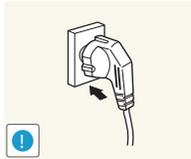


Do not use multiple products with a single power socket.

- Overheated power sockets may cause a fire.

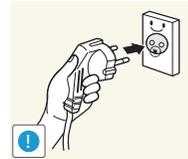


Do not touch the power plug with wet hands. Otherwise, an electric shock may result.



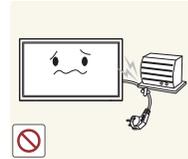
Insert the power plug all the way in so it is not loose.

- 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.

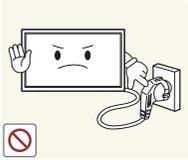
- A fire or electric shock may result.



Clean any dust around the pins of the power plug or the power socket with a dry cloth.

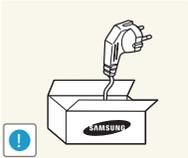
- A fire may result.

Caution



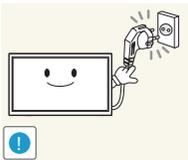
Do not disconnect the power cord while the product is being used.

- 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.

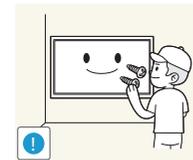
Installation

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.



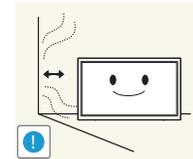
Have a technician install the wall-mount hanger.

- 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.



Install the product at least 10cm away from the wall to allow ventilation.

- An increased internal temperature may cause a fire.



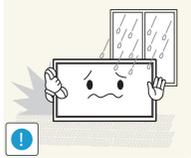
Keep the plastic packaging out of the reach of children.

- Children may suffocate.



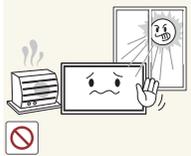
Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)

- 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.



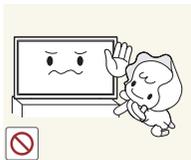
Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.

- A fire or electric shock may result.



Do not expose the product to direct sunlight, heat, or a hot object such as a stove.

- The product lifespan may be reduced or a fire may result.



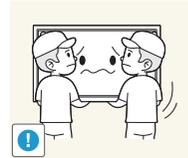
Do not install the product within the reach of young children.

- The product may fall and injure children.
- As the front is heavy, install the product on a flat and stable surface.



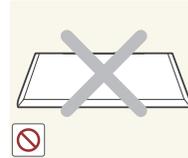
Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Caution



Do not drop the product while moving.

- Product failure or personal injury may result.



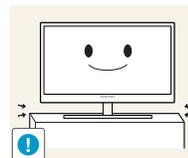
Do not set down the product on its front.

- 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.

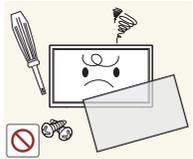


Installing the product in an unusual place (a place exposed to a lot of fine particles, chemical substances or extreme temperatures, or an airport or train station where the product should operate continuously for an extended period of time) may seriously affect its performance.

- Be sure to consult Samsung Customer Service Center if you want to install the product at such a place.

Operation

Warning



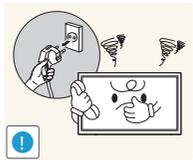
There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.

- 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.

- Damage to the cord may result in a fire or electric shock.



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.



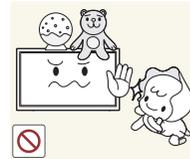
Do not let children hang from the product or climb on top of it.

- 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.



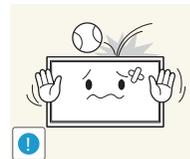
Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

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



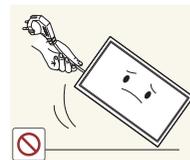
During a lightning or thunderstorm, power off the product and remove the power cable.

- A fire or electric shock may result.



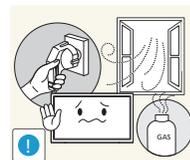
Do not drop objects on the product or apply impact.

- A fire or electric shock may result.



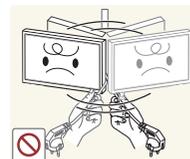
Do not move the product by pulling the power cord or any cable.

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



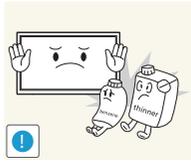
If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.



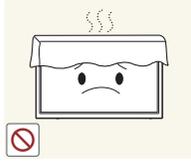
Do not lift or move the product by pulling the power cord or any cable.

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



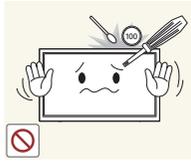
Do not use or keep combustible spray or an inflammable substance near the product.

- An explosion or fire may result.



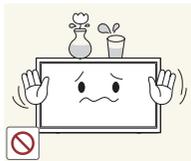
Ensure the vents are not blocked by tablecloths or curtains.

- 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).

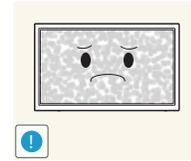
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.



Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.

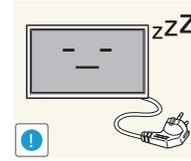
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.

Caution



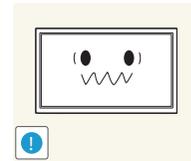
Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.

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



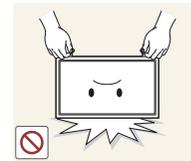
Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc).

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



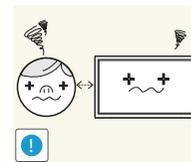
Use the product at the recommended resolution and frequency.

- 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.

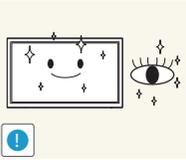


Looking at the screen too close for an extended period of time can deteriorate your eyesight.



Do not use humidifiers or stoves around the product.

- A fire or electric shock may result.



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

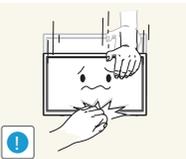
- Eye fatigue will be relieved.



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.



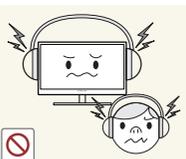
Exercise caution when adjusting the product angle or stand height.

- 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.



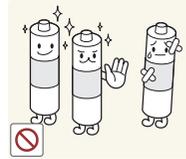
When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



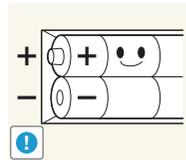
Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

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



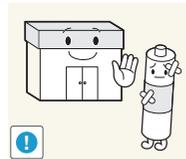
When replacing the battery, insert it with the right polarity (+, -).

- 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.

Chapter 02

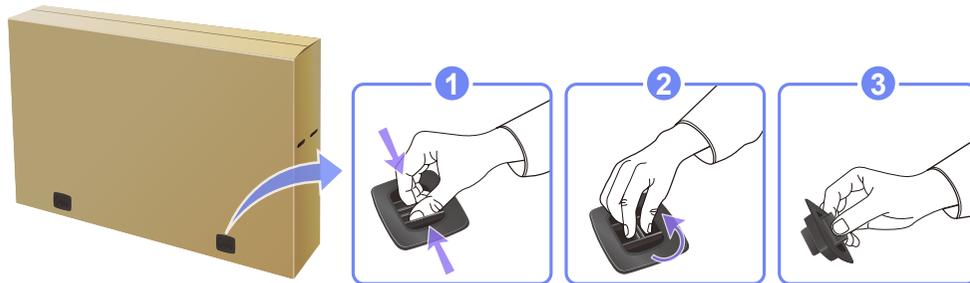
Preparations

Checking the Contents

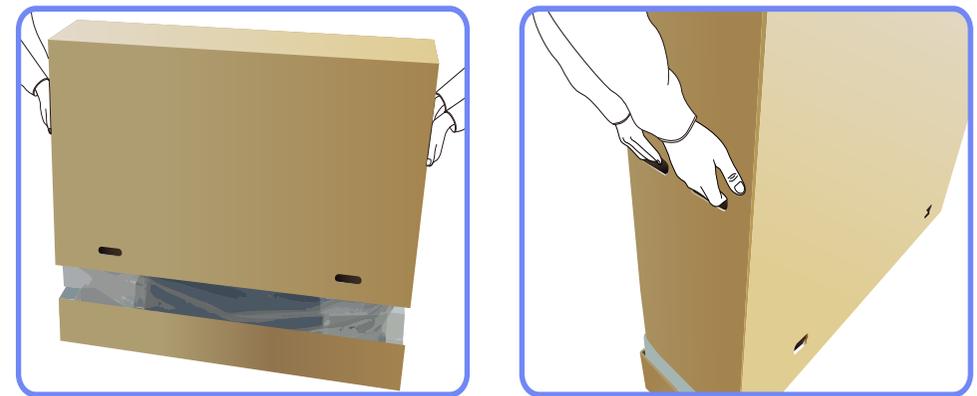
Removing the Packaging

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

- 1 Remove the black locking device at the bottom of the box.

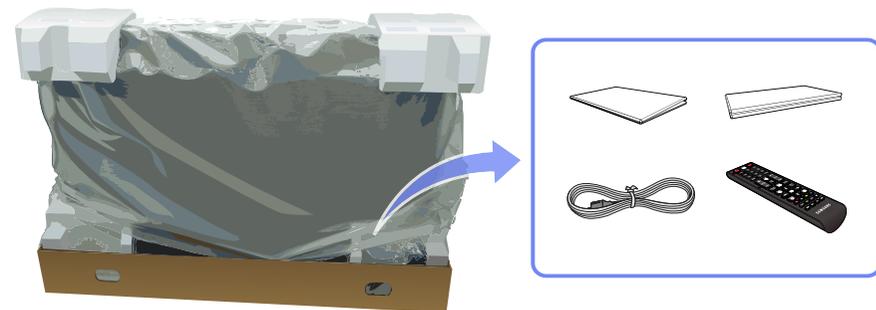


- 2 Using the grooves in the box, lift and remove the top of the box.



- 3 Check the components and remove the styrofoam and plastic bag.

— The appearance of actual components may differ from the image shown.



- 4 Store the box in a dry area so that it can be used when moving the product in the future.

Checking the Components

- Contact the vendor where you purchased the product if any components are missing.
- The appearance of the components and items sold separately may differ from the image shown.
- A stand is not provided with the product. To install a stand, you can purchase one separately.

Components

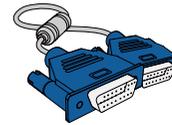
— Components may differ in different locations.



Quick setup guide



Warranty card
(Not available in some locations)



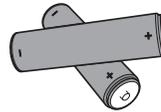
D-SUB cable [\(P.41\)](#)



Power cord



Remote Control [\(P.20\)](#)
(AA59-00714A)



Batteries [\(P.21\)](#)
(Not available in some locations)

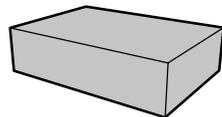


Holder-Wire stand

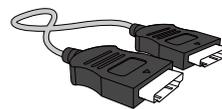


Holder-Ring (4EA)

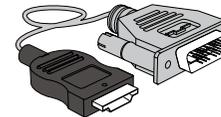
Items sold separately



Wall-mount Kit



HDMI cable [\(P.42\)](#)



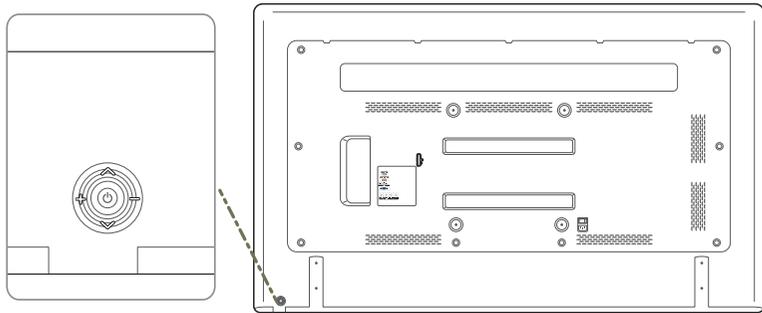
HDMI-DVI cable [\(P.42\)](#)



PIM

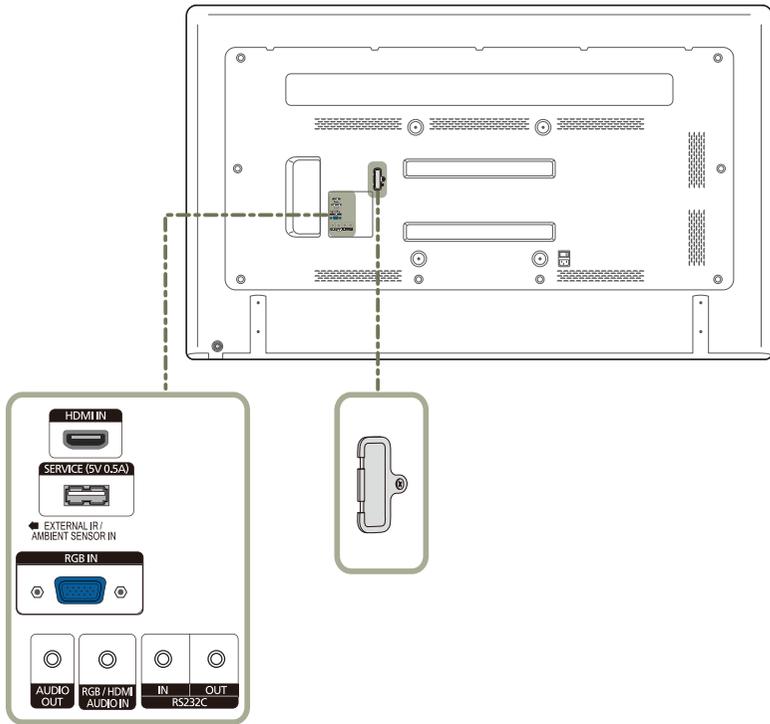
Parts

Panel Key



	<p>Power on the product. If you press the [⏻] button when the product is turned on, the control menu will be displayed. To exit the OSD menu, press and hold the panel key for at least one second.</p>
	<p>Move to the upper or lower menu. You can also adjust the value of an option.</p>
	<p>Move to the left or right menu. You can adjust the volume by moving the panel key left or right when the control menu is not displayed.</p>

Reverse Side



Port

Description

HDMI IN

Connects to a source device using an HDMI cable.

SERVICE (5V 0.5A)

This port is used to upgrade the software.

EXTERNAL IR / AMBIENT SENSOR IN

Supplies power to the external sensor board or receives the light sensor signal.

RGB IN

Connects to a source device using a D-SUB cable.

AUDIO OUT

Connects to the audio of a source device.

RGB / HDMI AUDIO IN

Receives sound from a PC via an audio cable.

RS232C IN

Connects to MDC using an RS232C-stereo adapter.

RS232C OUT

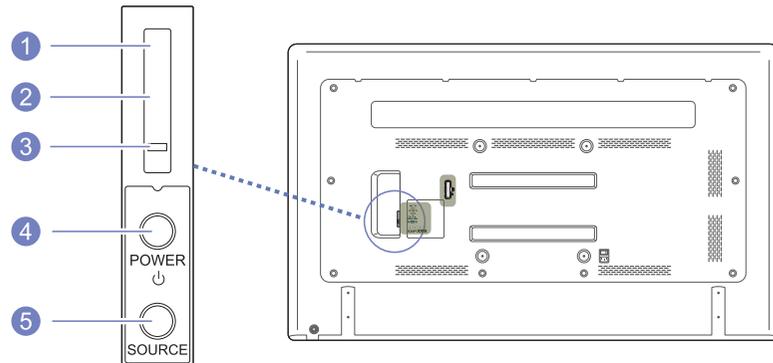
PIM

Connects to a PIM. (Refer to the PIM user manual for details.)

External sensor KIT

— The External sensor KIT has a remote-control sensor, a brightness sensor and function keys. If mounting the display onto a wall, you can move the External sensor KIT to the side of the display.

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

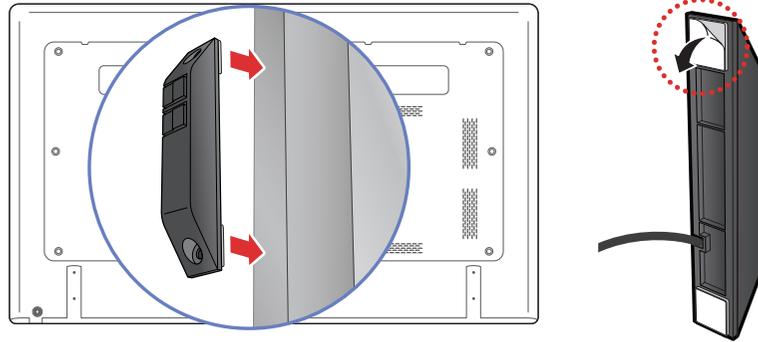


Buttons

Description

1	Remote Control Sensor	Aim the remote control towards this spot on the LCD Display. — Keep the area between the remote sensor and remote control obstacle-free.
2	Light sensor	Automatically detects the intensity of ambient light around a selected display and adjusts the screen brightness.
3	Power indicator	Turns off in power-on mode and blinks green in power-saving mode.
4	POWER button	Use this button for turning the LCD Display on and off.
5	SOURCE button	Switches from PC mode to Video mode. Selects the input source that an external device is connected to.

Attaching the External sensor KIT to the sid



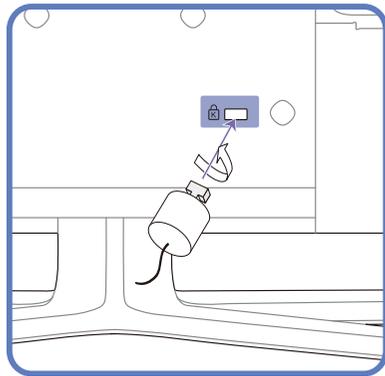
- This External sensor KIT can be attached to any part of the display using the double-sided tape provided with the sensor.
- The External sensor KIT can also be attached to a wall near the display.
- Do not attach the External sensor KIT to the display if the display does not have plastic or metal sides. The display can be damaged.

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.

To lock an anti-theft locking device:

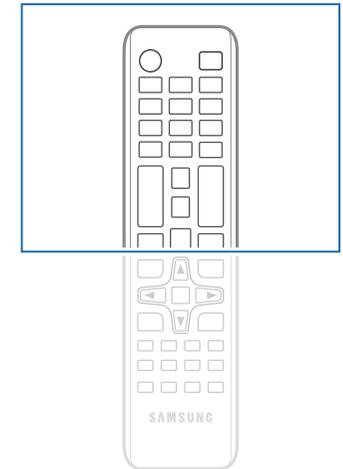
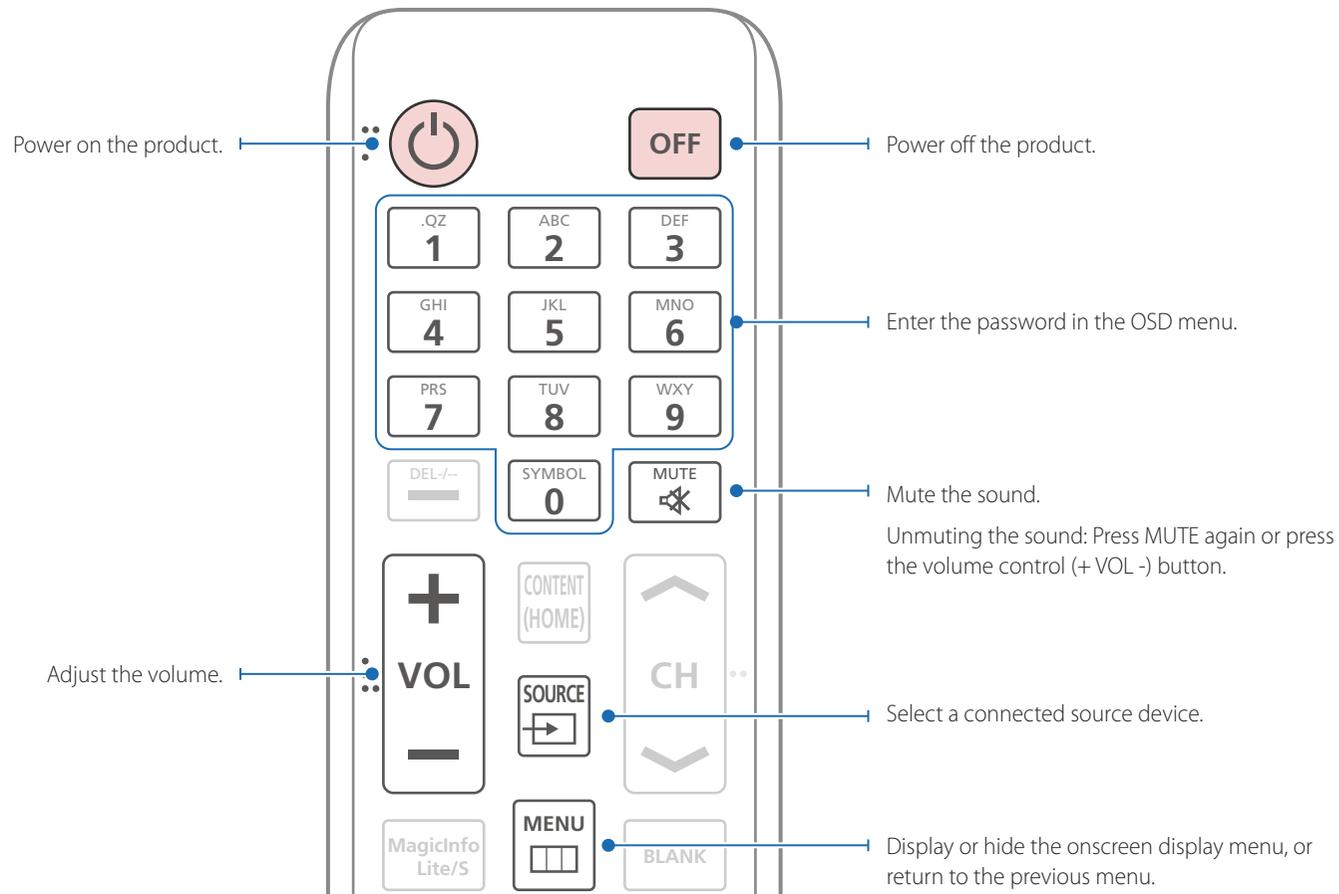
- Stand: Sold separately



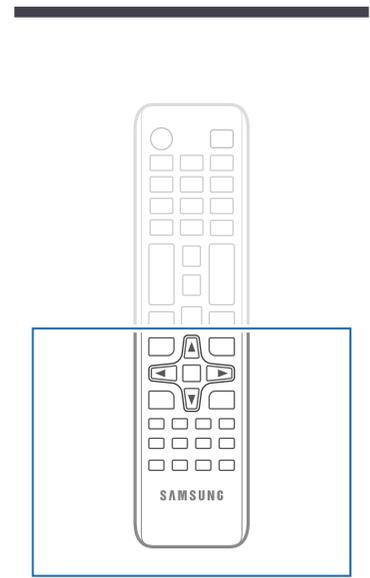
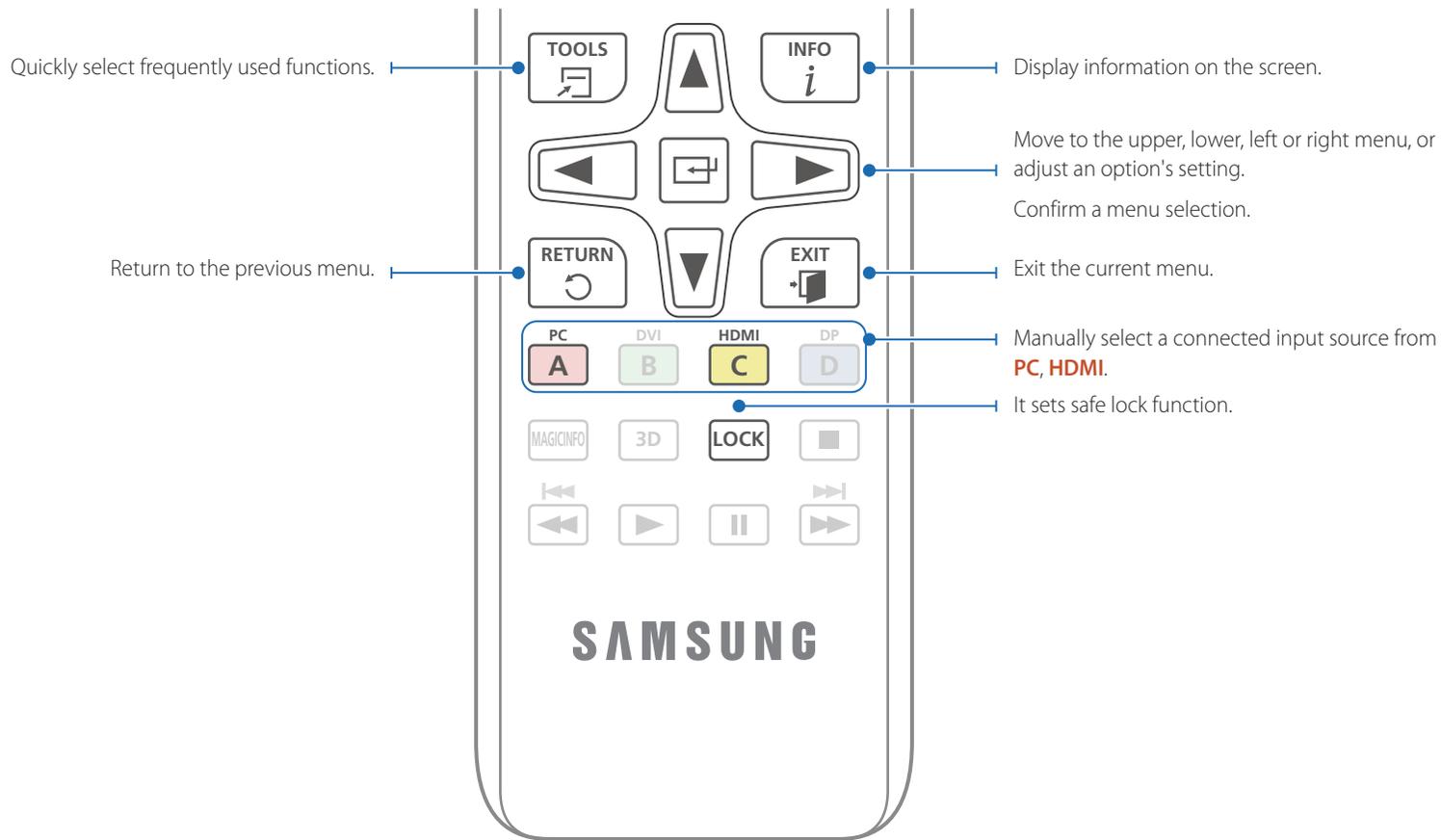
- 1 Fix the cable of your anti-theft locking device to a heavy object such as a desk.
- 2 Put one end of the cable through the loop on the other end.
- 3 Insert the locking device into the anti-theft lock slot at the back of the product.
- 4 Lock the locking device.
 - An anti-theft locking device can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

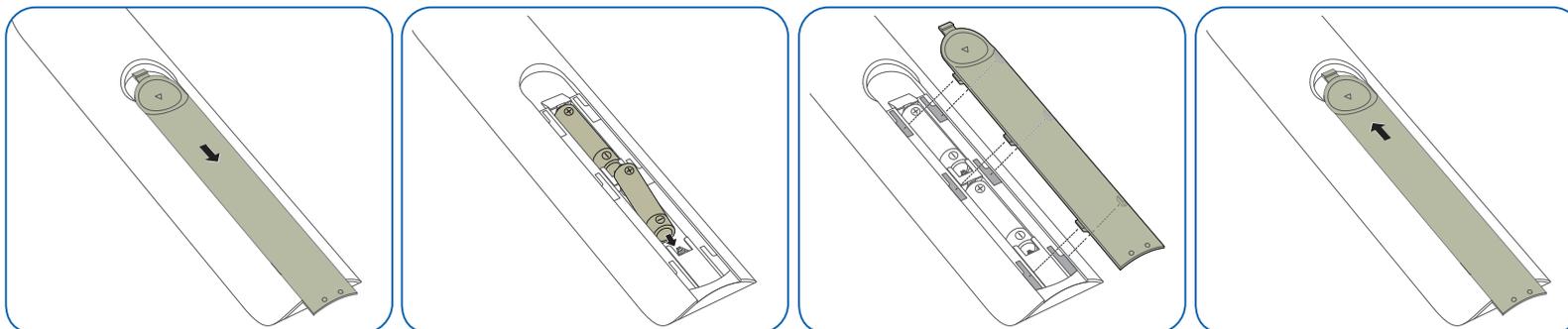


- Remote control button functions may differ for different products.

