SAMSUNG

User Manual

DCH (DC43H DC49H DC55H)
DCJ (DC43J DC49J)

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.

Recommended hours of use per day of this product is under 16 hours.

If the product is used for longer than 16 hours a day, the warranty may be void.

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Chapter 01
Before Using the Product

Copyright

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Safety Precautions

Warning

A serious or fatal injury may result if instructions are not followed.

Caution

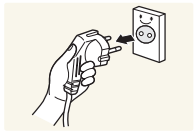
Personal injury or damage to properties may result if instructions are not followed.

Activities marked by this symbol are prohibited.

Instructions marked by this symbol must be followed.

Cleaning

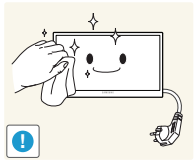
- Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.
- Take the following steps when cleaning.
- The following images are for reference only. Real-life situations may differ from what is shown in the images.



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.



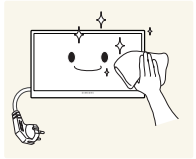
3 Wipe the product with a clean, soft and dry cloth.



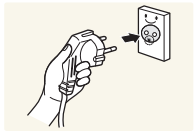
- Do not use detergents that contain alcohol, solvent or surface-active agents.



- 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

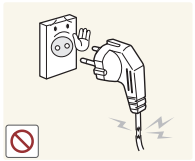
Due to the characteristics of high-glossy products, using a UV humidifier nearby may create white-colored stains on the product.

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

Electricity and Safety

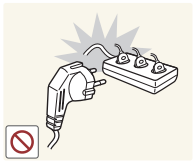
— The following images are for reference only. Real-life situations may differ from what is shown in the images.

Warning



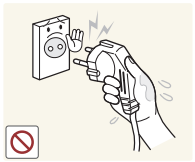
Do not use a damaged power cord or plug, or a loose power socket.

- An electric shock or fire may result.

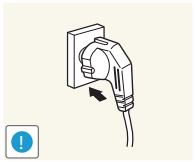


Do not use multiple products with a single power socket.

- Overheated power sockets may cause a fire.

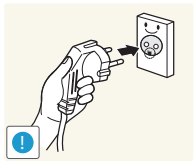


Do not touch the power plug with wet hands. Otherwise, an electric shock may result.



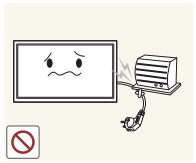
Insert the power plug all the way in so it is not loose.

- An unsecure connection may cause a fire.



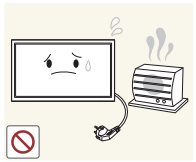
Connect the power plug to a grounded power socket (type 1 insulated devices only).

- An electric shock or injury may result.



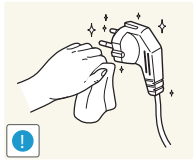
Do not bend or pull the power cord with force. Be careful not to leave the power cord under a heavy object.

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



Do not place the power cord or product near heat sources.

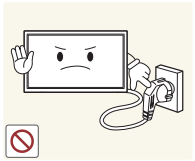
- A fire or electric shock may result.



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

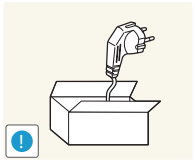
- A fire may result.

Caution



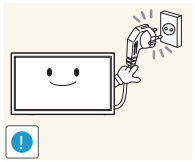
Do not disconnect the power cord while the product is being used.

- The product may become damaged by an electric shock.



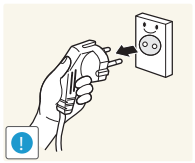
Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.

- 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.

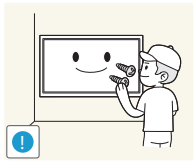
Installation

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.



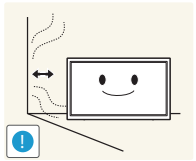
Have a technician install the wall-mount hanger.

- Installation by an unqualified person can result in an injury.
- Only use approved cabinets.



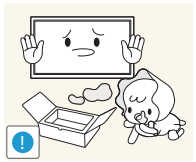
Do not install the product in poorly ventilated spaces such as a bookcase or closet.