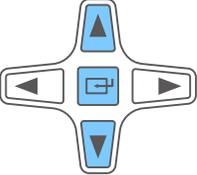
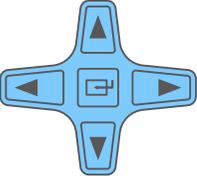
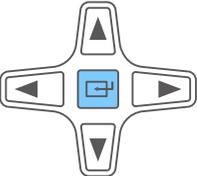


- Remote control button functions may differ for different products.

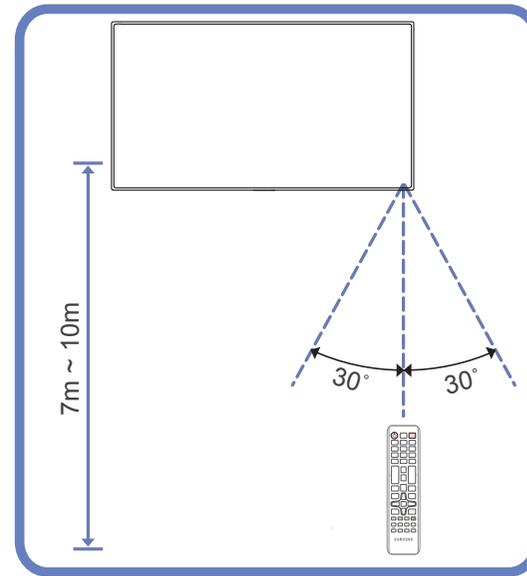
To place batteries in the remote control



Adjusting the OSD with the Remote Control

Buttons	Description
	1 Open the OSD menu.
	2 Select from Picture, Sound, Applications, System or Support in the displayed OSD menu screen.
	3 Change settings as desired.
	4 Finish setting.
	5 Close the onscreen display (OSD) menu.

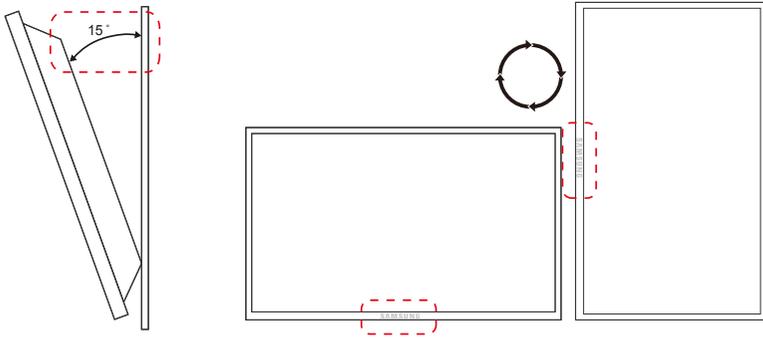
Remote Control Reception Range



Use the remote control within 7m to 10m 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.

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

A Minimum 40 mm

B Ambient temperature: Under 35°C

- When installing the product on a perpendicular wall, allow at least 40 mm of space between the product and wall surface for ventilation and ensure that the ambient A temperature is kept below 35°C.

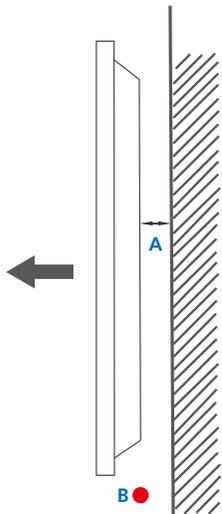


Figure 1.1 Side view

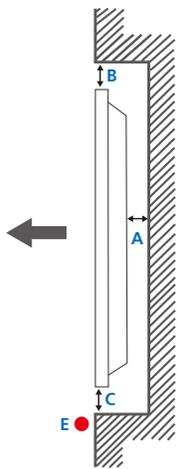
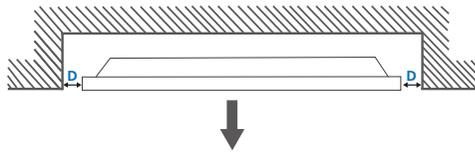


Figure 1.2 Side view

Figure 1.3 Side view



Installation on an Indented Wall

— Contact Samsung Customer Service Center for further details.

Plane view

A Minimum 40 mm

B Minimum 70 mm

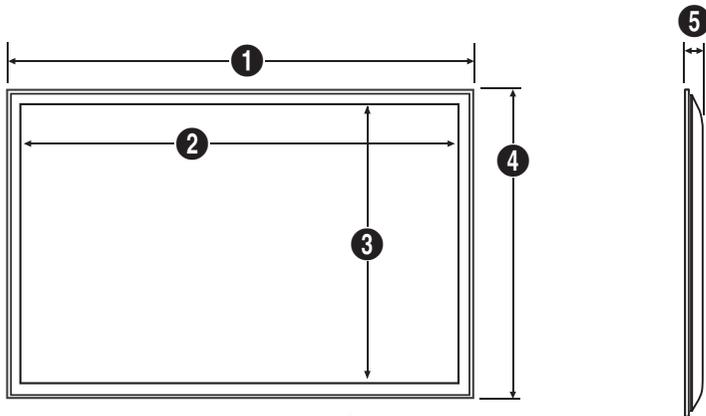
C Minimum 50 mm

D Minimum 50 mm

E Ambient temperature: Under 35°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 35°C.

Dimensions



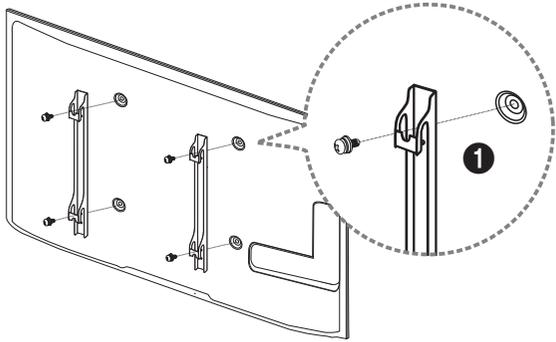
Unit: mm

Model name	1	2	3	4	5
ED65C	1467.5	1431.4	806.5	848.0	65.0
ED75C	1675.0	1653.3	931.3	958.5	65.0

— All drawings are not necessarily to scale. Some dimensions are subject to change without prior notice.

Refer to the dimensions prior to performing installation of your product. Not responsible for typographical or printed errors.

Installing the Wall Mount



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.

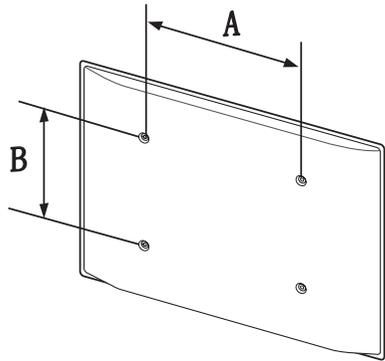
We recommend you contact a technician for assistance when installing the wall mount bracket.

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

Wall Mount Kit Specifications (VESA)

— Install your wall mount on a solid wall perpendicular to the floor. Before attaching the wall mount to surfaces other than plaster board, please contact your nearest dealer for additional information.

If you install the product on a slanted wall, it may fall and result in severe personal injury.



- 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 a non-VESA or non-specified 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

Model name	VESA screw hole specs (A * B) in millimeters	Standard Screw	Quantity
ED65C	400 x 400	M8, L32	4 EA
ED75C			

— Do not install your Wall Mount Kit while your product is turned on. It may result in personal injury due to electric shock.

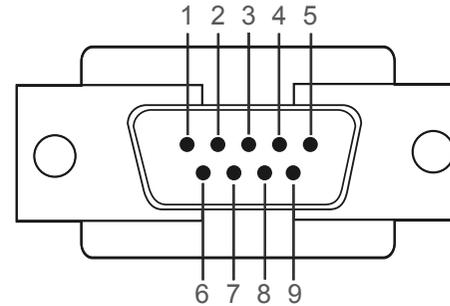
Remote Control (RS232C)

Cable Connection

RS232C Cable

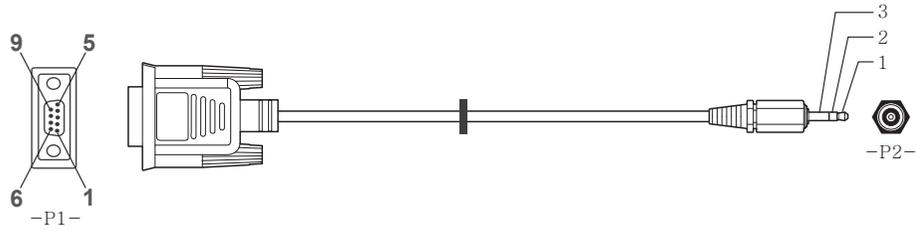
Interface	RS232C (9 pins)
Pin	TxD (No.2), RxD (No.3), GND (No.5)
Bit rate	9600 bps
Data bits	8 bit
Parity	None
Stop bit	1 bit
Flow control	None
Maximum length	15 m (only shielded type)

- Pin assignment



Pin	Signal
1	Detect data carrier
2	Received data
3	Transmitted data
4	Prepare data terminal
5	Signal ground
6	Prepare data set
7	Send request
8	Clear to send
9	Ring indicator

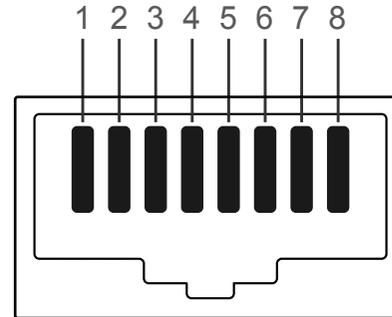
- RS232C cable
Connector: 9-Pin D-Sub to Stereo Cable



-P1-		-P1-		-P2-		-P2-	
Female	Rx	2	----->	3	Tx	STEREO	
	Tx	3	<-----	2	Rx	PLUG	
	Gnd	5	-----	5	Gnd	(3.5ø)	

LAN Cable

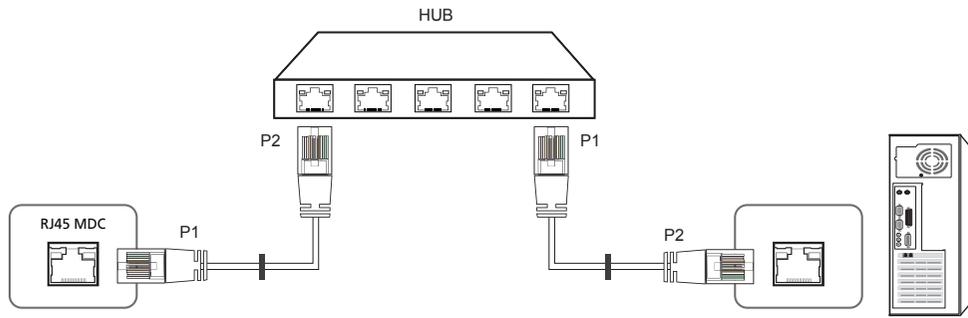
- Pin assignment



Pin No	Standard Color	Signal
1	White and orange	TX+
2	Orange	TX-
3	White and green	RX+
4	Blue	NC
5	White and blue	NC
6	Green	RX-
7	White and brown	NC
8	Brown	NC

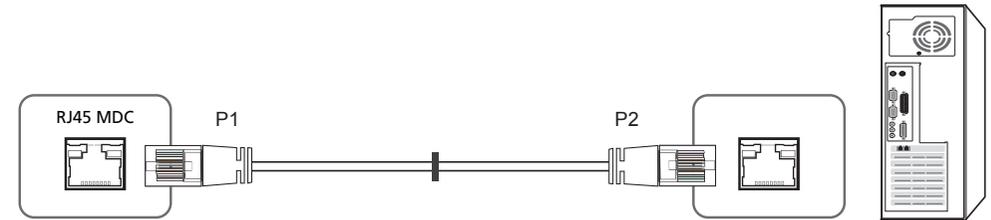
- Connector: RJ45

Direct LAN cable (PC to HUB)



Signal	P1		P2	Signal
TX+	1	<----->	1	TX+
TX-	2	<----->	2	TX-
RX+	3	<----->	3	RX+
RX-	6	<----->	6	RX-

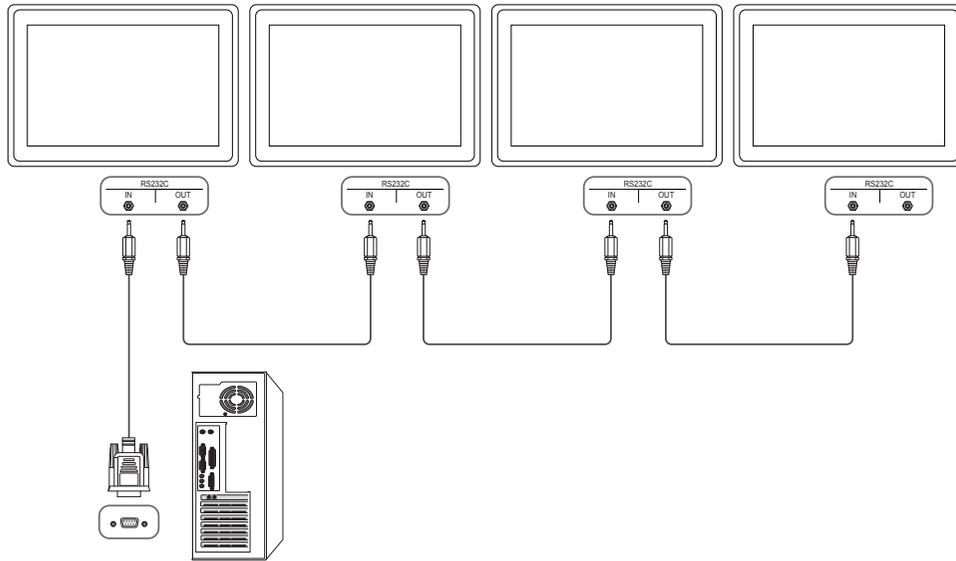
Cross LAN cable (PC to PC)



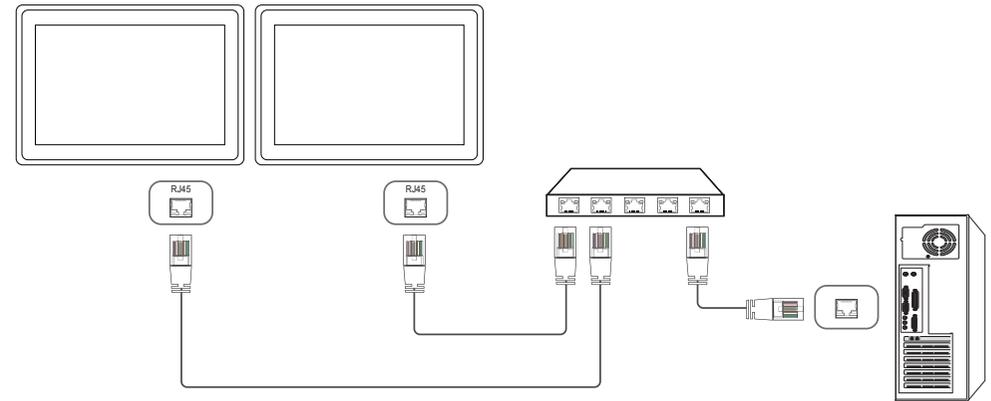
Signal	P1		P2	Signal
TX+	1	<----->	3	RX+
TX-	2	<----->	6	RX-
RX+	3	<----->	1	TX+
RX-	6	<----->	2	TX-

Connection

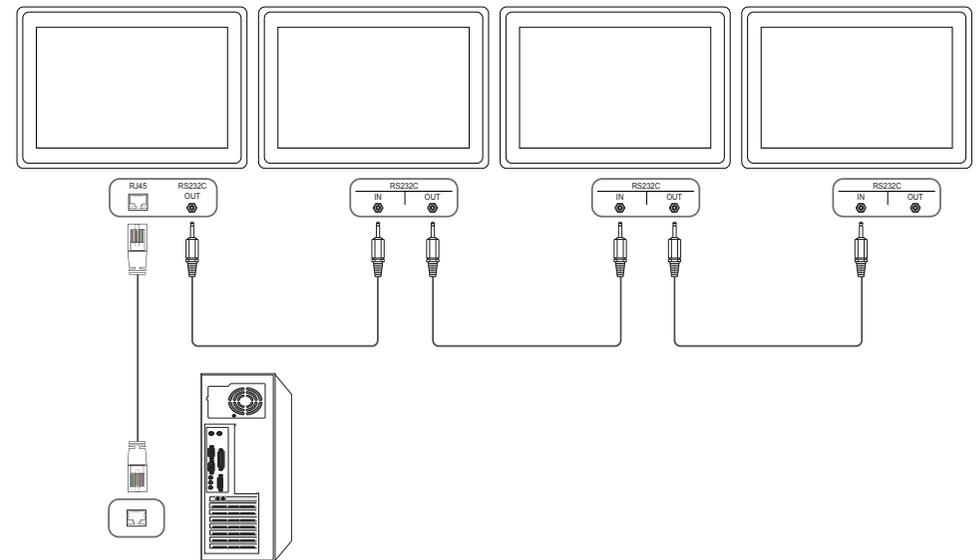
- Connection 1



- Connection 2



- Connection 3



Control Codes

Viewing control state (Get control command)

Header	Command	ID	Data length	Checksum
0xAA	Command type		0	

Controlling (Set control command)

Header	Command	ID	Data length	Data	Checksum
0xAA	Command type		1	Value	

Command

No.	Command type	Command	Value range
1	Power control	0x11	0~1
2	Volume control	0x12	0~100
3	Input source control	0x14	-
4	Screen mode control	0x18	-
5	Screen size control	0x19	0~255
6	PIP on/off control	0x3C	0~1
7	Auto adjustment control (PC and BNC only)	0x3D	0
8	Video wall mode control	0x5C	0~1
9	Safety Lock	0x5D	0~1

No.	Command type	Command	Value range
10	Video Wall On	0x84	0~1
11	Video Wall User Control	0x89	-

- All communications take place in hexadecimal. 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

Header	Command	ID	Data length	Data 1	Checksum
0xAA	0x11		1	"Power"	

Header	Command	ID	Data length	Data 1	12
0xAA	0x11		1	1	

- 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)

Header	Command	ID	Data length	Checksum
0xAA	0x11		0	

- Setting power ON/Off (Set Power ON / OFF)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x11		1	"Power"	

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

1: Power ON

0: Power OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x11	"Power"	

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

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x11	"ERR"	

"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)

Header	Command	ID	Data length	Checksum
0xAA	0x12		0	

- Setting the volume (Set Volume)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x12		1	"Volume"	

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

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x12	"Volume"	

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

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x12	"ERR"	

"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)

Header	Command	ID	Data length	Checksum
0xAA	0x14		0	

- Setting the input source (Set Input Source)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x14		1	"Input Source"	

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

0x14	PC
0x18	DVI
0x0C	Input source
0x08	Component
0x20	MagicInfo
0x1F	DVI_video
0x30	RF(TV)
0x40	DTV
0x21	HDMI1
0x22	HDMI1_PC
0x23	HDMI2

0x24	HDMI2_PC
0x25	DisplayPort

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

— This model does not support HDMI1, HDMI1_PC, HDMI2 and HDMI2_PC ports.

— **MagicInfo** is only available with models that contain the **MagicInfo** function.

— RF(TV), DTV are only available with models that include a TV.

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x14	"Input Source"	

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

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x14	"ERR"	

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

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.

— This control can only be used on models that include a TV.

- Viewing screen status (Get Screen Mode Status)

Header	Command	ID	Data length	Checksum
0xAA	0x18		0	

- Setting the picture size (Set Picture Size)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x18		1	"Screen Mode"	

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

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

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x18	"Screen Mode"	

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

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x18	"ERR"	

"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)

Header	Command	ID	Data length	Checksum
0xAA	0x19		0	

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x19	"Screen Size"	

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

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x19	"ERR"	

"ERR": A code showing what error has occurred

PIP On/Off control

- Function
The PIP mode of a product can be turned on or off using a PC.
 - Only available on models that have the PIP function.
 - The mode cannot be controlled if **Video Wall** is set to **On**.
 - This function is not available in **MagicInfo**.
- Viewing PIP on/off state (Get the PIP ON / OFF Status)

Header	Command	ID	Data length	Checksum
0xAA	0x3C		0	

- Setting PIP on/off (Set the PIP ON / OFF)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x3C		1	"PIP"	

"PIP": A code used to turn the PIP mode of a product on or off

1: PIP ON

0: PIP OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3C	"PIP"	

"PIP": A code used to turn the PIP mode of a product on or off

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3C	"PIP"	

"ERR": A code showing what error has occurred

Auto adjustment control (PC and BNC only)

- Function
Automatically adjust the PC system screen using a PC.
- Viewing auto adjustment state (Get Auto Adjustment Status)
None
- Setting auto adjustment (Set Auto Adjustment)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x3D		1	"Auto Adjustment"	

"Auto Adjustment" : 0x00 (at all times)

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3D	"Auto Adjustment"	

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x3D	"ERR"	

"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	

- Setting the video wall (Set Video Wall Mode)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x5C		1	"Video Wall Mode"	

"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	"Video Wall Mode"	

"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'	0x5C	"ERR"	

"ERR": A code showing what error has occurred

Safety Lock

- Function
 PC can be used to turn the **Safety Lock** 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	

- Enabling or disabling safety lock (Set Safety Lock Enable / Disable)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x5D		1	"Safety Lock"	

"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	"Safety Lock"	

"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	"ERR"	

"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

Header	Command	ID	Data length	Checksum
0xAA	0x84		0	

- Set Video Wall On/Off

Header	Command	ID	Data length	Data	Checksum
0xAA	0x84		1	V.Wall_On	

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

1: Video Wall ON

0: Video Wall OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x84	V.Wall_On	

V.Wall_On : Same as above

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x84	ERR	

"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

Header	Command	ID	Data length	Checksum
0xAA	0x89		0	

- Set Video Wall

Header	Command	ID	Data length	Val1	Val2	Checksum
0xAA	0x89		2	Wall_Div	Wall_SNo	

Wall_Div: Video Wall Divider code assigned to the product

10x10 Video Wall Model

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Off	0x00														
1	0x11	0x12	0x13	0x14	0x15	0x16	0x17	0x18	0x19	0x1A	0x1B	0x1C	0x1D	0x1E	0x1F
2	0x21	0x22	0x23	0x24	0x25	0x26	0x27	0x28	0x29	0x2A	0x2B	0x2C	0x2D	0x2E	0x2F
3	0x31	0x32	0x33	0x34	0x35	0x36	0x37	0x38	0x39	0x3A	0x3B	0x3C	0x3D	0x3E	0x3F
4	0x41	0x42	0x43	0x44	0x45	0x46	0x47	0x48	0x49	0x4A	0x4B	0x4C	0x4D	0x4E	0x4F
5	0x51	0x52	0x53	0x54	0x55	0x56	0x57	0x58	0x59	0x5A	0x5B	0x5C	0x5D	0x5E	0x5F
6	0x61	0x62	0x63	0x64	0x65	0x66	0x67	0x68	0x69	0x6A	0x6B	0x6C	0x6D	0x6E	0x6F
7	0x71	0x72	0x73	0x74	0x75	0x76	0x77	0x78	0x79	0x7A	0x7B	0x7C	0x7D	0x7E	N/A
8	0x81	0x82	0x83	0x84	0x85	0x86	0x87	0x88	0x89	0x8A	0x8B	0x8C	N/A	N/A	N/A
9	0x91	0x92	0x93	0x94	0x95	0x96	0x97	0x98	0x99	0x9A	0x9B	N/A	N/A	N/A	N/A
10	0xA1	0xA2	0xA3	0xA4	0xA5	0xA6	0xA7	0xA8	0xA9	0xAA	N/A	N/A	N/A	N/A	N/A
11	0xB1	0xB2	0xB3	0xB4	0xB5	0xB6	0xB7	0xB8	0xB9	N/A	N/A	N/A	N/A	N/A	N/A
12	0xC1	0xC2	0xC3	0xC4	0xC5	0xC6	0xC7	0xC8	N/A						
13	0xD1	0xD2	0xD3	0xD4	0xD5	0xD6	0xD7	N/A							
14	0xE1	0xE2	0xE3	0xE4	0xE5	0xE6	0xE7	N/A							
15	0xF1	0xF2	0xF3	0xF4	0xF5	0xF6	N/A								

10x10 Video Wall Model : (1 ~ 100)

Set Number	Data
1	0x01
2	0x02
...	...
99	0x63
100	0x64

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Val2	Checksum
0xAA	0xFF		4	'A'	0x89	Wall_Div	Wall_SNo	

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x89	ERR	

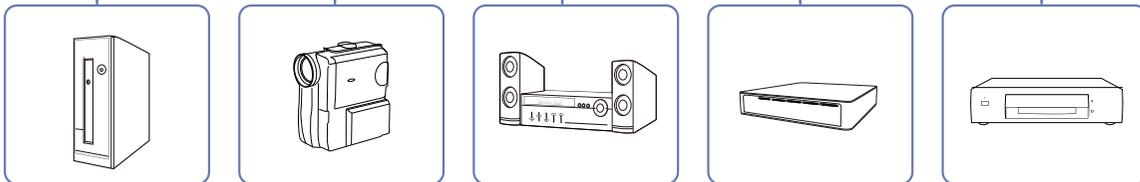
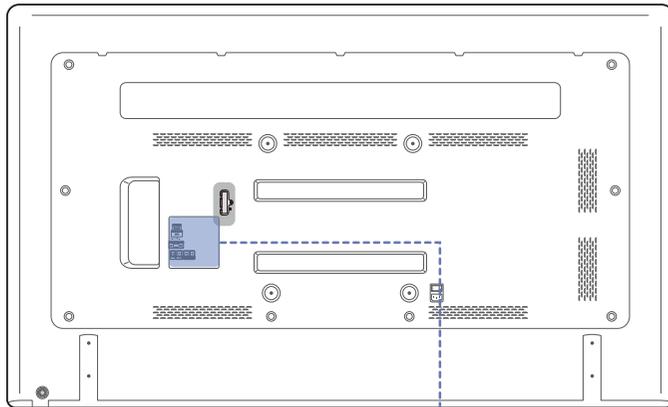
"ERR": A code showing what error has occurred

Chapter 03

Connecting and Using a Source Device

Before Connecting

Check the following before you connect this product with other devices. Devices that can be connected to this product include PCs, camcorders, speakers, set top boxes and DVD/Blu-ray Disc players.



Pre-connection Checkpoints

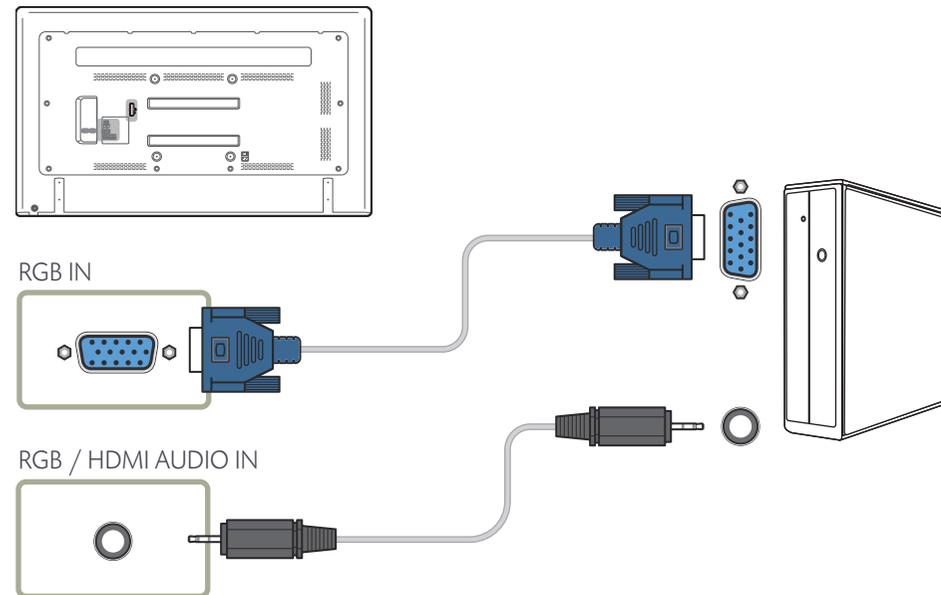
- Before connecting a source device, read the user manual provided with it.
The number and locations of ports on source devices may differ from device to device.
- Do not connect the power cable until all connections are completed.
Connecting the power cable during connection may damage the product.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

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.

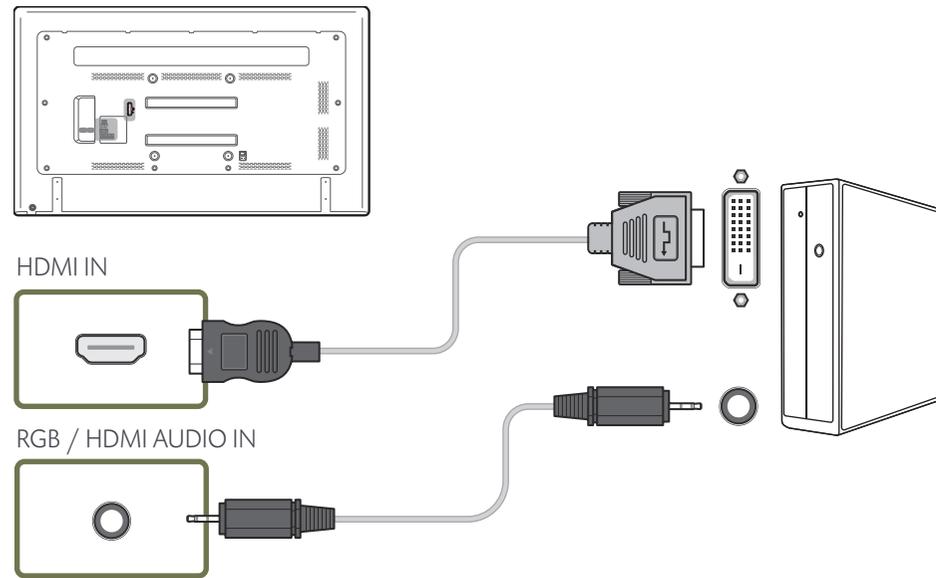
— Connecting parts may differ in different products.

Connection using the D-SUB cable (Analog type)

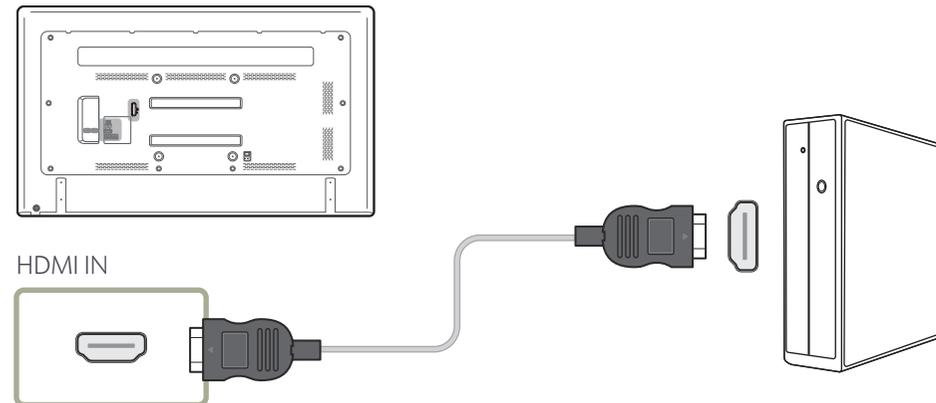


Connection Using an HDMI-DVI Cable

— When you connect a PC to the product using an HDMI-DVI cable, set **Edit Name** to **DVI PC** to access video and audio content stored on the PC.



Connection Using an HDMI Cable



Changing the Resolution

- Adjust the resolution and refresh rate in Control Panel on your PC to obtain optimum picture quality.
- The picture quality of TFT-LCDs may degrade if the optimum resolution is not selected.

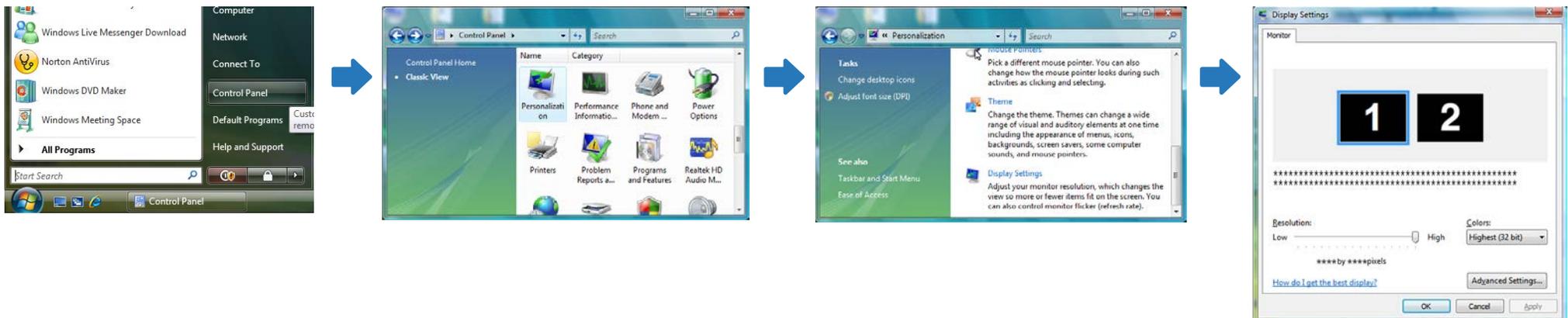
Changing the Resolution on Windows XP

Go to **Control Panel** → **Display** → **Settings**, and change the resolution.



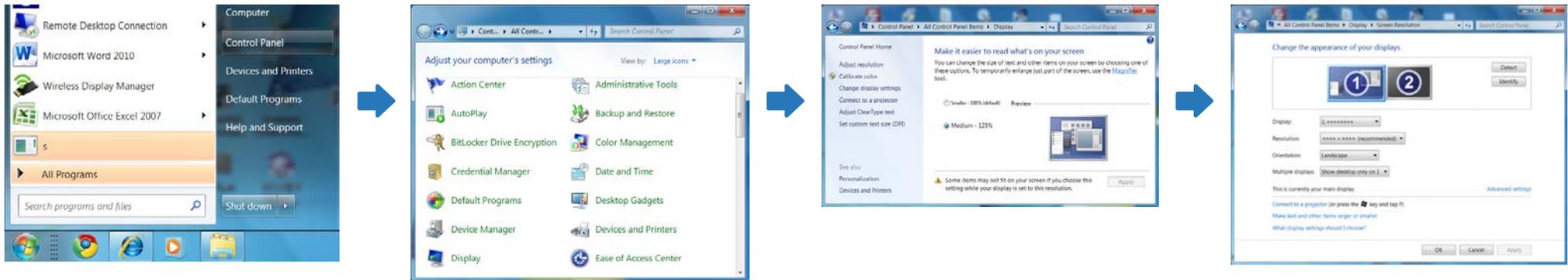
Changing the Resolution on Windows Vista

Go to **Control Panel** → **Personal Settings** → **Display Settings**, and change the resolution.



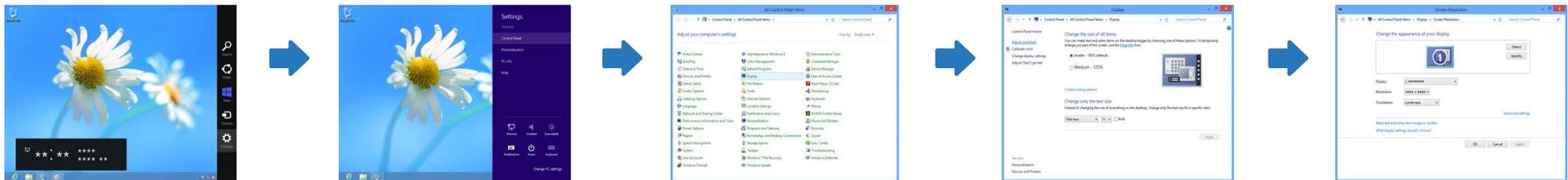
Changing the Resolution on Windows 7

Go to **Control Panel** → **Display** → **Screen Resolution**, and change the resolution.



Changing the Resolution on Windows 8

Go to **Settings** → **Control Panel** → **Display** → **Screen Resolution**, and change the resolution.

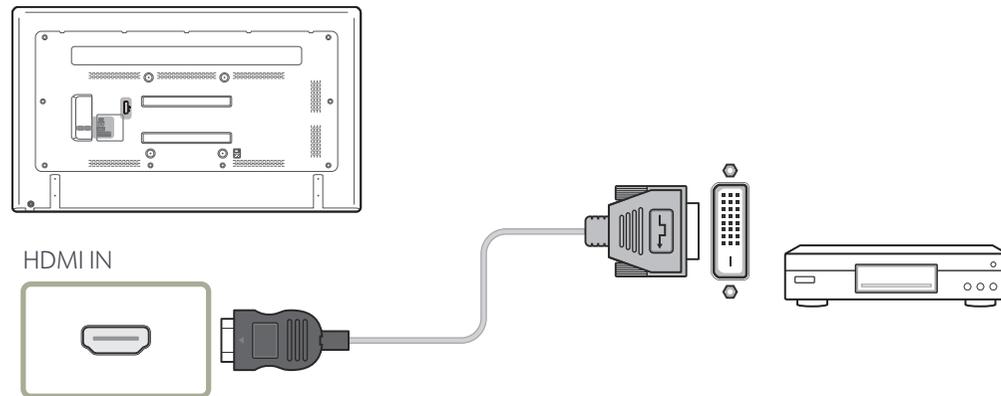


Connecting to a Video Device

- 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

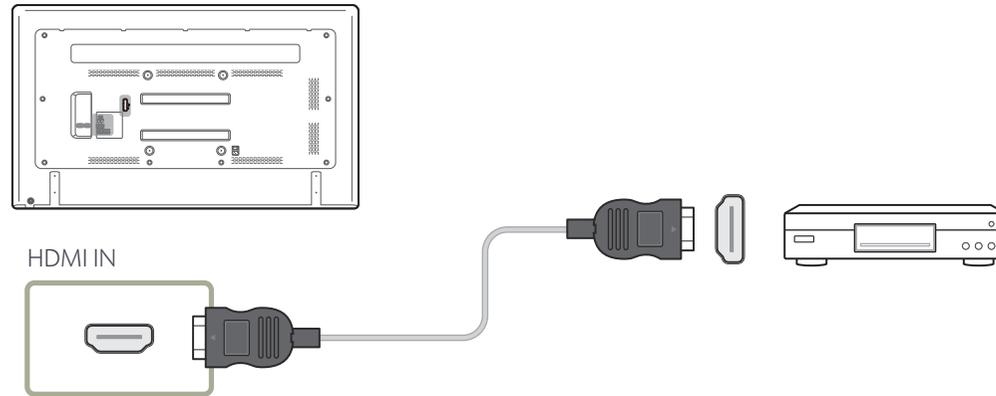
- Audio will not be enabled if the product is connected to a video device using an HDMI-DVI cable. To resolve this, additionally connect an audio cable to the audio ports on the product and video device. When you connect a video device to the product using an HDMI-DVI cable, set **Edit Name** to **DVI Devices** to access video and audio content stored on the video device.
- Supported resolutions include 1080p (50/60Hz), 720p (50/60Hz), 480p, and 576p.



Connection Using an HDMI Cable

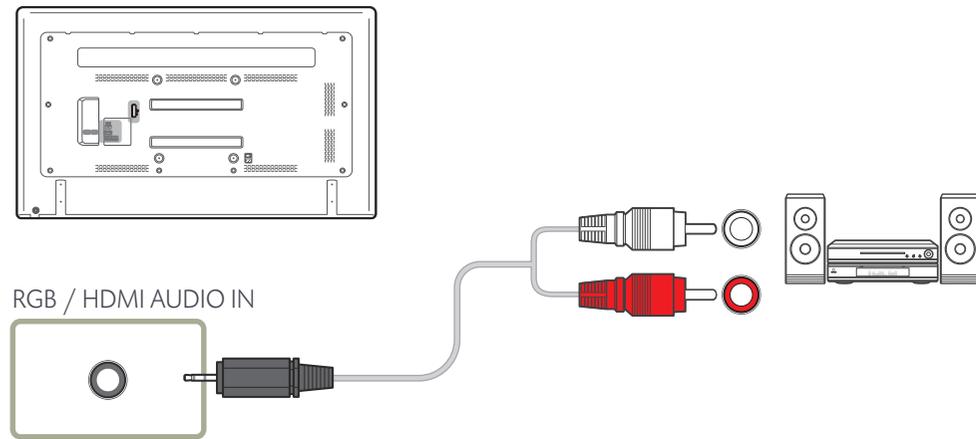
Using an HDMI cable or HDMI to DVI Cable (up to 1080p)

- 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.
 - To connect the product to a digital device that does not support HDMI output, use an HDMI-DVI and audio cables.
- 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 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.

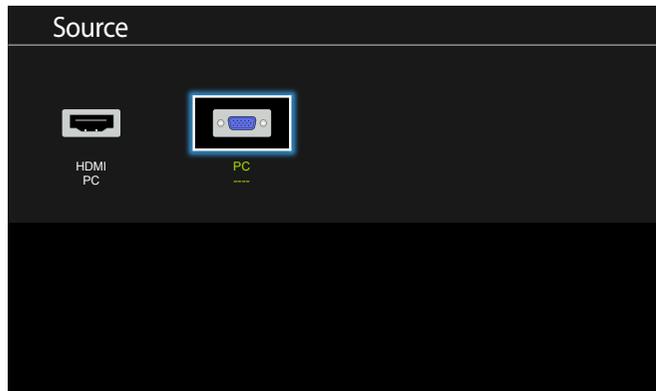


Connecting to an Audio System

Connecting parts may differ in different products.



Changing the Input source



— The displayed image may differ depending on the model.

Source

MENU  → **Applications** → **Source List** → **ENTER** 

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.

Chapter 04

Using MDC

MDC (Multiple Display Control) is an application that allows you to easily control multiple display devices simultaneously using a PC.

Configuring Settings for Multi Control

MENU  → **System** → **Multi Control** → ENTER 

Assign an individual ID to your product.

Configuring settings for Multi Control

- **ID Setup**
Assign an ID to a set. (Range: 0~99)
Press ▲/▼ to select a number, and press .
- **ID Input**
Enter the ID number of the product connected to the input cable for input signal reception.
Enter the number you want using the number buttons on the remote control.

MDC Program Installation/Uninstallation

Installation

- 1 Insert the installation CD into the CD-ROM drive.
- 2 Click the **MDC Unified** installation program.
- 3 Select a language for installation. Next, click **"OK"**.
- 4 When the **"Welcome to the InstallShield Wizard for MDC_Unified"** screen appears, click **"Next"**.
- 5 In the **"License Agreement"** window displayed, select **"I accept the terms in the license agreement"** and click **"Next"**.
- 6 In the displayed **"Customer Information"** window, fill out all the information fields and click **"Next"**.
- 7 In the displayed **"Destination Folder"** window, select the directory path you want to install the program in and click **"Next"**.
- 8 In the displayed **"Ready to Install the Program"** window, check the directory path to install the program in and click **"Install"**.
- 9 Installation progress will be displayed.
- 10 Click **"Finish"** in the displayed **"InstallShield Wizard Complete"** window.
- 11 The **MDC Unified** shortcut icon will be created on the desktop after installation.

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**.

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

If a software installation window is not displayed on the main screen, install with the **MDC Unified** execution file in the **MDC** folder on the CD.

If the directory path is not specified, the program will be installed in the default directory path.

Select **"Launch MDC Unified"** and click **"Finish"** to run the MDC program immediately.

-
- 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.

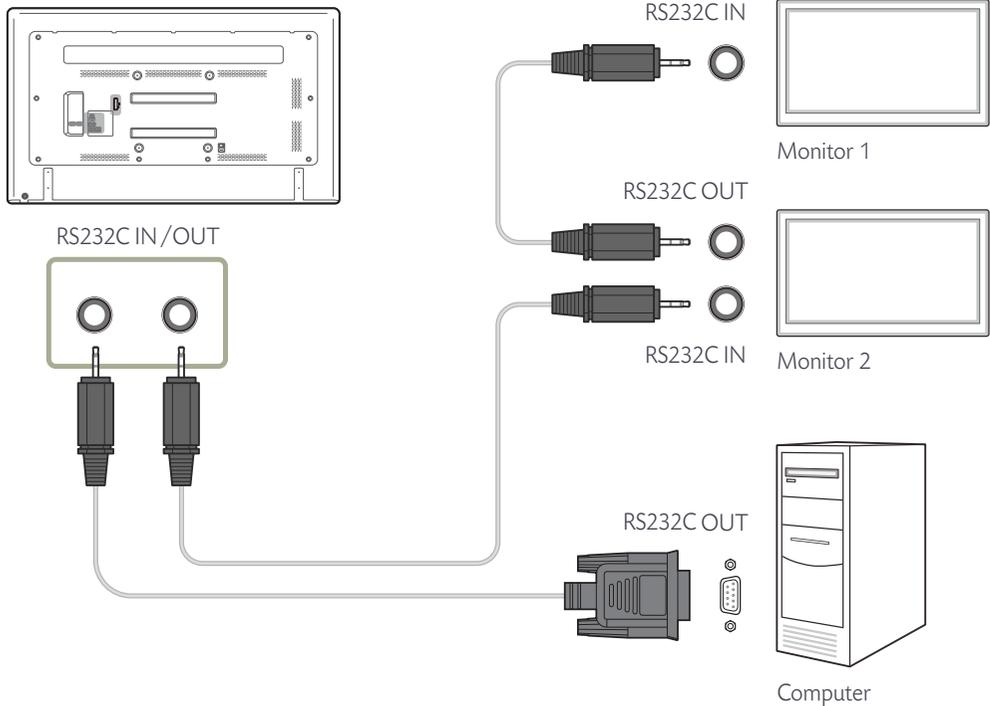
What is MDC?

Multiple display control "MDC" is an application that allows you to easily control multiple display devices simultaneously using a PC.

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.