- 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.



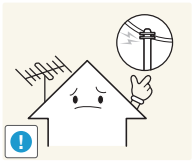
Keep the plastic packaging out of the reach of children.

- Children may suffocate.



Bend and keep part of the outdoor TV antenna cable hanging downwards (the part inside the room) to prevent rainwater from entering the product.

- If rainwater enters the product, a fire or electric shock can occur.



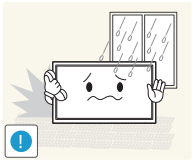
When using an outdoor antenna, be sure to install the antenna away from nearby power lines to prevent the antenna from collapsing onto them in strong winds.

- A collapsed antenna can cause an electric shock or injury.



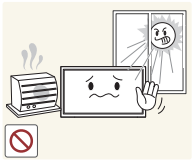
Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)

- 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.



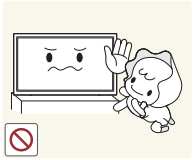
Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.

- 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.



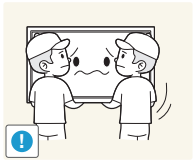
Do not install the product within the reach of young children.

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



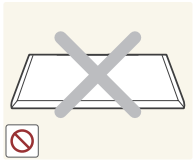
Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Caution



Do not drop the product while moving.

- Product failure or personal injury may result.



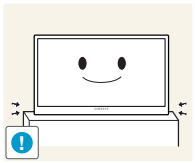
Do not set down the product on its front.

- 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 dust, chemical substances, extreme temperatures or a significant presence of moisture, or a place where the product will 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.

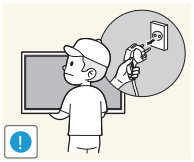
Operation

Warning



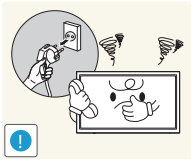
There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.

- A fire or electric shock may result.
- Contact Samsung Customer Service Center for repairs.



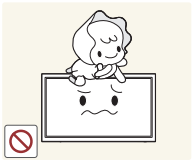
Before moving the product, turn off the power switch and disconnect the power cord, antenna cable and all other connected cables.

- 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.



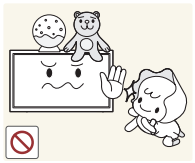
Do not let children hang from the product or climb on top of it.

- Children may become injured or seriously harmed.



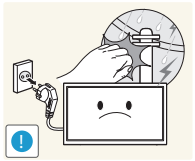
If the product is dropped or the outer case is damaged, turn off the power switch and disconnect the power cord. Then contact Samsung Customer Service Center.

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



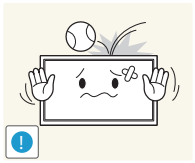
Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

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



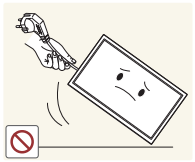
During a lightning or thunderstorm, remove the power cable and do not touch the antenna cable.

- A fire or electric shock may result.



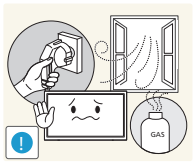
Do not drop objects on the product or apply impact.

- A fire or electric shock may result.



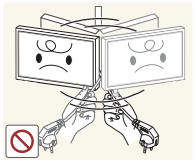
Do not move the product by pulling the power cord or any cable.

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



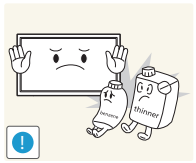
If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.



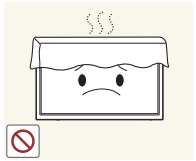
Do not lift or move the product by pulling the power cord or any cable.

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



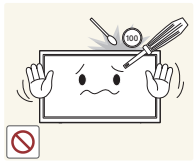
Do not use or keep combustible spray or an inflammable substance near the product.

- 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).

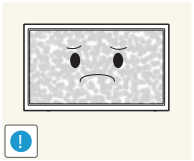
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.



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

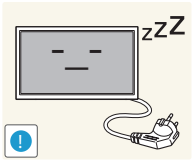
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.