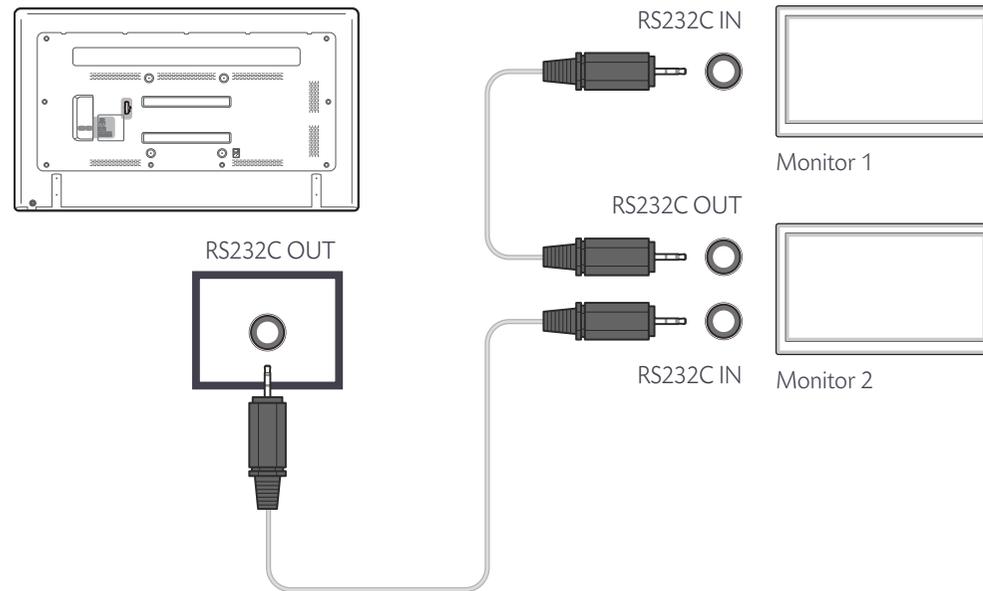


Using MDC via Ethernet

Enter the IP for the primary display device and connect the device to the PC. One display device can connect to another using an RS-232C serial cable.

Connection using a cross LAN cable

Multiple products can be connected using the **RS232C IN / OUT** port on the product.



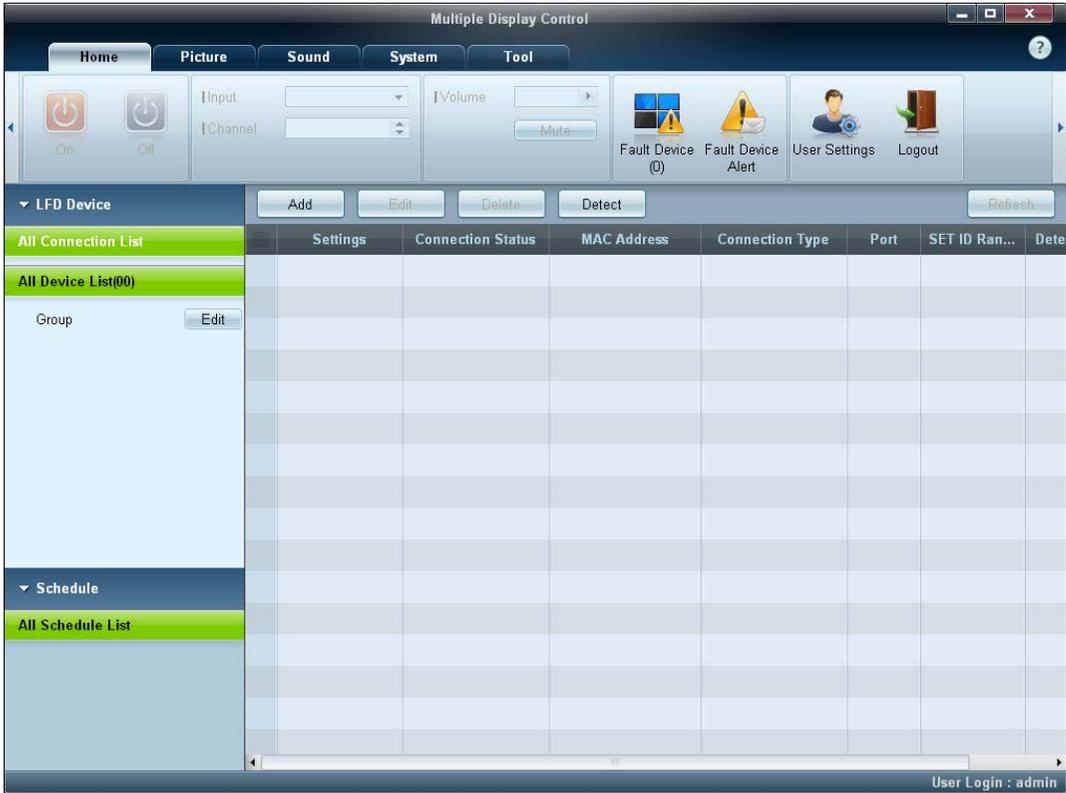
Connection Management

Connection management includes the **Connection list** and **Connection list** modification options.

Connection list - Connection list shows the details of the connections such as connection setting (IP/COM, Port No, MAC, and Connection Type), connection status, **Set ID Range**, and detected devices.

Each connection can contain a maximum of 100 devices connected in serial daisy-chain fashion. All the LFDs detected in a connection are displayed in the Device list, where the user can make groups and send commands to detected devices.

Connection list modification options - Connection modification options includes **Add**, **Edit**, **Delete**, and **Refresh**.



User Login

Launching the program displays the user login window.

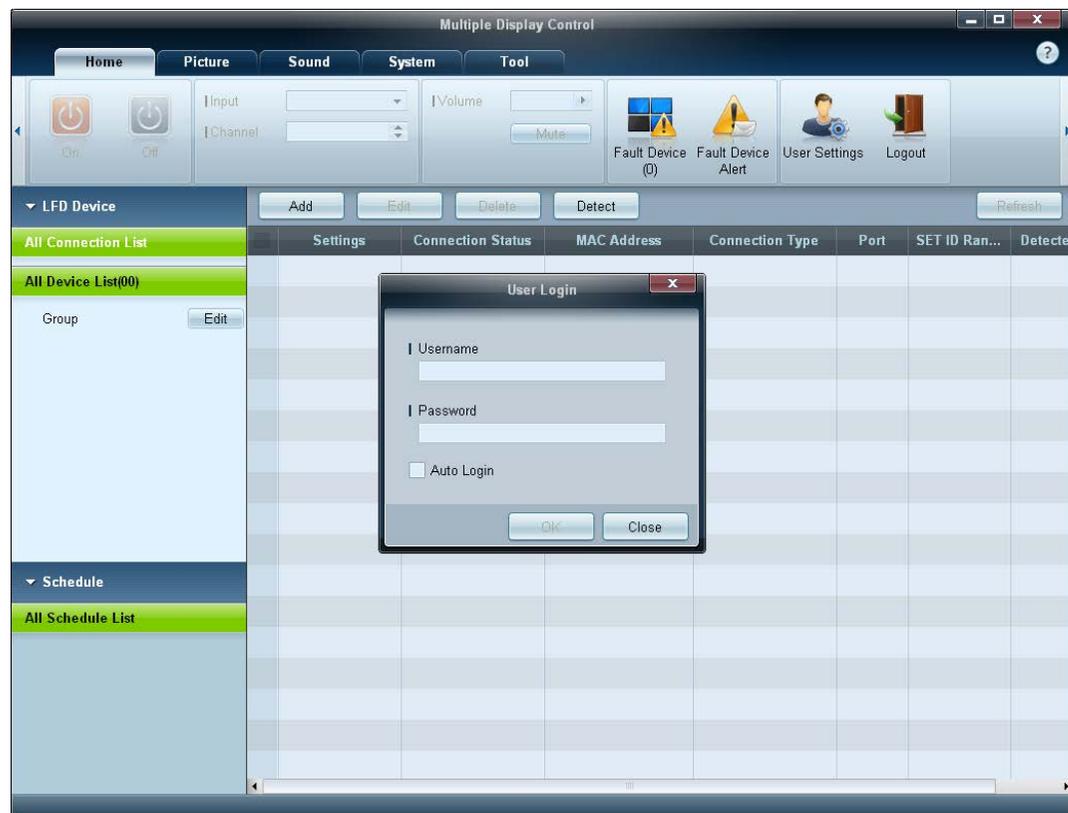
The initial login ID (**Username: admin**) and password (**password: admin**) are set to **admin**.

— After logging in for the first time, make sure to change the password to ensure security.

— To change the password, go to **Home > User Settings**.

After you are logged in, [**User Login : admin**] appears at the right bottom of the program.

To log in automatically when the program restarts, select the **Auto Login** checkbox in the **User Login** window.



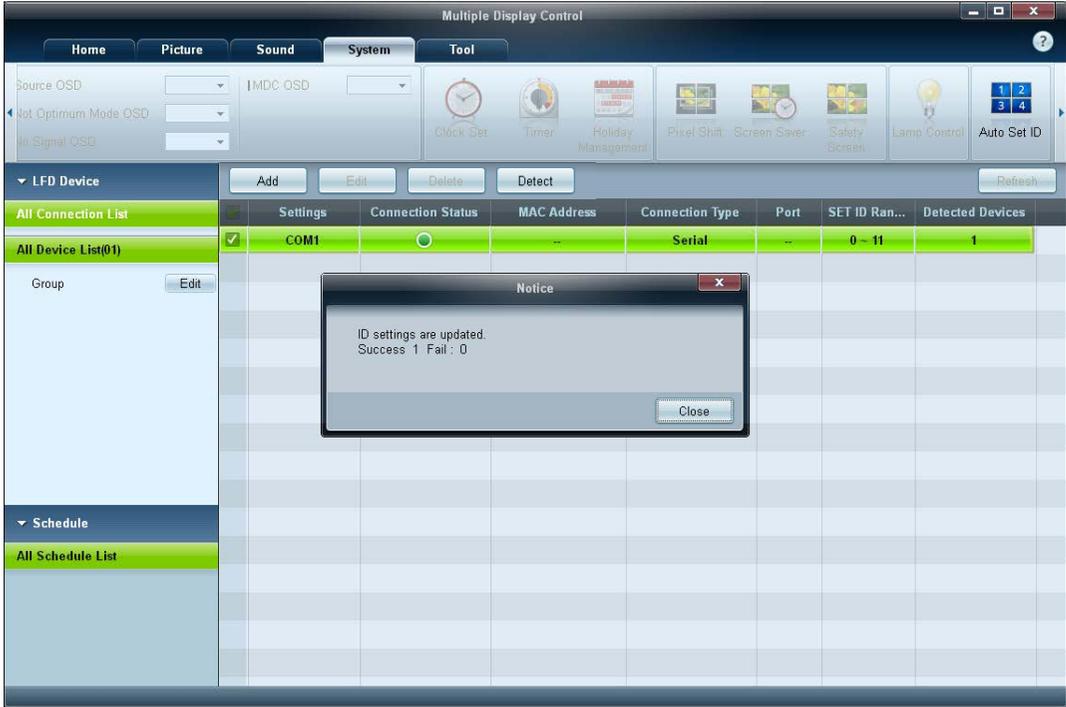
Auto Set ID

Auto Set ID feature assigns a Set ID for all the LFDs connected in daisy-chain of a selected connection.

There can be a maximum of 100 LFDs in a connection.

The Set ID is assigned sequentially in the daisychain running from 1 to 99, and then finally to Set ID 0.

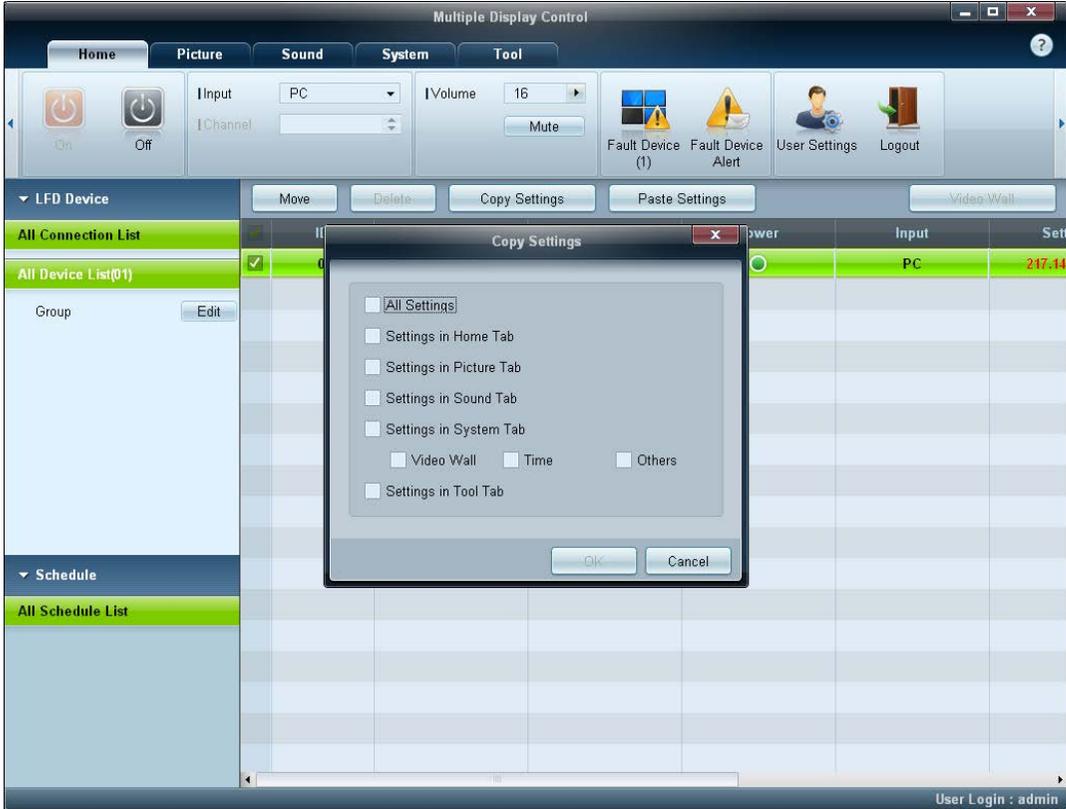
— ID for the last 100th LFD is set to 0.



Cloning

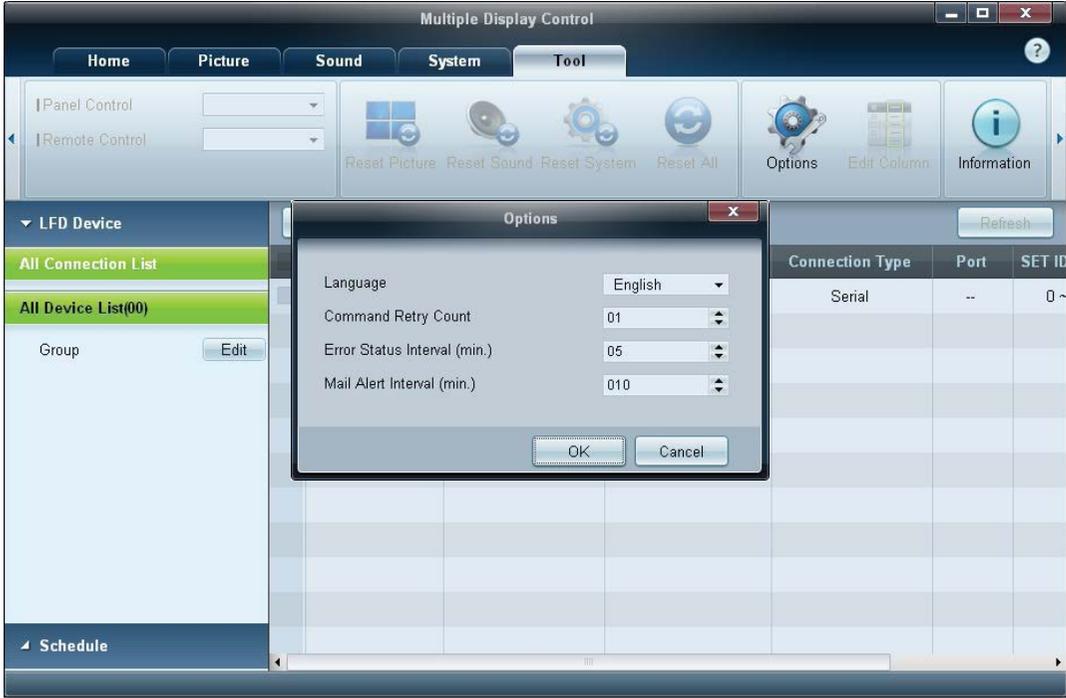
Using the **Cloning** feature, you can copy the setting of one LFD and apply it to multiple selected LFDs. You can select specific tab categories or all tab categories for cloning, using the copy setting option window.

— To delete the settings you have configured, click the **Paste Settings** button.

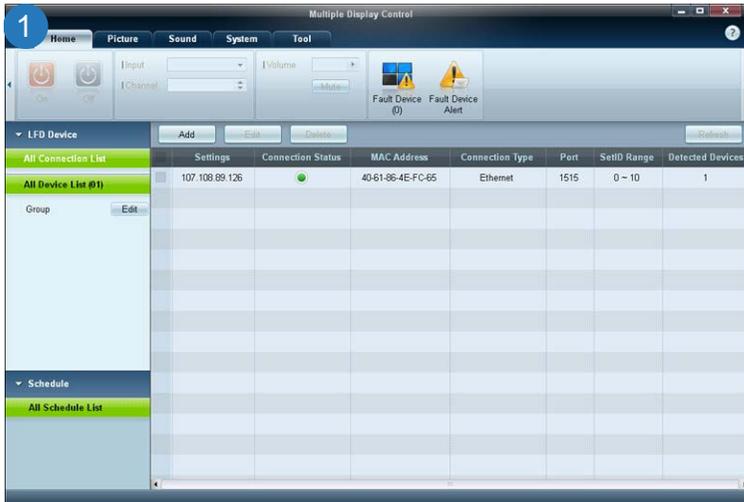


Command Retry

This feature is used to specify the maximum number of times the MDC command will be retried in case of there being no reply or a corrupted reply from an LFD.
The retry count value can be set using the MDC options window.
The retry count value must be between 1-10. The default value is 1.



Getting Started with MDC

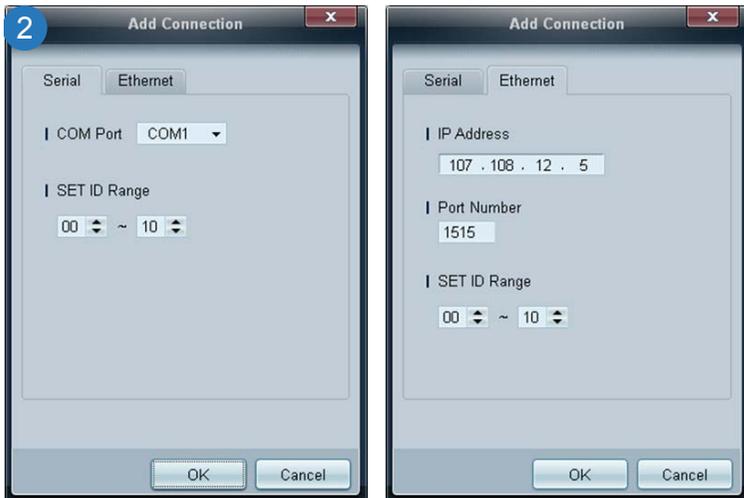


1 To start the program, click **Start** → **Programs** → **Samsung** → **MDC Unified**.

The login window appears after the MDC program is launched.

Enter the user ID and password.

- The default user ID and password are **admin**.
- Make sure to change the password after the first login.

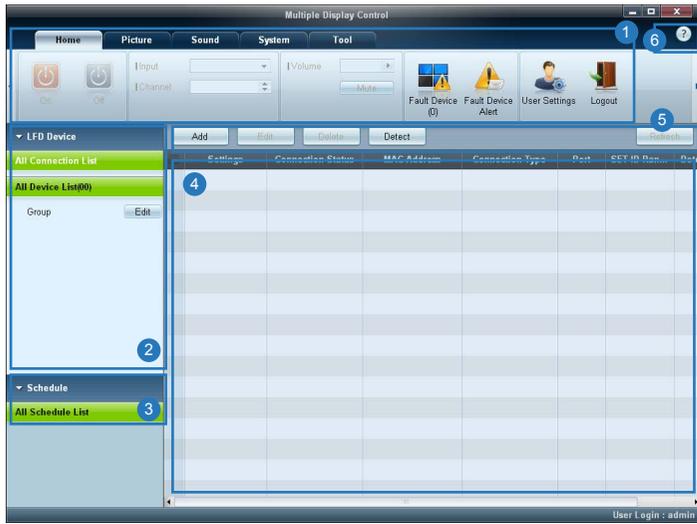


2 Click **Add** to add a display device.

SET ID Range: Select a range of the unique ID assigned to a monitor.

- If the connection is established via RS232C, go to **Serial** and specify the **COM Port**.
- If the connection is established via **Ethernet**, enter the IP that was entered for the display device.

Main Screen Layout



- | | |
|-----------------------|---|
| 1 Menu Bar | Change the status of a display device or the properties of the program. |
| 2 Device Category | View a list of connected display devices or device groups. |
| 3 Schedule Category | View a list of schedules for display devices. |
| 4 Set List | Select the display device you want to adjust. |
| 5 Modify the Set List | Add, edit, regroup or delete sets. |
| 6 Help Topics | Display help topics for the program. |

Menus

Home



You can power on or off a selected device or change the input source or volume of the device.

Choose display devices from the list of sets, and select the **Home** tab.

Select an item and change the corresponding setting.

Power

- **On**: Power on a selected display.
- **Off**: Power off a selected display.

Input

- Input Source : Change the input source.
 - Input sources available can vary depending on the Display Device Models.
 - The input source can be changed only for displays that are turned on.
- **Channel**: Change the channel.
 - The TV channel can be changed by using the up/down arrow keys.
 - The channel can be changed only when the input source is **TV**.
 - Only registered channels can be selected.
 - Only applicable to models that support TVs.

Volume



— The volume can be changed or the sound can be muted only for displays that are turned on.

Volume

- Adjust the volume of a selected display.
- The volume can be adjusted using the slider bar in the range of 0 to 100.

Mute

- Enable or disable **Mute** for a selected display.
Mute will automatically be disabled if **Volume** is adjusted when **Mute** is on.

Alert



Fault Device

- This menu shows a list of display devices which have following errors - fan error, temperature error, brightness sensor error, or lamp error.
- Select a display device from the list. The **Repair** button will be enabled.
- Click the **Refresh** button to refresh the error status of the display device. The recovered display device will disappear from the **Fault Device List**.

Fault Device Alert

- Display device in which error is detected will be reported by email.
- Fill in all required fields. The **Test** and **OK** buttons will be enabled.
Ensure the **Sender** information and at least one **Recipient** are entered.

User Login



User Settings

- Add, delete or edit login information.

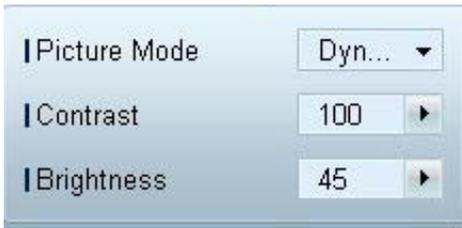
Logout

- Log out from the current user account as follows.
- Click **Logout**. The message "**Do you want to log admin out?**" is displayed
- Click **Yes**. The user login window appears.
- If you do not want to log in, click **Close**. The program is closed.

— If you close the program using **Logout**, the login window will appear prompting you to enter user information even if the **Auto Login** checkbox is selected.

Screen Adjustment

Custom



The screen settings (contrast, brightness, etc.) can be adjusted.

Choose display devices from the list of sets, and select the **Picture** tab.

Select an item and change the corresponding screen setting.

Picture Mode

- Adjust the picture mode for the selected display device.

Contrast

- Adjust the contrast for the selected display device.

Brightness

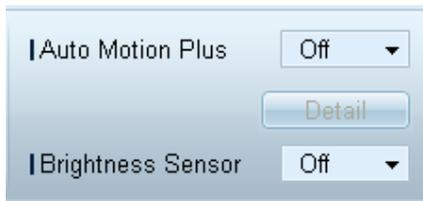
- Adjust the brightness for the selected display device.

Color



- **Color** and **Tint (G/R)** are not available if the input source is **PC**.
- **Color**, **Tint (G/R)**, **Color Tone** and **Color Temp.** are not available if both **PC Source** and **Video Source** are selected.

Options



Color

- Adjust the colors for the selected display device.

Tint (G/R)

- Adjust the tint for the selected display device.

Color Tone

- Adjust the background color tone for the selected display device.

Color Temp.

- Adjust the color temperature for the selected display device.

— This option is enabled if **Color Tone** is set to **Off**.

HDMI Black Level

- Adjust the **HDMI Black Level** for the selected display device.

Auto Motion Plus

This option is used to view dynamic images.

- **Off**: Disable the **Auto Motion Plus** function.
- **Clear**: Set the level of **Auto Motion Plus** to clear. This mode is suitable to display vivid images.
- **Standard**: Set the level of **Auto Motion Plus** to standard.
- **Smooth**: Set the level of **Auto Motion Plus** to smooth. This mode is suitable to display smooth images.
- **Custom**: Customize the level of screen burn-in or flickering.
- **Demo**: This function demonstrates the technology of **Auto Motion Plus**. The result when the mode is changed can be previewed on the left side of the window.

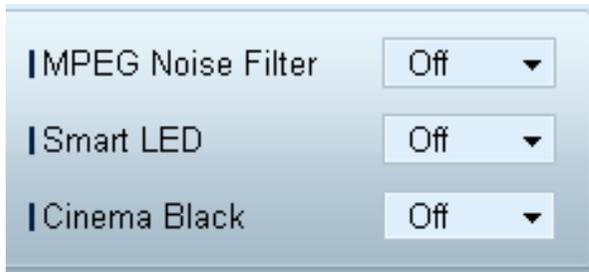
— **Auto Motion Plus** may not be available depending on the product.

- **Detail**: View detailed information about the selected display device.

Brightness Sensor

- Enable or disable the **Brightness Sensor** for the selected display device.
- The **Brightness Sensor** detects the ambient light intensity and automatically adjusts the screen brightness.

— **Brightness Sensor** may not be available depending on the product.



MPEG Noise Filter

Reduces MPEG noise to provide improved picture quality.

- **Off / Low / Medium / High / Auto**

Smart LED

Controls the LED backlight to maximize picture clarity.

Cinema Black

In Movie mode, this feature dims the top and bottom areas of the video image to provide a more immersive viewing experience.

- **Off:** Turns off the **Cinema Black** feature.
- **On:** Adjusts the dimming of the top and bottom areas of the screen according to the video.

Size



Picture Size

- Adjust the screen size for the selected display device.
- The **Detail** item will be disabled if **Picture Size** is set to a mode that does not support detailed configuration.
- The -/+ buttons can be used to adjust **Zoom**.
- The screen can be relocated using the up/down/left/right buttons.

Detail

- You can view details of the selected screen size.

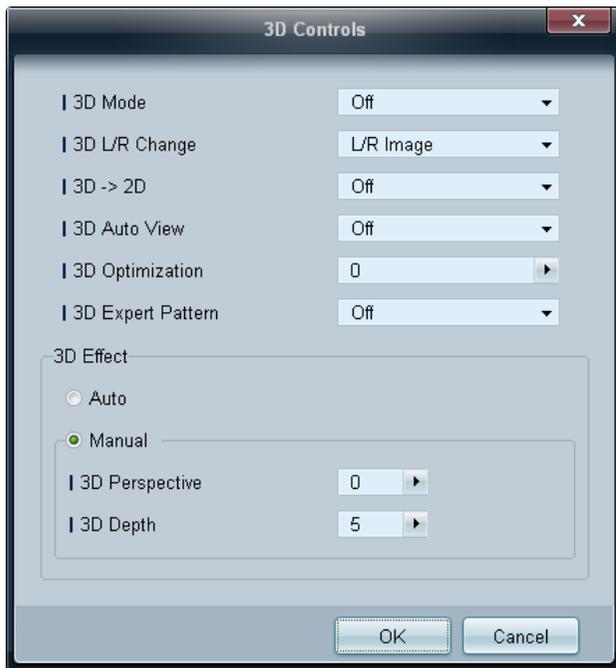
PC Screen Adjustment

- Frequency adjustment or fine-tuning is available by using the -/+ buttons in **Coarse** or **Fine**.
- To relocate the screen, click one of the four images below **Position**.
- To automatically adjust the frequency, fine-tune or relocate the screen, click **Auto Adjustment**.

Advanced features



3D Control



3D Mode

Select the 3D input format.

3D L/R Change

Swap the left and right pictures.

3D → 2D

Displays the image for the left eye only.

3D Auto View

If you set **3D Auto View** to **Message Notice**, a pop up message window appears when the product receives a 3D signal.

3D Optimization

The overall adjustment of 3D effect.

3D Expert Pattern

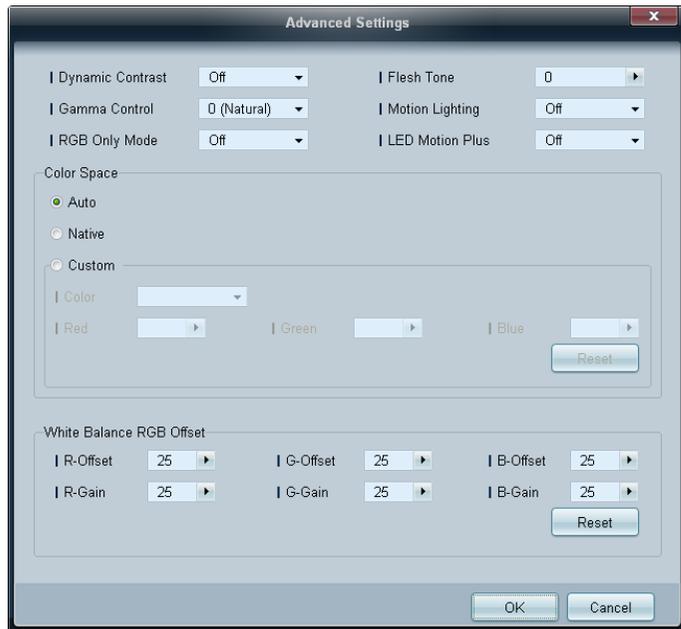
View a 3D pattern.

3D Effect

Adjust 3D effects like perspective and depth for your preferred 3D viewing experience.

- **Auto**: Automatically adjust the perspective and depth settings in accordance with the 3D input source.
- **Manual**: Manually adjust the perspective and depth settings.

Advanced Settings



Dynamic Contrast

Adjust the screen contrast.

Gamma Control

Adjust the primary color intensity.

RGB Only Mode

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

Flesh Tone

Emphasize pink "Flesh Tone."

Motion Lighting

Reduces power consumption by reducing screen brightness when the picture on the screen is in motion.

LED Motion Plus

Removes blur and judder from scenes with larger amounts of rapid movement to provide a clearer picture.

Color Space

Adjusts the range and variety of color (the color space) available to create images.

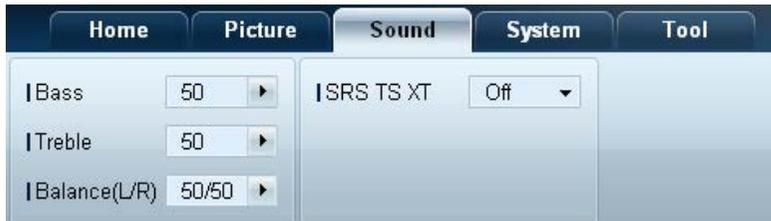
- **Auto / Native / Custom**
 - To adjust **Color**, **Red**, **Green**, **Blue** and **Reset**, set **Color Space** to **Custom**.

White Balance

Adjust the colour temperature for a more natural picture.

- **R-Offset / G-Offset / B-Offset**
Adjust each color (red, green, blue) darkness.
- **R-Gain / G-Gain / B-Gain**
Adjust each color (red, green, blue) brightness.
- **Reset**
Resets the **White Balance** to it's default settings.

Sound Adjustment



— The **Bass** or **Treble** item will be disabled if the item is not supported by the selected set.

You can change the sound settings.

Choose display devices from the list of sets, and select the **Sound** tab.

Bass

- Adjust the bass for the selected display.

Treble

- Adjust the treble for the selected display.

Balance(L/R)

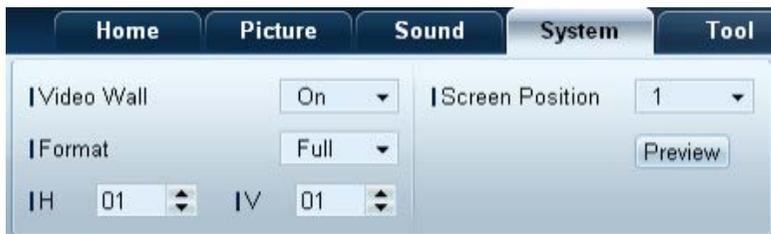
- Adjust the volume of the left and right speakers of the selected display device.

SRS TS XT

- Enable or disable the **SRS TS XT** effect for the selected display device.

System Setup

Video Wall



Choose display devices from the list of sets, and select the **System** tab.

The **Video Wall** function can be used to display part of a whole picture or repeat the same picture on each of connected multiple display devices.

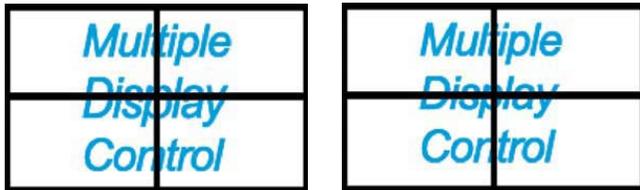
— **Video Wall** is enabled only when devices are in the group.

Video Wall

- Enable or disable **Video Wall**.

Format

- Select the format to display the split screen.



Full



Natural

PIP



- Basic information required to adjust PIP will appear in the menu screen.
- PIP will be disabled when **Video Wall** is **On**.
- Note that **Picture Size** is disabled when PIP is **On**.

H

- Select the number of horizontal display devices.
- A maximum of 15 displays can be arranged in a row.
 - A maximum of 6 can be assigned to **V** if 15 is assigned to **H**.

V

- Select the number of vertical display devices.
- A maximum of 15 displays can be arranged in a row.
 - A maximum of 6 can be assigned to **H** if 15 is assigned to **V**.

Screen Position

- View the layout of displays (configured by the screen divider) or change the layout as required.
- **Screen Position** and **Preview** are enabled when **Video Wall** is set to on.
- Note that if multiple sets are selected, **Preview** is enabled only if the settings for **H** and **V** match the layout of the selected sets.
- To change the **Position**, select a set and drag it to a new position.
 - The range of screen divider settings may differ depending on the model.

PIP Size

- View the **PIP Size** of the current display.

PIP Source

- Select a PIP input source.

Sound Select

- Select and enable the sound from either the primary screen or secondary screen.

Channel

- The channel can be changed if **PIP Source** is **TV**.

General



User Auto Color

- Automatically adjust the screen colors.
— Available only in **PC** mode.

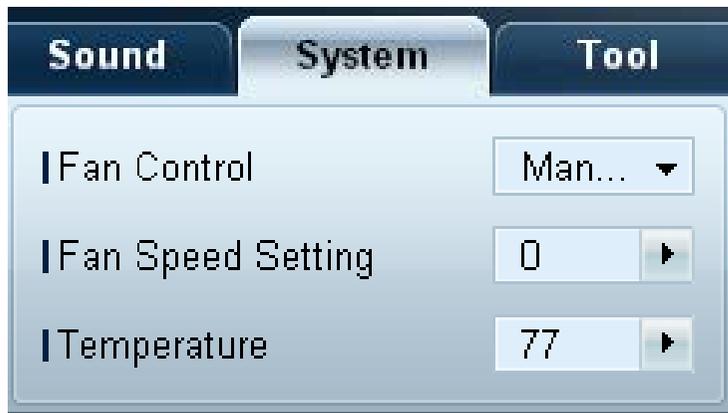
Auto Power

- Set the product to automatically power on.

Standby Control

- Set the standby mode to activate if an input source is not detected.

Fan & Temperature



Configure the settings required to detect the fan speed and internal temperature for the product's protection.

Fan Control

- Select a method to configure the fan speed.

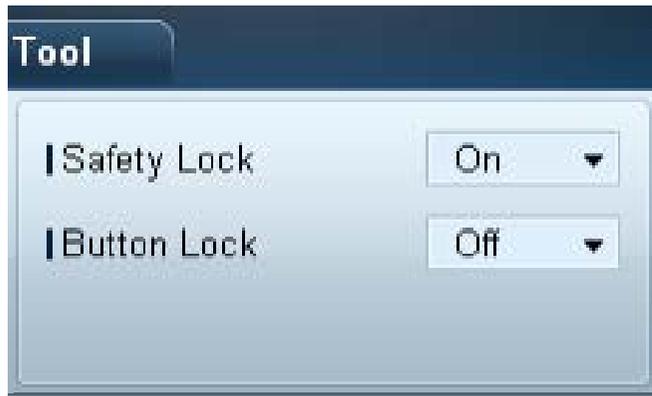
Fan Speed Setting

- Configure the fan speed.

Temperature

- Detect the internal temperature by specifying the range of temperature.

Security



Safety Lock

- Lock the on-screen menus.
 - To unlock the menus, set **Safety Lock** to **Off**.

Button Lock

- Lock the buttons on the display device.
 - To unlock the buttons, set **Button Lock** to **Off**.

OSD Display



Source OSD

- Select whether to display a message when the **Source** is changed.

Not Optimum Mode OSD

- Select whether to display a message when a non-compatible mode is selected.

No Signal OSD

- Select whether to display a message when there is no input signal.

MDC OSD

- Select whether to display a message when settings are changed by the MDC.

Time

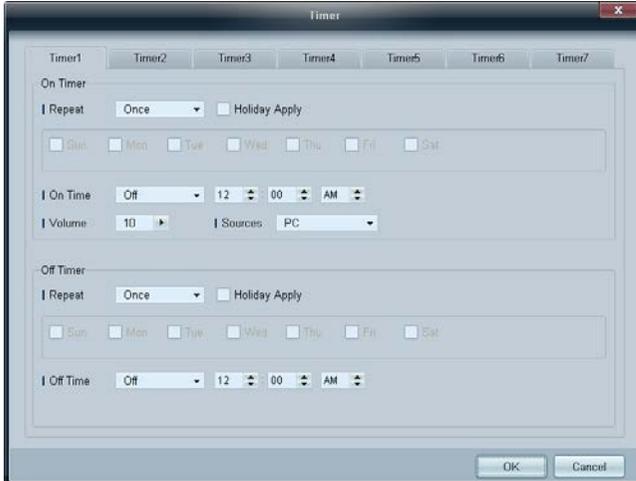


Clock Set



Change the current time on the selected display device according to the time set on a PC. If the time is not set on the display device, null values will be displayed.

Timer



On Timer

- **Repeat:** Specify the period for which you want to repeat the selected **Timer**.
Once, EveryDay, Mon~Fri, Mon~Sat, Sat~Sun, Manual
- **Holiday Apply:** The **Holiday Management** settings can be applied to the **Timer**.
- **On Time:** Set the time to power on the selected display device.
- **Volume:** Specify the volume of the display device when it is powered on by **On Time**.
- **Source:** Specify the input source of the display device when it is powered on by **On Time**.

Off Timer

- **Repeat:** Specify the period for which you want to repeat the selected **Timer**.
Once, EveryDay, Mon~Fri, Mon~Sat, Sat~Sun, Manual
 - **Holiday Apply:** The **Holiday Management** settings can be applied to the **Timer**.
 - **Off Time:** Set the time to power off the selected display device.
- The checkboxes to select days of the week below **Repeat** are enabled only if **Manual** is selected.

Holiday Management



Holiday Management allows you to prevent devices that are set to be powered on by the **Timer** from turning on at a specified date.

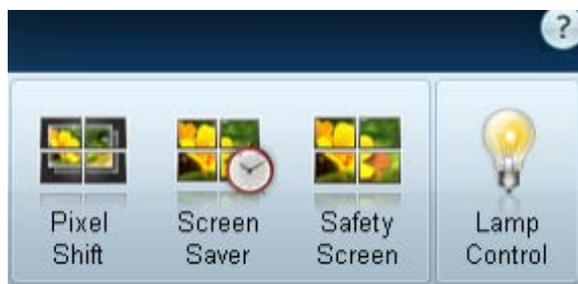
The **Holiday Management** function can be enabled or disabled in the **Timer** settings menu.

- **Add:** You can specify holidays.
Click the **Add** button in the **Holiday Management** window.

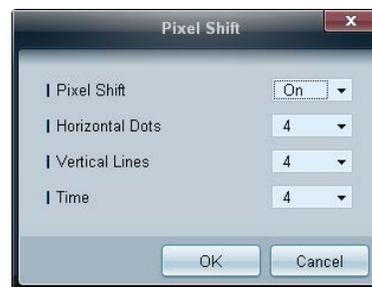


- **Delete:** Delete holidays. check the corresponding checkboxes and click this button.
- List of holidays: View a list of holidays you have added.

Screen Burn Protection



Pixel Shift

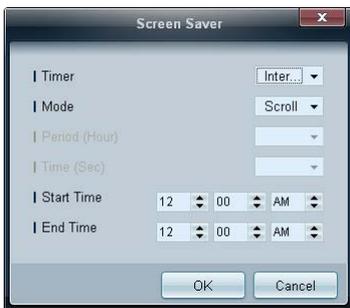


Move the screen slightly at specified time intervals to prevent screen burn-in.

Screen Saver



— **Period (Hour)** and **Time (Sec)** can be configured when **Repeat** is selected.



— **Start Time** and **End Time** can be configured when **Interval** is selected.

This function prevents screen burn-in when the screen of the selected display device is left idle for an extended period of time.

Timer: You can set the timer for **Screen Saver**.

- **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:** Select a screen protective pattern to display.
- **Period (Hour):** Specify the time interval to activate the **Screen Saver** function.
 - The option is enabled when **Repeat** is selected for **Timer**.
- **Time (Sec):** Specify the duration to keep the **Screen Saver** function on.
 - The option is enabled when **Repeat** is selected for **Timer**.
- **Start Time:** Set start time to display screen saver.
 - The option is enabled when **Interval** is selected for **Timer**.
- **End Time:** Set end time to display screen saver.
 - The option is enabled when **Interval** is selected for **Timer**.

Safety Screen



The **Safety Screen** function can be used to prevent screen burn-in when a stationary image displays on the screen of a display device for an extended period of time.

Lamp Control



Lamp Control is used to adjust the backlight to reduce power consumption.

Automatically adjust the backlight of the selected display device at a specified time.

If **Manual Lamp Control** is adjusted, **Auto Lamp Control** will automatically switch to **Off**.

Manually adjust the backlight for the selected display.

If **Auto Lamp Control** is adjusted, **Manual Lamp Control** will automatically switch to **Off**.

- **Ambient Light: Ambient Light** detects ambient light intensity and automatically adjusts the screen brightness of all the LFDs in the same serial chain.

Ticker

The screenshot shows a 'Ticker' dialog box with the following settings:

- Ticker:** Off
- Message:** | Text: [Empty text field]
- Time:** | Start Time: 12 : 00 AM | End Time: 12 : 00 AM
- Position:** | Horizontal: Left | Vertical: Down
- Motion:** | On: | Off: | Direction: Left | Speed: Slow
- Font Options:** | Size: Standard | Foreground Color: White | Background Color: Black | Foreground Opacity: Solid | Background Opacity: Solid

Buttons: OK, Cancel, Reset

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

Ticker

Enable or disable **Ticker**.

- **Off / On**

Message

Enter a message to display on the screen.

Timer

Set the **Start Time** and **End Time** to display a message (**Message**).

Position

Select an orientation to display a message (**Message**) from **Horizontal** and **Vertical**.

Motion

Specify the **Direction** and **Speed** to display a message (**Message**).

Font Options

Specify the message **Size**, **Foreground Color**, **Foreground Opacity**, **Background Color** and **Background Opacity**.

Tool Settings

Security



- **Panel Control:** Turn on or off the screen of a display device.
- **Remote Control:** Enable or disable the remote control.

Reset



- **Reset Picture:** Reset the screen settings.
- **Reset Sound:** Reset the sound settings.
- **Reset System:** Reset the system settings.
- **Reset All:** Reset the screen, sound and system settings at the same time.

Edit Column

Options

Language: English

Command Retry Count: 01

Error Status Interval (min.): 05

Mail Alert Interval (min.): 010

OK Cancel

Configure the settings for the items that will be displayed on the list of displays.

- **Language:** Select a language to use in the MDC program. After selecting a language, restart the MDC program to use the selected language.
- **Command Retry Count:** Specify the number of retry attempts when a command fails.
- **Error Status Interval:** Specify the time interval to query the display device in order to check if "Fault Device" has occurred.
- **Mail Alert Interval:** Specify the time interval for email notifications in the event when "Fault Device" occurs.

Edit Column

Edit Column

ID B/R Sensor

Type Fan

Power Current Temp.

Input Mac Address

Setting Timer

Picture Size PIP Size

Lamp PIP Source

Wall Position

Temp. Status

Up

Down

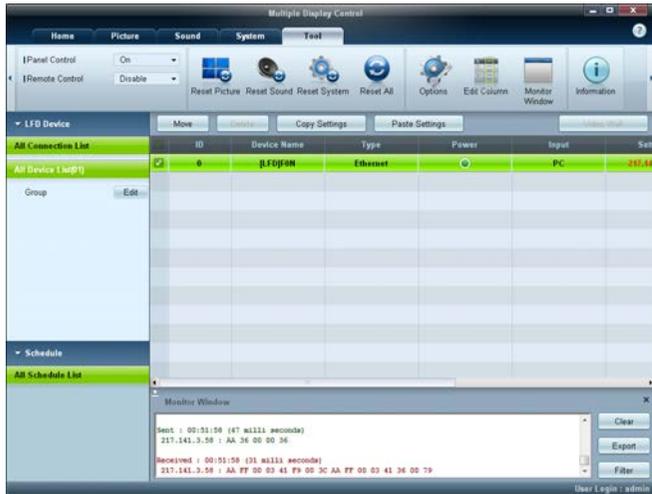
Show

Hide

Default Ok Cancel

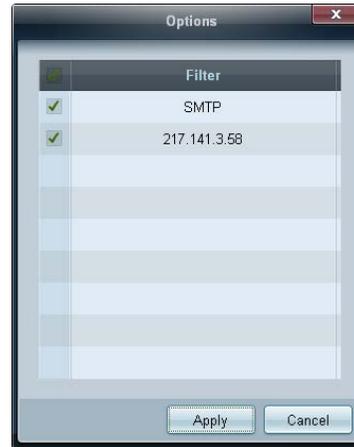
Select the items you want to display in the list of sets.

Monitor Window



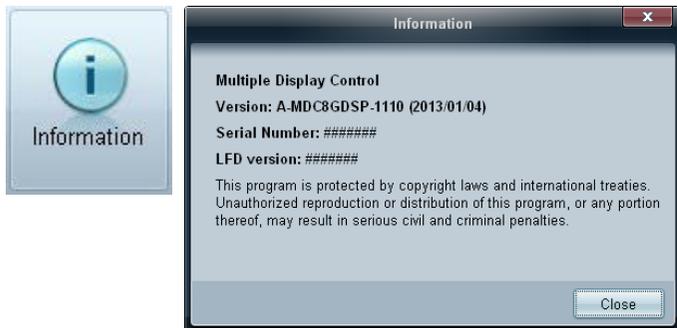
A window appears showing details for data transfer between the computer and display devices.

- **Filter**



Information

View the program information.



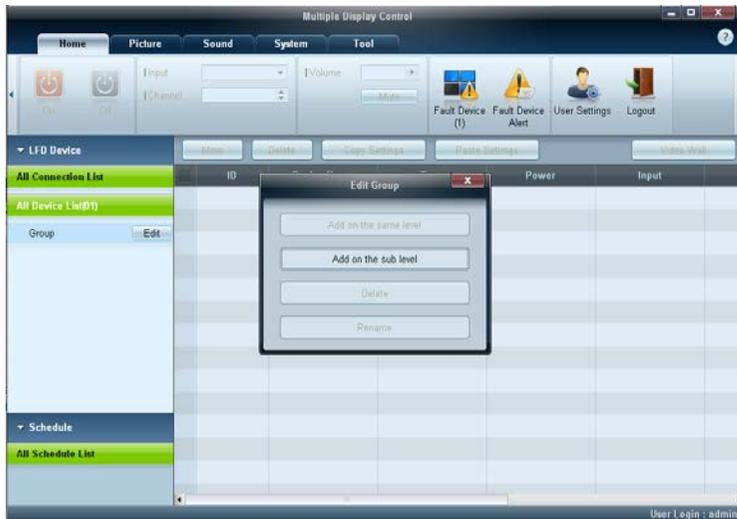
Group Management

Creating Groups

Create groups and manage the list of sets on a group basis.

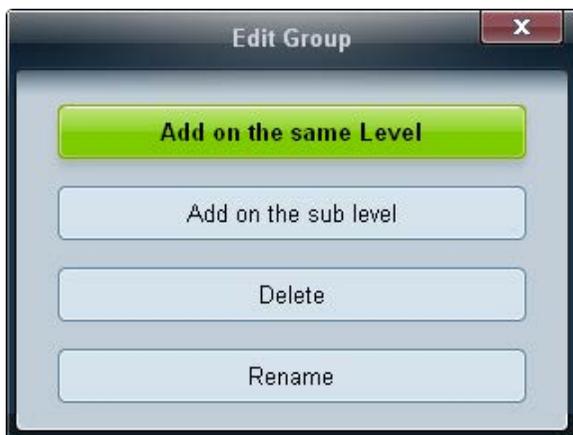
— Duplicate group names cannot be used.