Caution



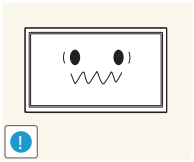
Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.

- 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.



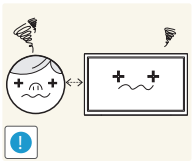
Use the product at the recommended resolution and frequency.

- Your eyesight may deteriorate.

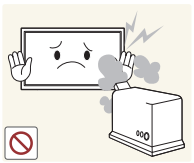


Do not hold the product upside-down or move it by holding the stand.

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

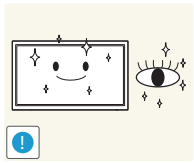


Looking at the screen too close for an extended period of time can deteriorate your eyesight.



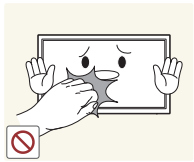
Do not use humidifiers or stoves around the product.

- A fire or electric shock may result.

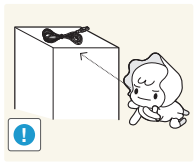


Rest your eyes for more than 5 minutes for every 1 hour of product use.

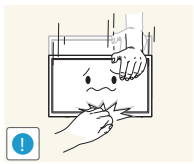
- Eye fatigue will be relieved.



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.



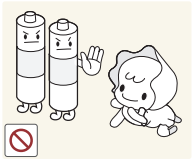
Do not place heavy objects on the product.

- Product failure or personal injury may result.



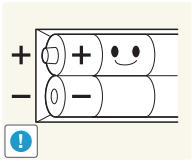
When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



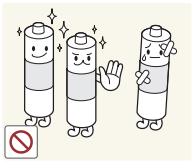
Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

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



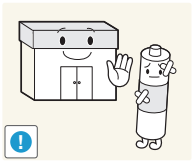
When replacing the battery, insert it with the right polarity (+, -).

- 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.

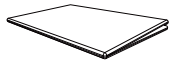
- The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.

Chapter 02
Preparations

Checking the Components

- Contact the vendor where you purchased the product if any components are missing.
- The pictures may look different from the actual components.
- A stand is not provided with the product. To install a stand, you can purchase one separately.
- The RS232C adapter can be used to connect to another monitor using the D-SUB (9-pin) type RS232C cable.

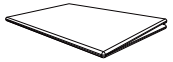
Components



Quick Setup Guide



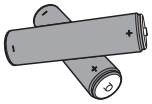
Warranty card
(Not available in some locations)



Regulatory guide



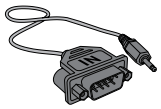
Power cord



Batteries
(Not available in some locations)