1 Right-click and select **Group** → **Edit** in the display device list section on the left side of the program window.

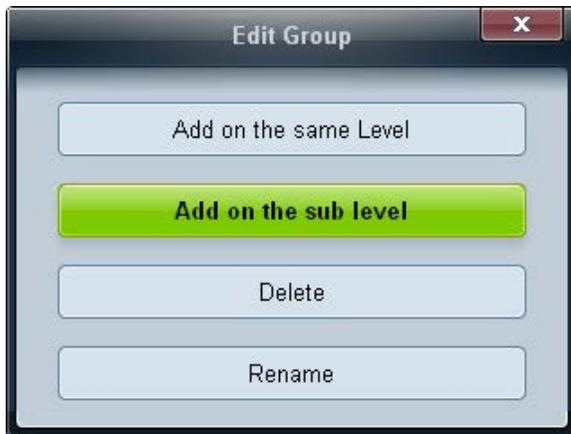


2 In the **Edit Group** window displayed, click **Add on the same level** or **Add on the sub level**.

- **Add on the same level**: Create a group on the same level as the selected group.

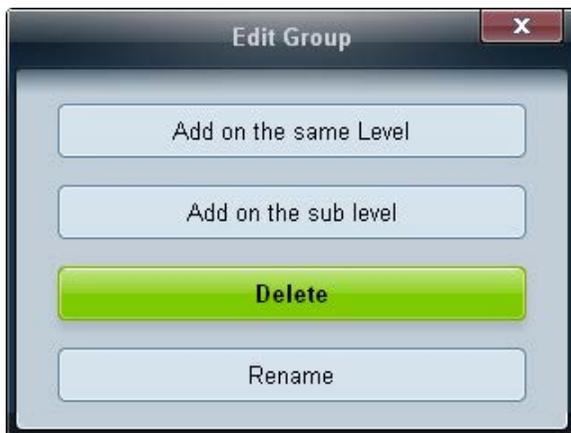


— The **Add on the same level** button is enabled only if at least one group is created.



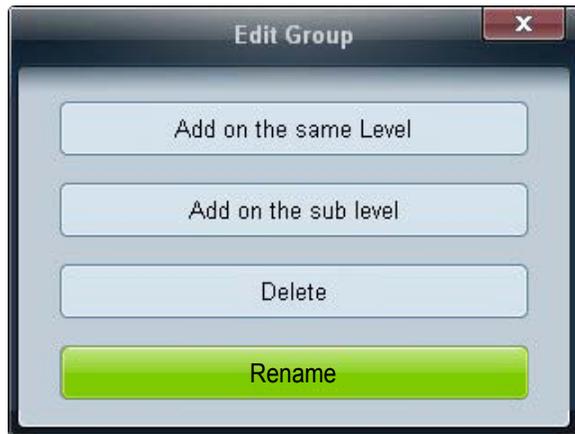
- **Add on the sub level:** Create a sub-group under the selected group.
- 3 Enter the group name.

Deleting Groups



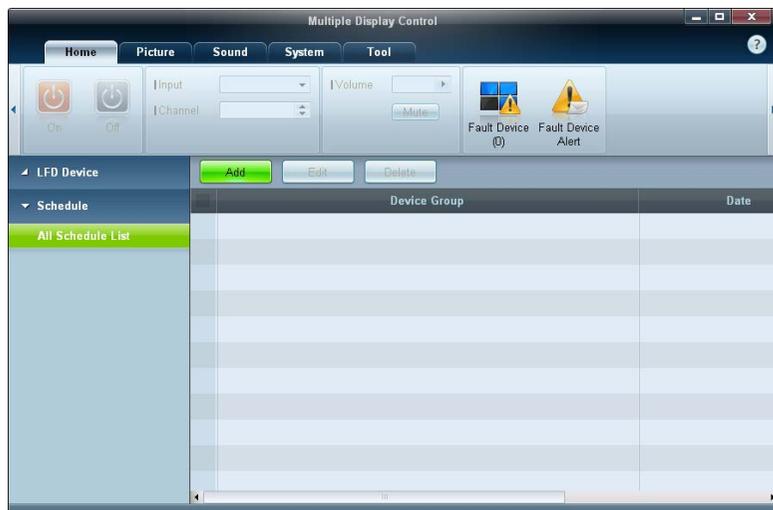
- 1 Select a group name, and click **Edit**.
- 2 In the **Edit Group** window displayed, click **Delete**.
- 3 Click **Yes**. The group will be deleted.

Renaming Groups



- 1 Select a group name, and click **Edit**.
- 2 In the **Edit Group** window displayed, click **Rename**.
- 3 If a cursor appears in the old group name, enter a new group name.

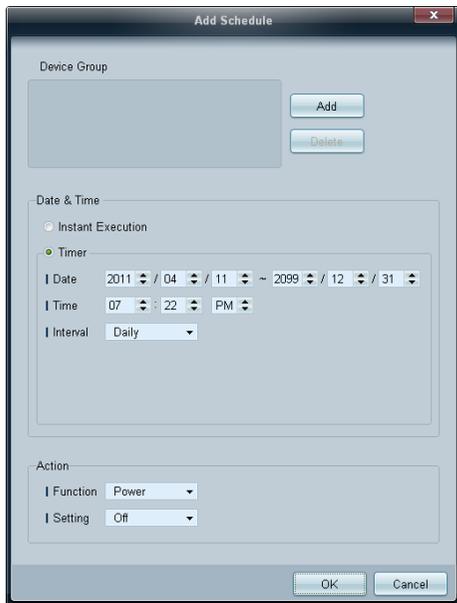
Schedule Management



Creating Schedules

Create and register a schedule on a group basis.

- 1 Click **All Schedule List** in the schedule section on the left side of the program window. The **Add** button will be enabled in the middle.



- 2 Click the **Add** button. The **Add Schedule** window will appear.
- 3 Click **Add** below the **Device Group** item, and select the group you want to add a schedule to.



- 4 Select **Date&Time/Action** and click **OK**. The schedule will be added and a list of schedules will appear in the set list window.
 - **Device Group**: Select a group.
 - **Date&Time**
 - Instant Execution**: Run the schedule immediately.
 - Timer**: Set the date, time and interval to run the schedule.
 - **Action**: Select a function that will activate at the specified time and interval.

Schedule Modification

To modify a schedule, select the schedule and click **Edit**.

Deleting a Schedule

To delete a schedule, select the schedule and click **Delete**.

Troubleshooting Guide

-
- This program may malfunction sometimes due to a communication problem between the PC and display or electromagnetic waves emitted from nearby electronic devices.

Issue	Solution
The display you want to control does not appear on the system information chart.	<ol style="list-style-type: none">1 Check the connection of the RS232C cable (check that the cable is properly connected to appropriate serial port).2 Check that another display with a duplicate ID is not connected. Connecting displays with a duplicate ID can cause the displays not to be shown due to data collision.3 Check that the display ID is within the range of 0 and 99. (Change the ID using the Display menu.)<ul style="list-style-type: none">▮ For a display that supports the ID in a range of 0 to 99, the ID should be set between 0 and 99.
The display you want to control does not appear on the other Control Info Grids.	<p>Check that the display is powered on. (See the power status in the system information chart.)</p> <p>Ensure you select the input source the display is connected to.</p>
The following message appears repeatedly.	<p>Check that the display you want to control is selected.</p>
	
Displays power on or off at different time from one another even though On Time or Off Time is set.	<p>Adjust the time on the PC to synchronize the time between the connected displays.</p>
The remote control does not work.	<p>The remote control may not work if the RS-232C cable is removed or the program is closed abnormally while the Remote Control function is Disable. To resolve this, run the program again and set Remote Control to Enable.</p>

How display properties are shown when multiple displays are used

- 1 When no display is selected: The default value is displayed.
- 2 When one display is selected: Settings for the selected display are displayed.
- 3 When two displays are selected (e.g. in sequence of **ID 1** and **ID 3**): The settings for **ID 1** are displayed before the settings for **ID 3**.
- 4 When the **All+Select** checkbox is checked and all displays are selected: The default settings are displayed.

Chapter 05

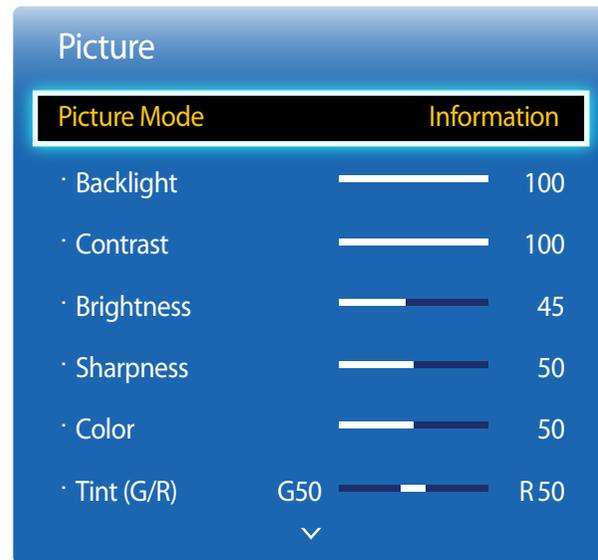
Screen Adjustment

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 



– 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.

Different **Picture Mode** options are displayed depending on the current input source.

If the input source is PC, HDMI(PC)

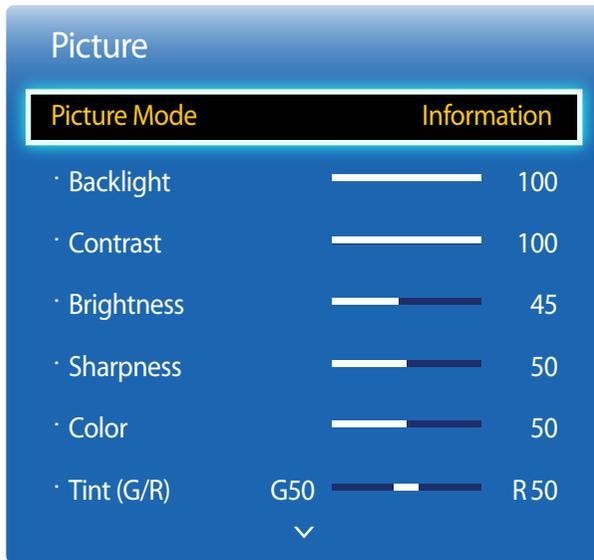
- **Information:** This mode reduces eye fatigue and is suitable for displaying information to the public.
- **Advertisement:** This mode is suitable for displaying video content and indoor/outdoor advertisements.

If the input source is HDMI(AV)

- **Dynamic:** This mode is suitable when the ambient light is bright.
- **Standard:** This mode is generally suitable for any environment.
- **Natural:** Suitable for reducing eye strain.
- **Movie:** This mode reduces eye fatigue.

Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R)

MENU  → Picture → ENTER 



- The displayed image may differ depending on the model.

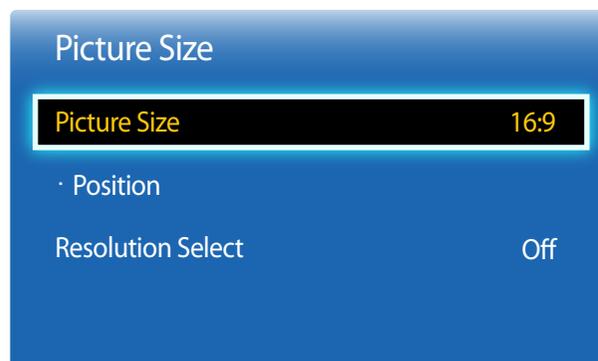
Your product has several options for adjusting picture quality.

Input source	Picture Mode	Adjustable options
PC, HDMI (when a PC is connected)	Information	Backlight / Contrast / Brightness / Sharpness
	Advertisement	Backlight / Contrast / Brightness / Sharpness
HDMI (720p, 1080i, 1080p)	Dynamic, Standard, Natural, Movie	Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R)

- 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.

Picture Size

MENU  → Picture → Picture Size → ENTER 



– The displayed image may differ depending on the model.

Picture Size

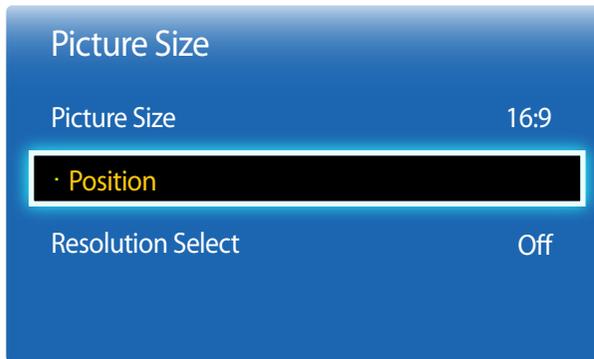
If you have a cable box or satellite receiver, it may have its own set of screen sizes as well. However, we highly recommend you use your product's 16:9 mode most of the time.

- **16:9**: Sets the picture to **16:9** wide mode.
- **Zoom1**: Use for moderate magnification. Cuts off the top and sides.
- **Zoom2**: Use for a stronger magnification.
- **Smart View 1**: Reduces the **16:9** picture by 50%.
 - **Smart View 1** is enabled only in **HDMI** mode.
- **Smart View 2**: Reduces the **16:9** picture by 25%.
 - **Smart View 2** is enabled only in **HDMI** mode.
- **Wide Fit**: Enlarges the aspect ratio of the picture to fit the entire screen.
- **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.
- **Screen Fit**: Displays the full image without any cut-off when **HDMI**(720p / 1080i / 1080p) signals are inputted.
- **Custom**: Changes the resolution to suit the user's preferences.
- **Original Ratio**: If the input source is **PC**, **HDMI**(PC connection) the video will display in the original aspect ratio.
 - Available ports may differ depending on the model.
 - You can adjust and store settings for each external device you have connected to an input on the product.

Picture Sizes available by Input Source.

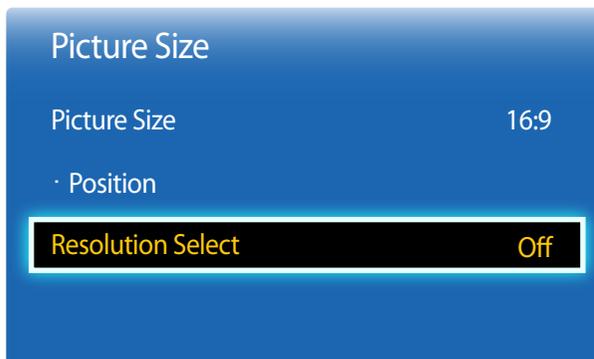
Input Source	Picture Size
HDMI (720p, 1080i, 1080p)	16:9, 4:3, Smart View 1, Smart View 2, Custom, Wide Fit, Screen Fit
PC, HDMI (when a PC is connected)	16:9, 4:3, Original Ratio

Position



– The displayed image may differ depending on the model.

Resolution Select



– Available in **PC** mode only.

– The displayed image may differ depending on the model.

Adjusts the picture position. **Position** is only available if **Picture Size** is set to **Zoom1**, **Zoom2**, **Wide Fit**, **Screen Fit**.

— To use the **Position** function after selecting **Zoom1**, **Zoom2**, **Wide Fit**, **Screen Fit** or **Original Ratio**, follow these steps.

- 1 Press the ▼ button to select **Position**. Press the  button.
- 2 Press the ▲ or ▼ button to move the picture up or down.
- 3 Press the  button.

If the picture is not normal even when the resolution of the graphics card is one of the following, you can optimize the picture quality by selecting the same resolution for the product as the PC using this menu.

Available resolutions: **Off** / **1024x768** / **1280x768** / **1360x768** / **1366x768**

Auto Adjustment

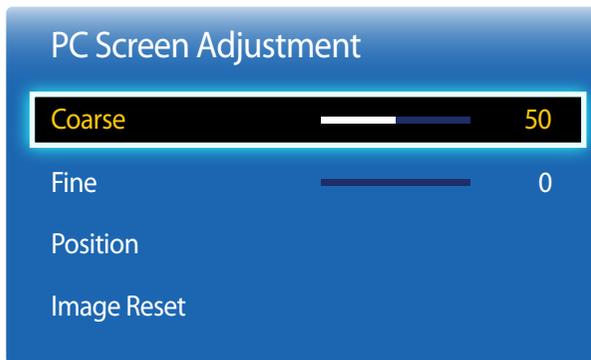
Adjust frequency values/positions and fine tune the settings automatically.

MENU  → Picture → Auto Adjustment → ENTER 



- Available in **PC** mode only.
- The displayed image may differ depending on the model.

PC Screen Adjustment

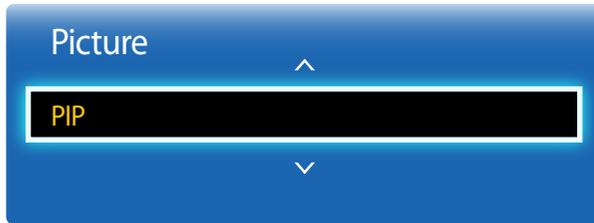


- The displayed image may differ depending on the model.

- **Coarse / Fine**
Removes or reduces picture noise.
If the noise is not removed by Fine-tuning alone, use the **Coarse** function to adjust the frequency as best as possible (**Coarse**) and Fine-tune again. After the noise has been reduced, re-adjust the picture so that it is aligned with the center of screen.
- **Position**
To adjust the PC's screen position if it is not centered or does not fit the product screen.
Press the ▲ or ▼ button to adjust the Vertical Position. Press the ◀ or ▶ button to adjust the Horizontal Position.
- **Image Reset**
Resets the image to the default settings.

PIP

MENU  → System → PIP → ENTER 



- The displayed image may differ depending on the model.
- For **PIP** sound, refer to the **Sound Select** instructions.
- If you turn the product off while watching in the **PIP** mode, the PIP function is reset to off. When you turn your product on, you must turn PIP on again to watch in the **PIP** mode.
- You may notice that the picture in the PIP screen becomes slightly unnatural when you use the main screen to view a game or karaoke.

PIP Settings

The picture from the external video source will be in the main screen and the picture from the product will be in the PIP sub-picture screen.

Main picture

PC

HDMI

Sub picture

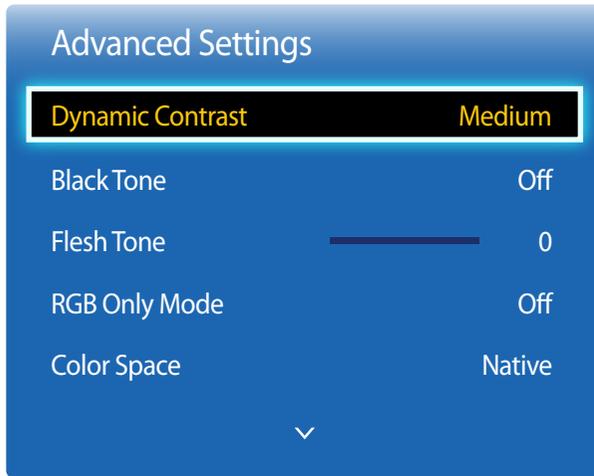
HDMI

PC

- **PIP (Off / On):** Activate or deactivate the PIP function.
- **Source:** You can select a source of the sub picture.
- **Size** (): Select a size for the subpicture.
- **Position** (): Select a position for the sub-picture.
— In () mode, you cannot select **Position**.
- **Sound Select (Main / Sub):** You can choose to listen to the sound from the **Main** picture or the **Sub** picture.

Advanced Settings

MENU  → Picture → Advanced Settings → ENTER 



– The displayed image may differ depending on the model.

Input Source	Picture Mode	Advanced Settings
PC, HDMI (when a PC is connected)	Information	White Balance / Gamma
	Advertisement	White Balance / Gamma

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.

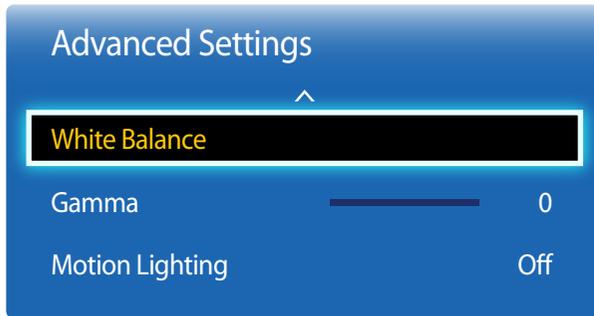
- Off / Red / Green / Blue

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**.



– The displayed image may differ depending on the model.

White Balance

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:** Resets the **White Balance** to its default settings.

Gamma

Adjust the primary color intensity.

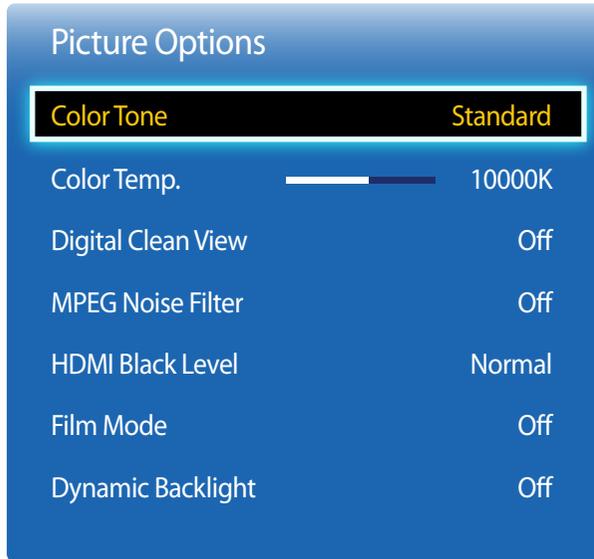
Motion Lighting

Reduces power consumption by reducing screen brightness when the picture on the screen is in motion.

- **Off / On**

Picture Options

MENU  → Picture → Picture Options → ENTER 

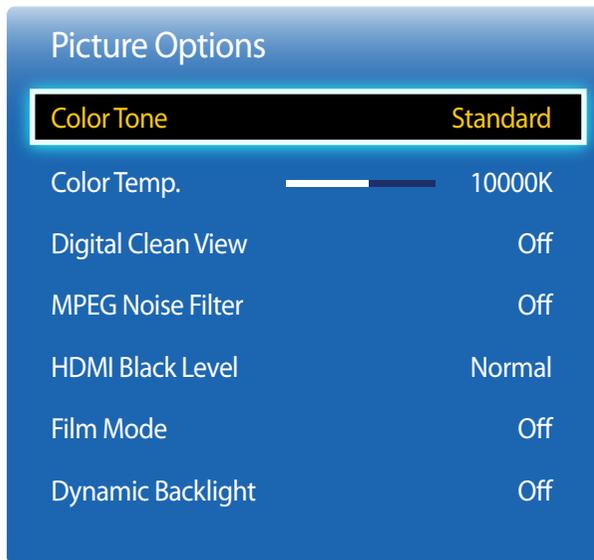


Select an option using the ▲ and ▼ arrow keys, and the press .

Use the arrow keys to change the setting, and then press .

Input source	Picture Mode	Picture Options
PC, HDMI (when a PC is connected)	Information	Color Tone / Color Temp. / Dynamic Backlight
	Advertisement	Color Tone / Color Temp. / Dynamic Backlight

- The displayed image may differ depending on the model.



– The displayed image may differ depending on the model.

Color Tone

If the input source is **PC, HDMI**(PC connection).

- **Off / Cool / Standard / Warm**

If the input source is **HDMI**.

- **Off / Cool / Standard / Warm1 / Warm2**

— **Warm1** or **Warm2** will be deactivated when the **Picture Mode** is **Dynamic**.

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

Color Temp.

Adjust the color temperature (**Red/Green/Blue**). (Range: 3000K–15000K)

— This option is available when **Color Tone** is set to **Off**.

Digital Clean View

If the broadcast signal received by your product is weak, you can activate the **Digital Clean View** feature to reduce any static and ghosting that may appear on the screen.

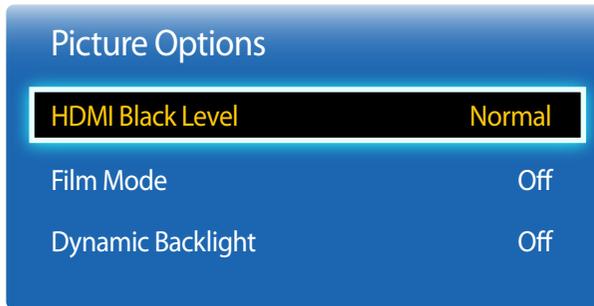
- **Off / Low / Medium / High / Auto**

— When the signal is weak, try all the options until the the product displays the best picture.

MPEG Noise Filter

Reduces MPEG noise to provide improved picture quality.

- **Off / Low / Medium / High / Auto**



— The displayed image may differ depending on the model.

HDMI Black Level

Selects the black level on the screen to adjust the screen depth.

- **Normal / Low**

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

Film Mode

This mode is suitable to view movies.

Sets the product to automatically sense and process film signals from all sources and adjust the picture for optimum quality.

- **Off / Auto1 / Auto2**

— Available in **HDMI**(1080i).

Dynamic Backlight

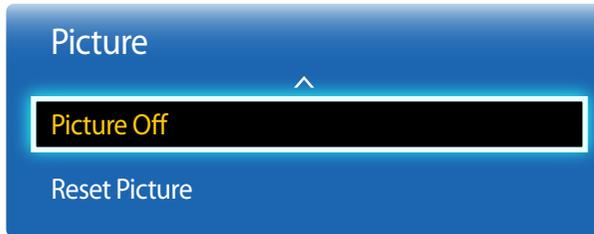
Automatically adjust the backlight to provide the best possible screen contrast under the current conditions.

- **Off / On**

— The **Dynamic Backlight** is not available when the input source is set to **PC** while **Video Wall** is **On**.

Picture Off

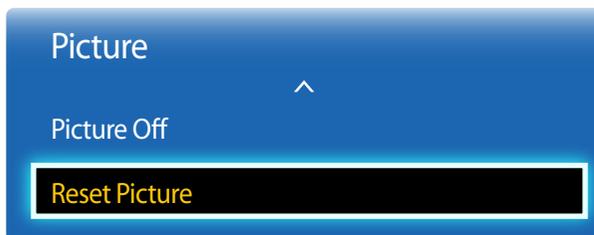
The product screen is turned off but the audio will continue. Press any key on your remote to turn the screen back on.



- The displayed image may differ depending on the model.

Reset Picture

Resets your current picture mode to its default settings.



- The displayed image may differ depending on the model.

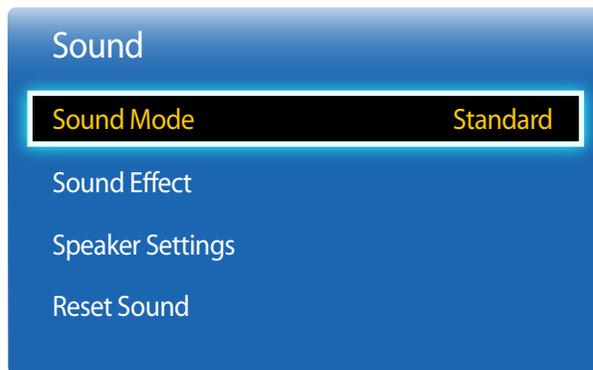
Chapter 06

Sound Adjustment

Configure the sound (**Sound**) settings for the product.

Sound Mode

MENU  → **Sound** → **Sound Mode** → ENTER 



— The displayed image may differ depending on the model.

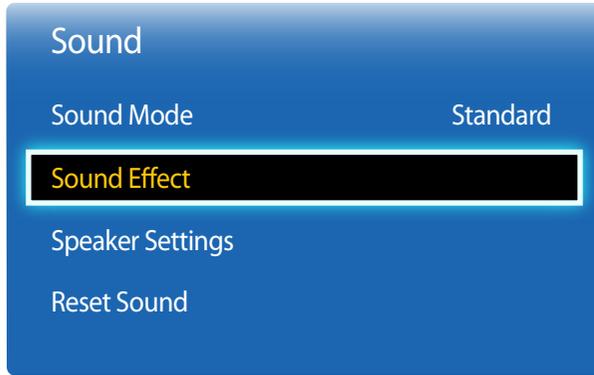
You can select a sound mode to suit your personal preferences.

- **Standard**: Selects the normal sound mode.
- **Music**: Emphasizes music over voices.
- **Movie**: Provides the best sound for movies.
- **Clear Voice**: Emphasizes voices over other sounds.
- **Amplify**: Increase the intensity of high-frequency sound to allow a better listening experience for the hearing impaired.

— If **Speaker Select** is set to **External**, **Sound Mode** is disabled.

Sound Effect

MENU  → Sound → Sound Effect → ENTER 



– The displayed image may differ depending on the model.

Configure your preferred sound effect for output sound.

– If **Speaker Select** is set to **External**, **Sound Effect** is disabled.

– Available only when **Sound Mode** is set to **Standard**.

- **DTS TruSurround (Off / On)**

This function provides a virtual 5.1 channel surround sound experience through a pair of speakers using HRTF(Head Related Transfer Function) technology.

- **DTS TruDialog (Off / On)**

This function allows you to increase the intensity of a voice over background music or sound effects so that dialog can be heard more clearly.

- **Equalizer**

Use **Equalizer** to customize sound setting for each speaker.

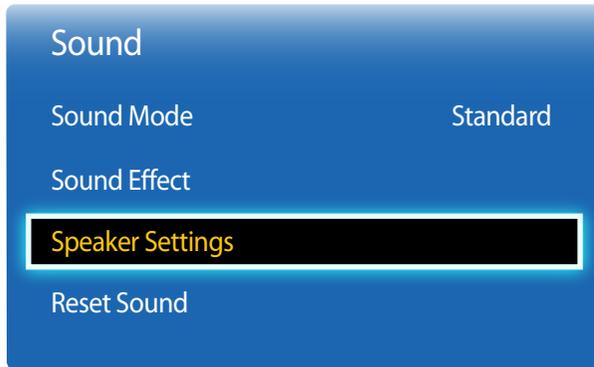
- **Balance(L/R)**: Adjusts the balance between the right and left speaker.

- **100Hz / 300Hz / 1kHz / 3kHz / 10kHz** (Bandwidth Adjustment): Adjusts the level of specific bandwidth frequencies.

- **Reset**: Resets the equalizer to its default settings.

Speaker Settings

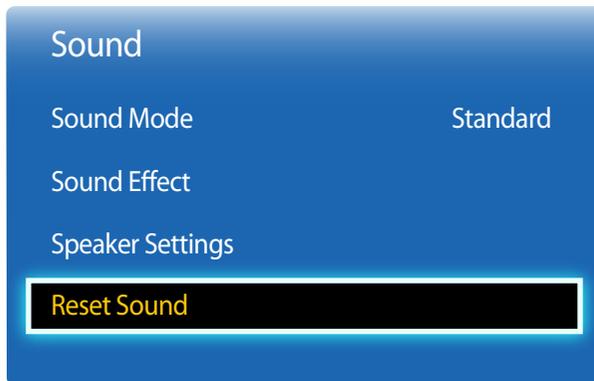
MENU  → Sound → Speaker Settings → ENTER 



– The displayed image may differ depending on the model.

Reset Sound

MENU  → Sound → Reset Sound → ENTER 



– The displayed image may differ depending on the model.

- **Speaker Select (External / Internal / Receiver)**

If you are listening to the sound track of a broadcast or movie through an external receiver, you may hear a sound echo caused by the difference in decoding speed between the products speakers and the speakers attached to your audio receiver. If this occurs, set the product to **External**.

— When you set **Speaker Select** to **External**, the products speakers are turned off.

You will hear sound through the external speakers only. When the **Speaker Select** is set to **Internal**, both the product speakers and the external speakers are on. You will hear sound through both.

— If there is no video signal, both the products speakers and the external speakers will be mute.

Reset all sound settings to the factory defaults.

Chapter 07

Applications

Source List

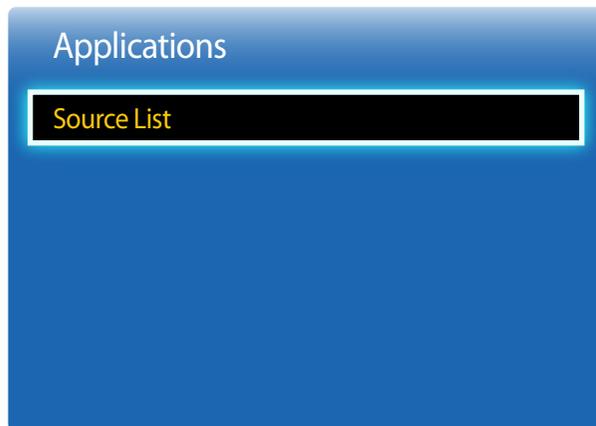
Source allows you to select a variety of sources and change source device names.

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.

MENU  → **Applications** → **Source List** → ENTER 



— The displayed image may differ depending on the model.

Edit Name

MENU  → **Applications** → **Source List** → **TOOLS** → **Edit Name** → ENTER 

Sometimes the screen will not display properly unless the name of a source device is specified in **Edit Name**.

In addition, it is best to rename the source device in **Edit Name** to obtain optimal picture quality.

— The list can include the following source devices. **Source** devices on the list differ depending on the selected source.

VCR / DVD / Cable STB / Satellite STB / PVR STB / AV Receiver / Game / Camcorder / PC / DVI PC / DVI Devices / TV / IPTV / Blu-ray / HD DVD / DMA

— Available settings in the **Picture** menu depend on the current source and settings made in **Edit Name**.

- When connecting a PC to the **HDMI IN** port with HDMI cable, you should set the product to **PC** mode under **Edit Name**.
- When connecting a PC to the **HDMI IN** port with HDMI to DVI cable, you should set the product to **DVI PC** mode under **Edit Name**.
- When connecting an AV devices to the **HDMI IN** port with HDMI to DVI cable, you should set the product to **DVI Devices** mode under **Edit Name**.

Information

MENU  → **Applications** → **Source List** → **TOOLS** → **Information** → ENTER 

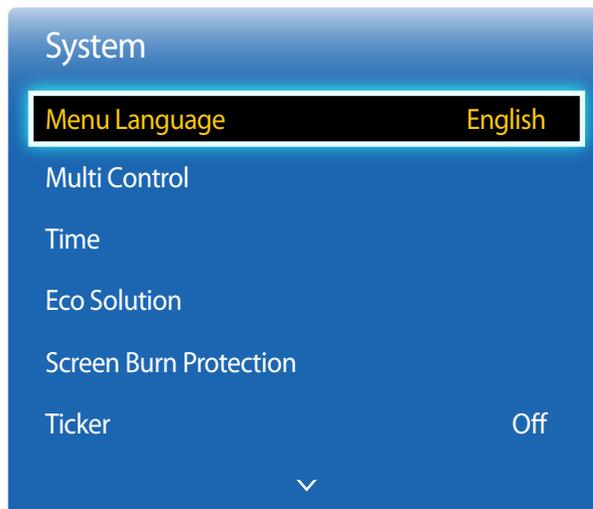
You can see detailed information about the selected external device.

Chapter 08

System

Menu Language

MENU  → System → Menu Language → ENTER 



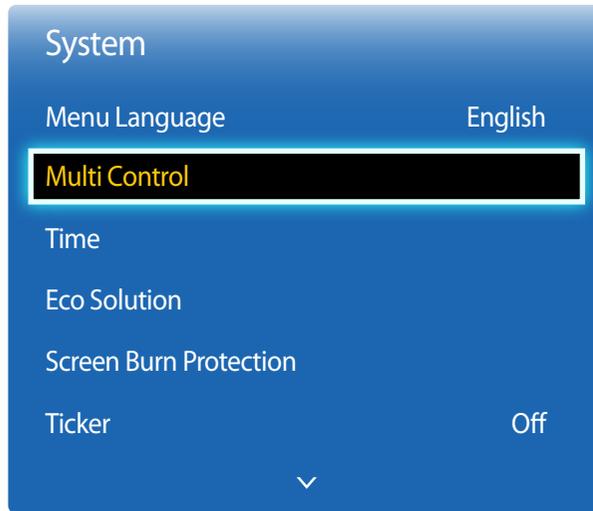
Set the menu language.

— 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.

Multi Control

MENU  → System → Multi Control → ENTER 



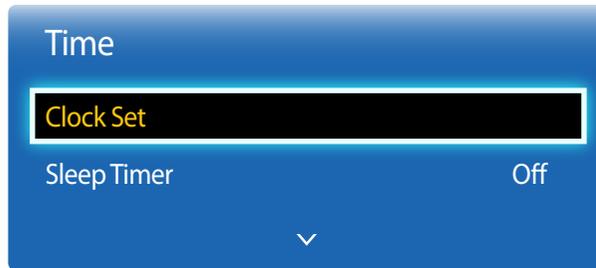
- The displayed image may differ depending on the model.

Configuring settings for Multi Control

- **ID Setup**
Assign an ID to a set. (Range: 0~99)
Press ▲ or ▼ to select a number, and press .
- **ID Input**
Enter the ID number of the product connected to the input cable for input signal reception.
Enter the number you want using the number buttons on the remote control.

Time

MENU  → System → Time → ENTER 



– The displayed image may differ depending on the model.

You can configure **Clock Set** or **Sleep Timer**. You can also set the product to automatically turn on or off at a specified time using the **Timer** function.

Clock Set

Set the clock to use the various various timer features of the product.

- **Clock Set**

Set the **Date** and **Time**.

Select **Clock Set**. Select **Date** or **Time**, and then press .

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  when done.

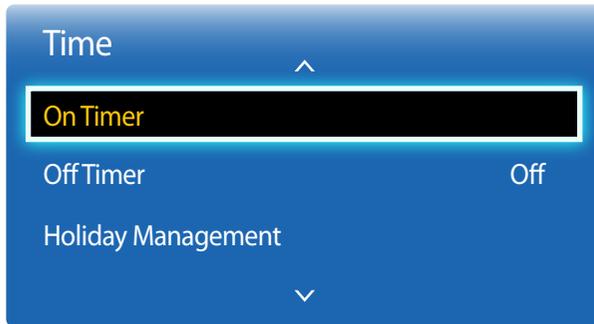
— You can set the **Date** and **Time** directly by pressing the number buttons on the remote control.

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 . To cancel **Sleep Timer**, select **Off**.



- The displayed image may differ depending on the model.

On Timer

Set **On Timer** so that your product turns on automatically at a time and on a day of your choosing.

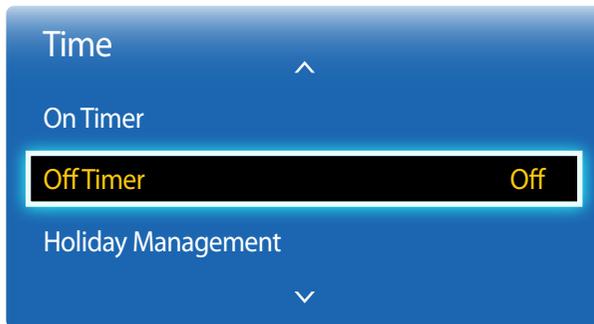
The power is turned on with the specified volume or input source.

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**)

— You must set the clock before you can use **On Timer**.

- **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.
 - 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.
- **Volume:** Set the desired volume level. Use the left and right arrow buttons to change the volume level.
- **Source:** Select the input source of your choice.



- The displayed image may differ depending on the model.

Off Timer

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

— You must set the clock before you can use **Off Timer**.

- **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.

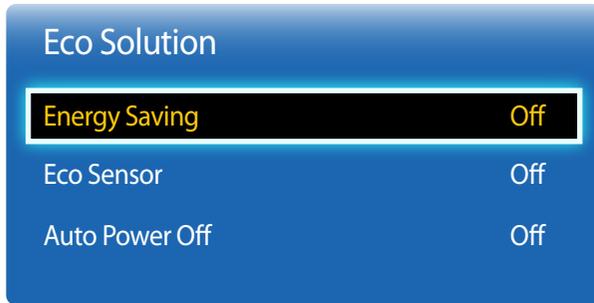
Holiday Management

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

- **Add:** 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 **Save** 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 all items from the list of holidays.
 - Select **Delete**. The message "**Delete all holidays?**" will appear.
 - Select **Yes**. All holidays will be deleted.
- **Apply:** 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.

Eco Solution

MENU  → System → Eco Solution → ENTER 



– The displayed image may differ depending on the model.

Energy Saving

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**.

- **Min. Backlight:** When **Eco Sensor** is **On**, you can manually adjust the minimum screen brightness.

— If **Eco Sensor** is **On**, the display brightness may change (become slightly darker or brighter) depending on the surrounding light intensity. You can control the screen's minimum brightness with the **Min. Backlight** function.

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 4 hours to prevent overheating.

- Off / On

Screen Burn Protection

MENU  → System → Screen Burn Protection → ENTER 



— The displayed image may differ depending on the model.

To reduce the possibility of screen burn, this unit is equipped with **Pixel Shift** screen burn prevention technology.

Pixel Shift moves the picture slightly on the screen.

The **Pixel Shift 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.

- **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.

	Available Settings	Optimum Settings
Horizontal (pixels)	0~4	4
Vertical (pixels)	0~4	4
Time (minute)	1 min.~4 min.	4 min.

— 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.

— This function is not available in the **Screen Fit** mode.

Screen Burn Protection

Pixel Shift	Off
Timer	Off
Immediate Display	Off
Side Gray	Off

– The displayed image may differ depending on the model.

Timer

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

The **Pixel Shift** feature stops automatically after a specified period of time.

- **Off**
- **Repeat**: Display the image retention-preventive pattern set in **Mode** at specified time intervals(**Period**).
 - **Period** and **Time** can be configured when **Repeat** is selected.
- **Interval**: Display the image retention-preventive pattern set in **Mode** for a specified period of time (from **Start Time** to **End Time**).
 - The option is enabled only when **Clock Set** is configured.
- **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.
 - **Hour 1 ~ Hour 10**
 - The option is enabled when **Repeat** is selected for **Timer**.
- **Time**: Specify the duration to keep the **Screen Burn Protection** function on.
 - **sec 10 ~ sec 50**
 - The option is enabled when **Pixel** is selected for **Mode**.
- **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

Pixel Shift	Off
Timer	Off
Immediate Display	Off
Side Gray	Off

Immediate Display

Select the screen saver you want to display immediately.

- **Off / Pixel / Rolling Bar / Fading Screen**

Side Gray

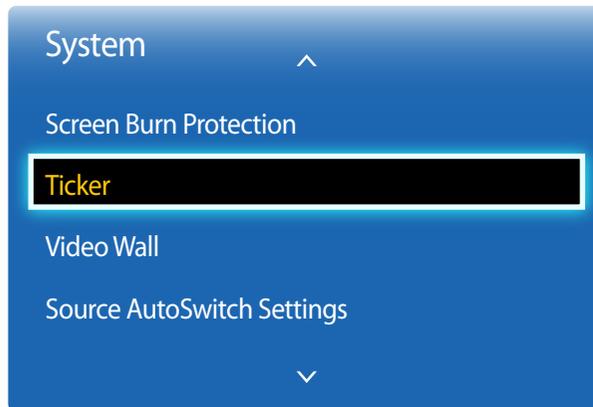
When the screen is set to **4:3** aspect ratio, adjust the brightness of white margins on sides to protect the screen.

- **Off / Light / Dark**

– The displayed image may differ depending on the model.

Ticker

MENU  → System → Ticker → ENTER 



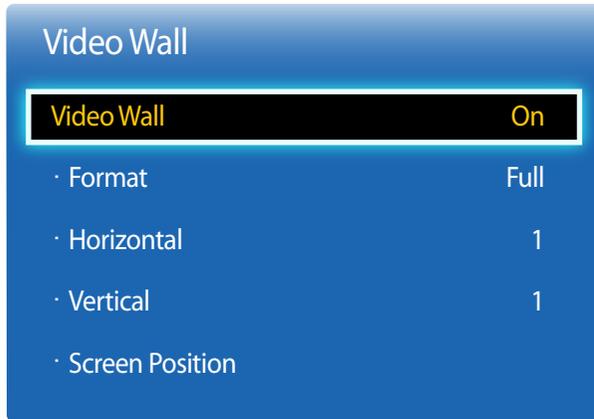
Input text while a video or image is displayed and display the text on the screen.

- **Off / On**
 - **Message, Time, Position, Motion,** and **Font Options** are enabled only when **Ticker** is set to **On**.
- **Message:** Enter a message to display on the screen.
- **Time:** Set the **Start Time** and **End Time** to display a **Message**.
- **Position:** Select an orientation to display a **Message** from **Horizontal** and **Vertical**.
 - **Horizontal** (**Left / Center / Right**)
 - **Vertical** (**Up / Middle / Down**)
- **Motion:** Specify the **Direction** and **Speed** to display a **Message**.
 - **Motion** (**Off / On**)
 - **Direction** (**Left / Right / Up / Down**)
 - **Speed** (**Slow / Normal / Fast**)
 - **Direction** and **Speed** are enabled only when **Motion** is set to **On**.
- **Font Style:** Specify the message **Size** and **Font Color**.

– The displayed image may differ depending on the model.

Video Wall

MENU  → System → Video Wall → ENTER 



- The displayed image may differ depending on the model.
- Some models may not support the MagicInfo function.
- The **Video Wall** option is only enabled when **PIP** is set to **Off**.
- If more than four displays are connected horizontally and vertically, it is recommended that you use an input resolution of XGA (1024 x 768) level or higher to prevent a dark picture due to degradation in the contrast or color intensity.

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.

Video Wall

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

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

Format

Select a format to display images on multiple displays.

- **Full**: Display images in full screen.
- **Natural**: Display images at the original resolution without enlarging or reducing.

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

Horizontal

This function automatically divides the screen according to the specified number of horizontal displays.

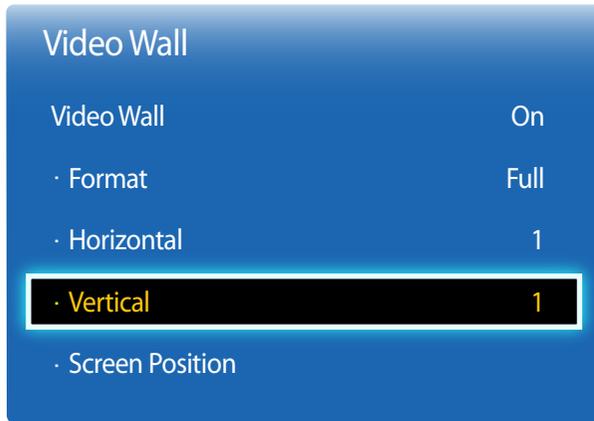
Enter the number of horizontally arranged displays.

The horizontal screen will automatically be divided according to the number entered.

A maximum of 15 displays can be assigned to the horizontal arrangement.

— The screen can be divided into a maximum of 100 screens (horizontal and vertical screens multiplied). For example, if the horizontal arrangement is set to 15, a maximum of 6 displays can be assigned to the vertical arrangement. Conversely, if the vertical arrangement is set to 15, a maximum of 6 displays can be assigned to the horizontal arrangement.

— The **Horizontal** option is only enabled when **Video Wall** is set to **On**.



- The displayed image may differ depending on the model.

Vertical

This function automatically divides the screen according to the specified number of vertical displays.

Enter the number of vertically arranged displays.

The vertical screen will automatically be divided according to the number entered.

A maximum of 15 displays can be assigned to the vertical arrangement.

— The screen can be divided into a maximum of 100 screens (horizontal and vertical screens multiplied). For example, if the horizontal arrangement is set to 15, a maximum of 6 displays can be assigned to the vertical arrangement. Conversely, if the vertical arrangement is set to 15, a maximum of 6 displays can be assigned to the horizontal arrangement.

— The **Vertical** option is only enabled when **Video Wall** is set to **On**.

Screen Position

You can customize the arrangement of split screens by moving displays identified with a number using the **Screen Position** function.

Select **Screen Position** to display the arrangement of displays (identified with a number) specified according to the **Horizontal** or **Vertical** settings. To customize the arrangement, move a number (display) using the direction buttons on the remote control and press .

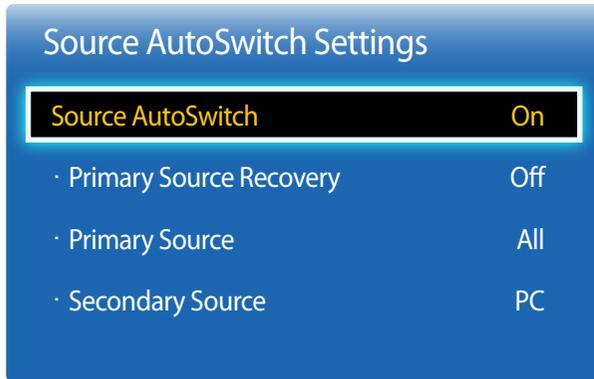
— A maximum of 100 displays can be arranged in **Screen Position**.

— The **Screen Position** option is only enabled when **Video Wall** is set to **On**.

— The **Screen Position** window is only displayed when **Horizontal** and **Vertical** are configured.

Source AutoSwitch Settings

MENU  → System → Source AutoSwitch Settings → ENTER 



— The displayed image may differ depending on the model.

Turning on the display with **Source AutoSwitch On**, and the previous video source selection is not active, the display will automatically search the different video input sources for active video.

Source AutoSwitch

When the **Source AutoSwitch** 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.

When the **Primary Source** selection is set to **All**, the display will search all the video source inputs twice in sequence looking for an active video source, returning back to the first video source in the sequence if no video is found.

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

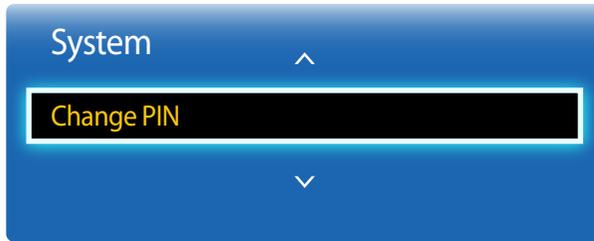
Specify **Primary Source** for the automatic input source.

Secondary Source

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

Change PIN

MENU  → System → Change PIN → ENTER 



- 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**.

When the Confirm screen disappears, press the **Close** button. The product has memorized your new PIN.

General

MENU  → System → General → ENTER 



– The displayed image may differ depending on the model.

Max. Power Saving

Turns off the product to reduce power consumption after the PC has been left idle for a specified period of time.

- Off / On

– Available only **PC**, **HDMI** mode.

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.

– **Game Mode** is not available when the input source is set to **PC**.

– If **Game Mode** is **On**, **Picture Mode** is set to **Standard** and **Sound Mode** is set to **Movie**.

Auto Power

Enabling this option will automatically power on the product if the power cable is connected.

- Off / On

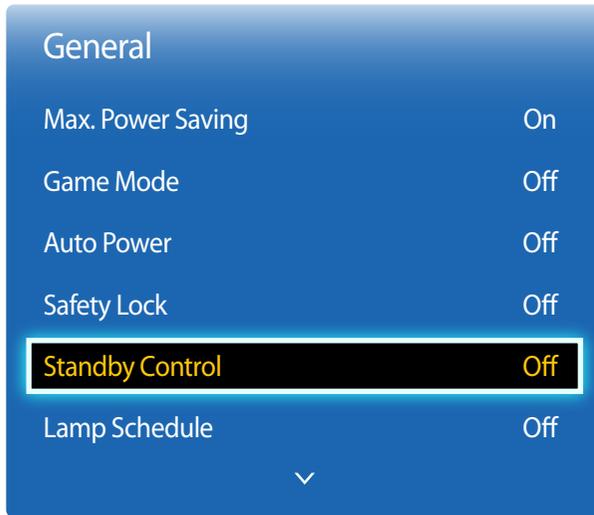
Safety Lock

It sets safe lock function.

- Off / On

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** function.

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



– The displayed image may differ depending on the model.

Standby Control

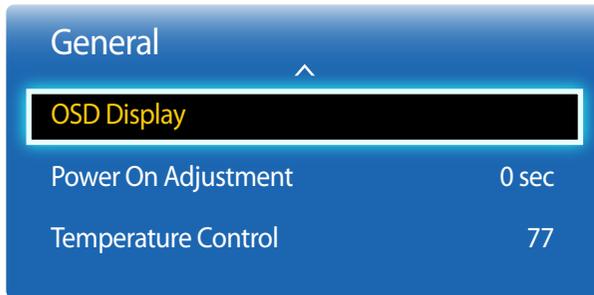
You can set the screen standby mode to be applied when an input signal is received.

- **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.
- **On**
Power-saving mode will activate if no input signals are detected.
- **Off**
The message **No Signal** will appear if no input signals are detected.
 - The **Standby Control** option is only enabled when **Source List** is set to **PC, HDMI**.
 - If **No Signal** is displayed although a source device is connected, check the cable connection.

Lamp Schedule

Enables the lamp value to be adjusted to a user-specified value at a specified time in MDC mode.

- **Off / On**



– The displayed image may differ depending on the model.

OSD Display

Displays or hides a menu item on the screen.

— **Source OSD / No Signal OSD / MDC OSD**

Power On Adjustment

You can set the warm-up time for the screen to turn on after the power button is pressed. (Range: 0 – 50 seconds)

— A warm-up time that is too short may damage the product due to overvoltage.

Temperature Control

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

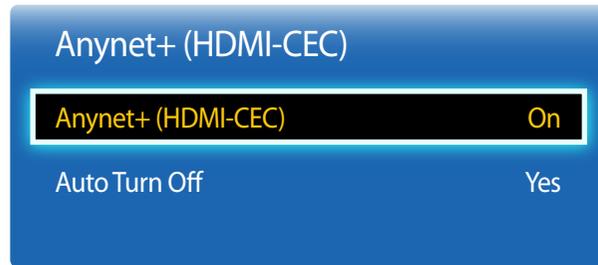
The default temperature is set to 77°C.

The recommended operating temperature for this product is 75 to 80°C (based on an ambient temperature of 40°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.

Anynet+ (HDMI-CEC)

MENU  → System → Anynet+ (HDMI-CEC) → ENTER 



- The displayed image may differ depending on the model.
- The **Anynet+ (HDMI-CEC)** functions do not operate with other manufacturers' products.
- For instructions explaining how to connect Anynet+ external devices, refer to the device's user manual.
- You can connect only one receiver (home theater).

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.

- 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.
- While in **PIP** mode, **Anynet+** functions only when an AV device is connected as the primary display. It does not work if the AV device is connected as a secondary display.
- **Anynet+** supports up to 12 AV devices in total. Note that you can connect up to 3 devices of the same type.

Anynet+ Menu

The **Anynet+** menu changes depending on the type and status of the Anynet+ devices connected to the product.

Anynet+ Menu	Description
View PC	Changes Anynet+ mode to PC mode.
Device List	Shows the Anynet+ device list.
(device_name) MENU	Shows the menu of the connected device menus. E.g. if a DVD player is connected, the disc menu of the DVD player will appear.
(device_name) Tools	Shows the tools menu of the connected device. E.g. if a DVD player is connected, the tools menu of the DVD player will appear. - Depending on the device, this menu may not be available.
(device_name) Title Menu	Shows the title menu of the disc in the connected device. E.g. If a DVD player is connected, the title menu of the movie in the DVD player will appear. - Depending on the device, this menu may not be available.

Anynet+ (HDMI-CEC)

Anynet+ (HDMI-CEC)

On

Auto Turn Off

Yes

– The displayed image may differ depending on the model.

Auto Turn Off

Setting an **Anynet+** Device to turn **Off** automatically when the product is turned off.

- **No / Yes**

– If **Auto Turn Off** is set to **Yes**, running external devices will turn off at the same time as the product powers off.
– May not be enabled depending on the device.

Switching between Anynet+ Devices

1 Press the **TOOLS** button, select **Anynet+ (HDMI-CEC)**, and then press .

2 Select **Device List**, and then press the  button.

If you cannot find a device you want, select **Refresh** to refresh the list.

3 Select a device, and then press the  button. You can switch to the selected device.

– The **Device List** menu appears only when you set **Anynet+ (HDMI-CEC)** to **On** in the **System** menu.

– Switching to the selected device may take up to 2 minutes. You cannot cancel the switching operation while switching is in progress.

– If you have selected an Anynet+ device by pressing the **SOURCE** button and then selecting its input source, you cannot use the Anynet+ function.

– Make sure to switch to an **Anynet+** device by using the **Device List**.

Troubleshooting for Anynet+

Problem	Possible Solution
Anynet+ does not work.	<ul style="list-style-type: none">• Check if the device is an Anynet+ device. The Anynet+ system supports Anynet+ devices only.• You can connect only one receiver (home theater).• 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 Anynet+setup 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+.	<ul style="list-style-type: none">• Check if the Anynet+ device is properly connected to the product and check if the Anynet+ (HDMI-CEC) is set to On in the Anynet+ System menu.• Press the TOOLS button to display the Anynet+ menu and select a menu you want.
I want to exit Anynet+.	<ul style="list-style-type: none">• Select View PC in the Anynet+ menu.• Press the SOURCE button on the product remote control and select a non- Anynet+ device.
The message "Connecting to Anynet+ device ..." appears on the screen.	<ul style="list-style-type: none">• 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.	<ul style="list-style-type: none">• You cannot use the play function when initial setup is in progress.

Problem

Possible Solution

The connected device is not displayed.

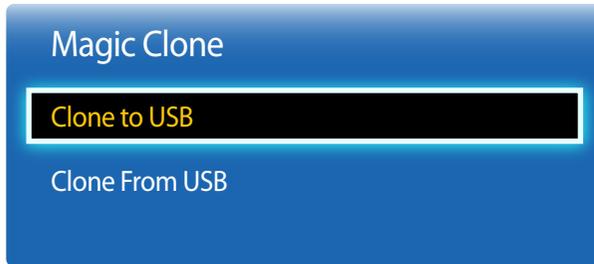
- Check whether or not the device supports Anynet+ functions.
- Check whether or not the HDMI cable is properly connected.
- Check whether **Anynet+ (HDMI-CEC)** is set to **On** in the **Anynet+ System** menu.
- Search Anynet+ devices again.
- Anynet+ requires an HDMI connection. Make sure the device 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.

The product sound is not output through the receiver.

- Connect the optical cable between product and the receiver.
-

Magic Clone

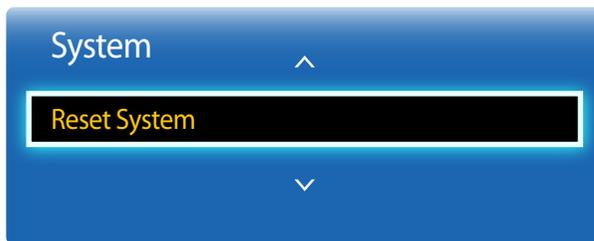
MENU  → System → Magic Clone → ENTER 



– The displayed image may differ depending on the model.

Reset System

MENU  → System → Reset System → ENTER 



– The displayed image may differ depending on the model.

Export the product settings to a USB device or load the settings via a USB device.

This option is useful when assigning the same settings to several products.

- **Clone to USB:** Copy the product settings to a USB device.
- **Clone From USB:** Assign the settings saved in a USB device to the product.
 - After configuration is complete, the product is rebooted automatically.
 - The option may not work properly if the USB device contains a file other than a settings file.
 - Confirm that the USB device functions properly before running the option.
 - The option is available for products with the same **Model Code** and **Software Version**.
Go to **Support** → **Contact Samsung** and find the product **Model Code** and **Software Version**.

This option returns the current settings under system to the default factory settings.

Reset All

This option returns all the current settings for a display to the default factory settings.

MENU  → System → Reset All → ENTER 



- The displayed image may differ depending on the model.

Chapter 09

Support

Software Update

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

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.

By USB

To perform a software update from a USB device, contact the customer service centre.

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**.

Chapter 10

Troubleshooting Guide

Before calling Samsung Customer Service Center, test your product as follows. If the problem persists, contact Samsung Customer Service Center.

If the screen remains blank, check the PC system, video controller and cable.

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)

The screen keeps switching on and off.

Check the cable connection between the product and PC, and ensure the connection is secure.

Blank spaces are found on all four sides of the screen when an HDMI or HDMI-DVI cable is connected to the product and PC.

The blank spaces found on the screen have nothing to do with the product.

Blank spaces on the screen are caused by the PC or graphics card. To resolve the problem, adjust the screen size in the HDMI or DVI settings for the graphics card.

If the graphics card settings menu does not have an option to adjust the screen size, update the graphics card driver to the latest version.

(Please contact the graphics card or computer manufacturer for further details about how to adjust the screen settings.)

Screen issue

No Signal is displayed on the screen (refer to "Connecting to a PC").

Check that the product is connected correctly with a cable

Check that the device connected to the product is powered on.

Not Optimum Mode is displayed.

This message is displayed when a signal from the graphics card exceeds the product's maximum resolution and frequency.

Refer to the Standard Signal Mode Table and set the maximum resolution and frequency according to the product specifications.

The images on the screen look distorted.

Check the cable connection to the product

The screen is not clear. The screen is blurry.

Adjust **Coarse** and **Fine**.

Remove any accessories (video extension cable, etc) and try again.

Set the resolution and frequency to the recommended level.

Screen issue

The screen appears unstable and shaky.

Check that the resolution and frequency of the PC and graphics card are set within a range compatible with the product. Then, change the screen settings if required by referring to the Additional Information on the product menu and the Standard Signal Mode Table.

There are shadows or ghost images left on the screen.

The screen is too bright. The screen is too dark.

Adjust **Brightness** and **Contrast**.

Screen color is inconsistent.

Go to **Picture** and adjust the **Color Space** settings.

White does not really look white.

Go to **Picture** and adjust the **White Balance** settings.

There is no image on the screen and the power LED blinks every 0.5 to 1 second.

The product is in power-saving mode.

Press any key on the keyboard or move the mouse to return to the previous screen.

Sound issue

There is no sound.

Check the connection of the audio cable or adjust the volume.

Check the volume.

The volume is too low.

Adjust the volume.

If the volume is still low after turning it up to the maximum level, adjust the volume on your PC sound card or software program.

Remote control issue

The remote control does not work.

Make sure that the batteries are correctly in place (+/-).

Check if the batteries are flat.

Check for power failure.

Make sure that the power cord is connected.

Check for any special lighting or neon signs switched on in the vicinity.

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.

Q & A

Question

How can I change the frequency?

Refer to the user manual for your PC or graphics card for further instructions on adjustment.

Answer

Set the frequency on your graphics card.

- Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.

How can I change the resolution?

- Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** and adjust the resolution.
 - Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** and adjust the resolution.
 - Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** and adjust the resolution.
 - Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
 - Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
-

Question

How do I set powersaving mode?

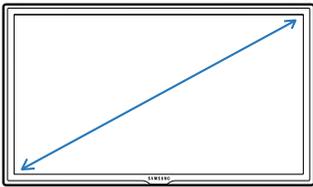
Answer

- Windows XP: Set power-saving mode in **Control Panel** → **Appearance and Themes** → **Display** → **Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows ME/2000: Set power-saving mode in **Control Panel** → **Display** → **Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows Vista: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows 7: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows 8: Set power-saving mode in **Settings** → **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or BIOS SETUP on the PC.
-

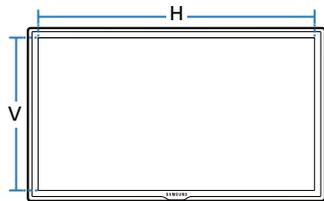
Chapter 11

Specifications

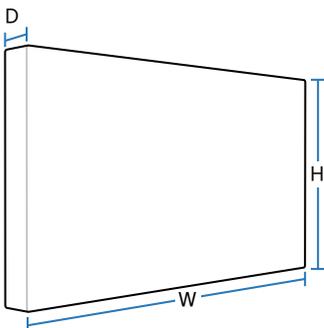
1 Size



2 Display area



3 Dimensions (W x H x D)



General

Model Name	ED65C	ED75C	
Panel	Size	65 class (64.5 inches / 163 cm)	75 class (75 inches / 189 cm)
	Display area	1431.4 (H) x 806.5 (V) mm 56.4 (H) x 31.8 (V) inches	1653.3 (H) x 931.3 (V) mm 65.1 (H) x 36.7 (V) inches
Dimensions (W x H x D)	1467.5 x 848.0 x 65.0 mm 57.8 x 33.9 x 2.6 inches	1675.0 x 958.5 x 65.0 mm 65.9 x 37.7 x 2.6 inches	
Weight (without stand)	26.8 kg / 59.1 lbs	28.8 kg / 63.5 lbs	
VESA	400 x 400 mm / 15.7 x 15.7 inches		
Display Color	10bit(Dithering), 1.07B		
Synchronization	Horizontal Frequency	30 ~ 81 kHz	
	Vertical Frequency	48 ~ 75 Hz	
Resolution	Optimum resolution	1920 x 1080 @ 60 Hz	
	Maximum resolution	1920 x 1080 @ 60 Hz	
Maximum Pixel Clock	148.5 MHz (Analog, Digital)		

Model Name**ED65C****ED75C****Power Supply**

This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.

Signal connectors**Input**

PC D-Sub, HDMI, Audio In, RS232C In, USB(Service Only), External Ambient Sensor, PIM (Plugable In Module-Option)

Output

Audio Out, RS232C Out

Environmental considerations**Operating**

Temperature : 32 °F ~ 104 °F (0 °C ~ 40 °C)
Humidity : 10 % ~ 80 %, non-condensing

Storage

Temperature : -4 °F ~ 113 °F (-20 °C ~ 45 °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.

Panel Dots (Pixels)

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 device is a Class A digital apparatus.

(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, (877) 278 - 0799

PowerSaver

The power-saving function of this product reduces power consumption by switching off the screen and changing the color of the power LED if the product is not used for a specified period of time. The power is not turned off in power-saving mode. To switch the screen back on, press any key on the keyboard or move the mouse. Power-savign mode only functions when the product is connected to a PC with a power-saving function.

PowerSaver	Normal Operation			Power saving mode (SOG Signal : Not Support the DPM Mode)	Power off	Power off (Power Button off)	
	Rating	Typical	Max				
Power Indicator	Off			Blinking	On	On	
	ED65C	215 Watts	180 Watts	235 Watts	1 Watts	1 Watts	0 Watts
	ED75C	280 Watts	247 Watts	310 Watts	1 Watts	1 Watts	0 Watts

— The displayed power consumption level can vary in different operating conditions or when settings are changed.

— SOG(Sync On Green) is not supported.

— To reduce the power consumption to 0, turn off the switch at the back or disconnect the power cord. Disconnect the power cable if you will not be using the product for an extended period of time (during vacation, etc.).

Preset Timing Modes

– 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.

— 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 85Hz, change the vertical frequency to 60Hz using the CDT product before you exchange it with the LCD product.

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.

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	31.469	59.940	25.175	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1280 x 720	45.000	60.000	74.250	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1366 x 768	47.712	59.790	85.500	+/+
VESA, 1440 x 900	55.935	59.887	106.500	-/+
VESA, 1600 x 900	60.000	60.000	108.000	+/+
VESA, 1680 x 1050	65.290	59.954	146.250	-/+
VESA, 1920 x 1080	67.500	60.000	148.500	+/+

Chapter 12

Appendix

Contact SAMSUNG WORLD WIDE

— If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

NORTH AMERICA

U.S.A	1-800-SAMSUNG(726-7864)	http://www.samsung.com
CANADA	1-800-SAMSUNG(726-7864)	http://www.samsung.com/ca (English) http://www.samsung.com/ca_fr (French)
MEXICO	01-800-SAMSUNG(726-7864)	http://www.samsung.com

LATIN AMERICA

ARGENTINE	0800-333-3733	http://www.samsung.com
BOLIVIA	800-10-7260	http://www.samsung.com
BRAZIL	0800-124-421 4004-0000	http://www.samsung.com
CHILE	800-SAMSUNG(726-7864) From mobile 02-24 82 82 00	http://www.samsung.com/cl

LATIN AMERICA

COLOMBIA	01-8000112112 Bogotá: 6001272	http://www.samsung.com/co
COSTA RICA	0-800-507-7267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
DOMINICA	1-800-751-2676	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
ECUADOR	1-800-10-7267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
EL SALVADOR	800-6225	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
GUATEMALA	1-800-299-0013	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
HONDURAS	800-27919267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
JAMAICA	1-800-234-7267	http://www.samsung.com
NICARAGUA	00-1800-5077267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
PANAMA	800-7267	http://www.samsung.com/latin (Spanish) http://www.samsung.com/latin_en (English)
PARAGUAY	98005420001	http://www.samsung.com
PERU	0-800-777-08 (Only from landline) 336-8686 (From HHP & landline)	http://www.samsung.com

LATIN AMERICA

PUERTO RICO	1-800-682-3180	http://www.samsung.com
TRINIDAD & TOBAGO	1-800-SAMSUNG(726-7864)	http://www.samsung.com
URUGUAY	40543733	http://www.samsung.com
VENEZUELA	0-800-100-5303	http://www.samsung.com

EUROPE

AUSTRIA	0810 - SAMSUNG (7267864, € 0.07/min)	http://www.samsung.com
BELGIUM	02-201-24-18	http://www.samsung.com/be (Dutch) http://www.samsung.com/be_fr (French)
BOSNIA	051 133 1999	http://www.samsung.com
BULGARIA	07001 33 11 , normal tariff	http://www.samsung.com
CROATIA	062 SAMSUNG (062 726 786)	http://www.samsung.com
CYPRUS	8009 4000 only from landline (+30) 210 6897691 from mobile and land line	http://www.samsung.com
CZECH	800 - SAMSUNG (800-726786) Samsung Electronics Czech and Slovak, s.r.o., Oasis Florenc, Sokolovská 394/17, 180 00, Praha 8 till 8.2.2013 . From 8.2.2013: Samsung Electronics Czech and Slovak, s.r.o. V Parku 2343/24, 148 00 - Praha 4	http://www.samsung.com
DENMARK	70 70 19 70	http://www.samsung.com
EIRE	0818 717100	http://www.samsung.com
ESTONIA	800-7267	http://www.samsung.com/ee

EUROPE

FINLAND	030-6227 515	http://www.samsung.com
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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.)

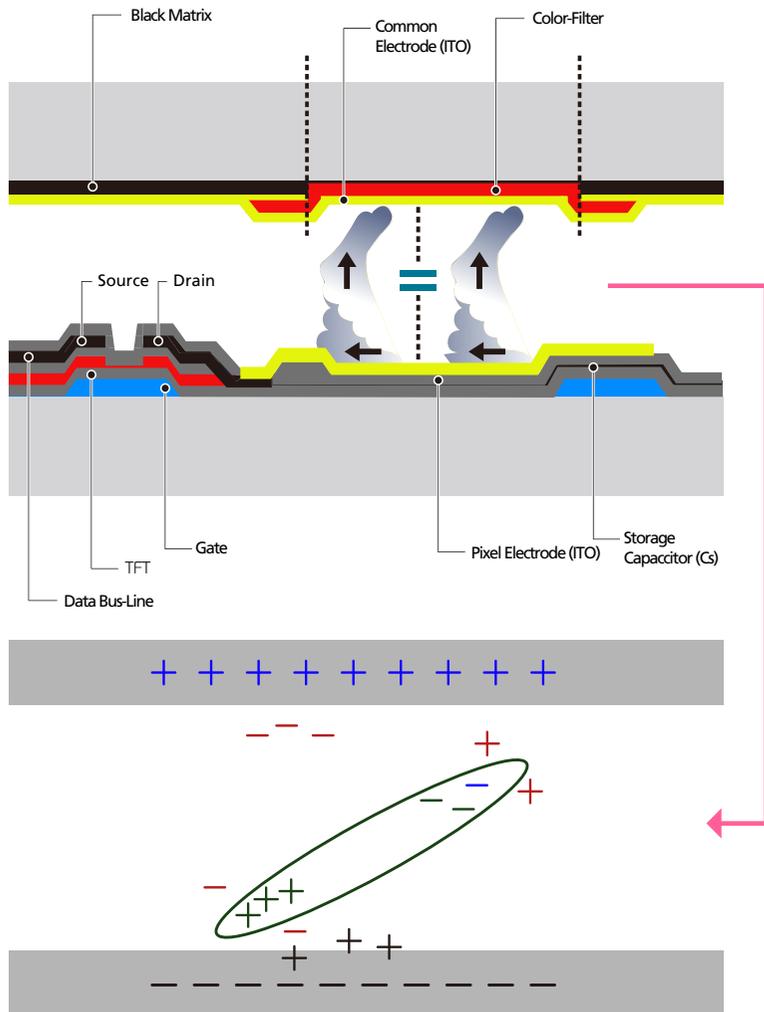
— If customer requests a service in case the product has no defect, service fee may be charged. So please read User Manual first.

Optimum Picture Quality and Afterimage Burn-in Prevention

Optimum Picture Quality

- To enjoy the optimum picture quality, go to Control Panel on your PC and adjust the resolution and refresh rate as follows. The picture quality of TFT-LCDs may degrade if the optimum resolution is not selected.
 - Resolution: 65" ~ 75": FHD (1920x1080)
 - Vertical frequency (refresh rate): 48 ~ 75 Hz
- 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
- Run **Auto Adjustment** to improve the picture quality. If noise is still found even after auto adjustment, adjust **Coarse** or **Fine**.
- 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.
- Unlike CDT monitors, TFT-LCD monitors (due to the nature of the panel) can be set to only one resolution to obtain the optimum picture quality. Therefore, setting 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 monitor.

Prevention of Afterimage Burn-in



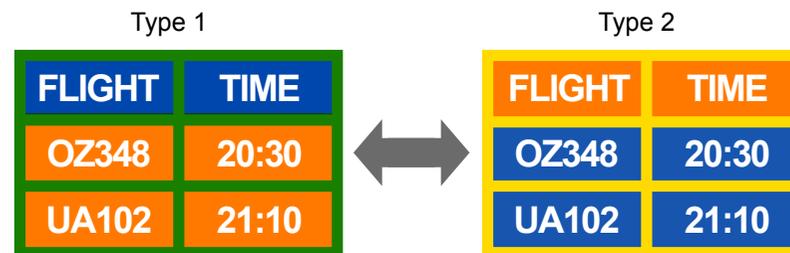
What is afterimage burn-in?

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 (more than 12 hours), 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.

— 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 4 hours after using it for 20 hours.
 - 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.



- Avoid combinations of a text color and background color of contrasting brightness.
- Avoid using grey as it may contribute to afterimage burn-in.
- Avoid using colors of contrasting brightness (black and white; grey).



- Regular Text color Change
 - 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.



- 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.

License



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

Open Source Licence Notice

In the case of using open source software, Open Source Licences are available on the product menu. Open Source Licence Notice is written only English.

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.

Dot Pitch_____ The product and 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.

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.

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).

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.