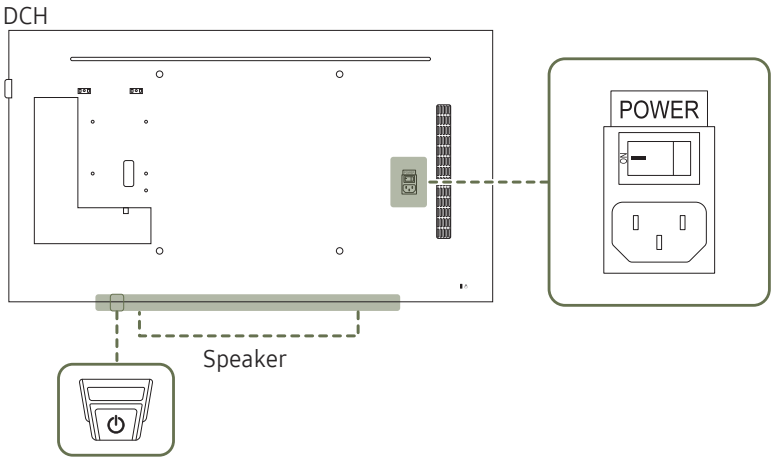
Remote Control



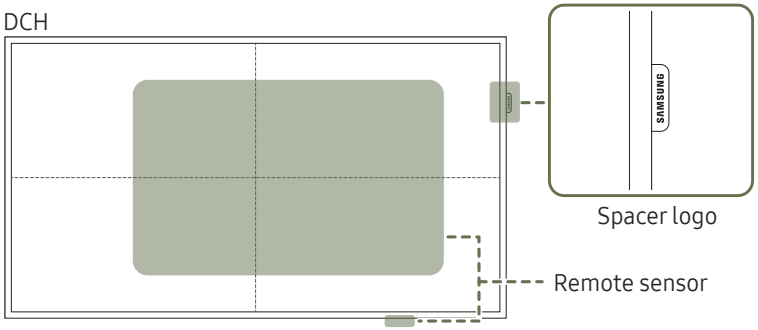
RS232C(IN) adapter

Parts

Control Panel



Remote sensor & Panel Key



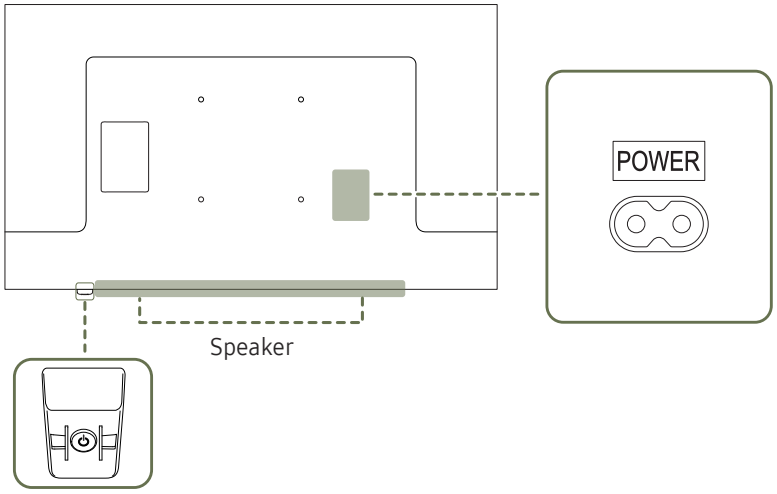
— The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

Power on	Press and hold for three seconds.
Power off	Press the panel key. A popup menu appears. Make sure Power Off is selected and then, press and hold the panel key until the display turns off.
Select source	Press the panel key. A popup menu appears. Press the panel key again to select Source. Then, press and hold the panel key to cycle through the desired source.
Spacer logo (optional)	Do not pull on the spacer logo using force. The logo may tear or break off.
Remote sensor	Press a button on the remote control pointing at the remote sensor on the product to perform the corresponding function. — 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. Use the remote control within 7 m to 10 m from the sensor on the product at an angle of 30° from the left and right. The product's screen also works as a remote sensor. When pointing the remote control at the screen, make sure: • the remote control is pointing towards the center of the screen. • to use the remote control 40 cm to 70 cm away from the screen. — 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.

- To use the panel key, make sure the sliding panel key is not protruding from the bottom of the product.
- To use remote/eco sensor, make sure the sliding panel key is protruding from the bottom of the product.

Control Panel

DCJ



Remote sensor & Panel Key

DCJ



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

Remote sensor	Press a button on the remote control pointing at the bottom of the product face to perform the function. The remote control sensor is located on the bottom of the product. — 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.

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

— Store used batteries out of reach of children and recycle.

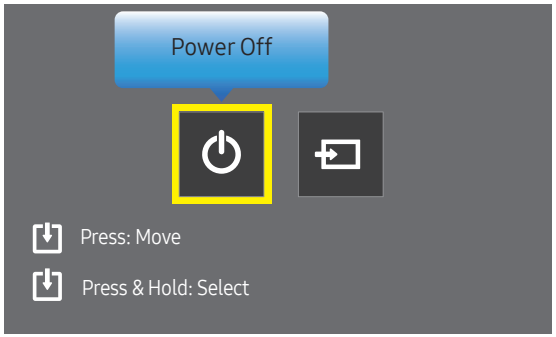
— Do not use a new and used battery together. Replace both batteries at the same time.

— Remove batteries when the remote control is not to be used for an extended period of time.

— The panel key is located on the bottom right front of the product.

— If you press the ⏻ button on the panel key when the product is turned on, the control menu will be displayed.

Control menu



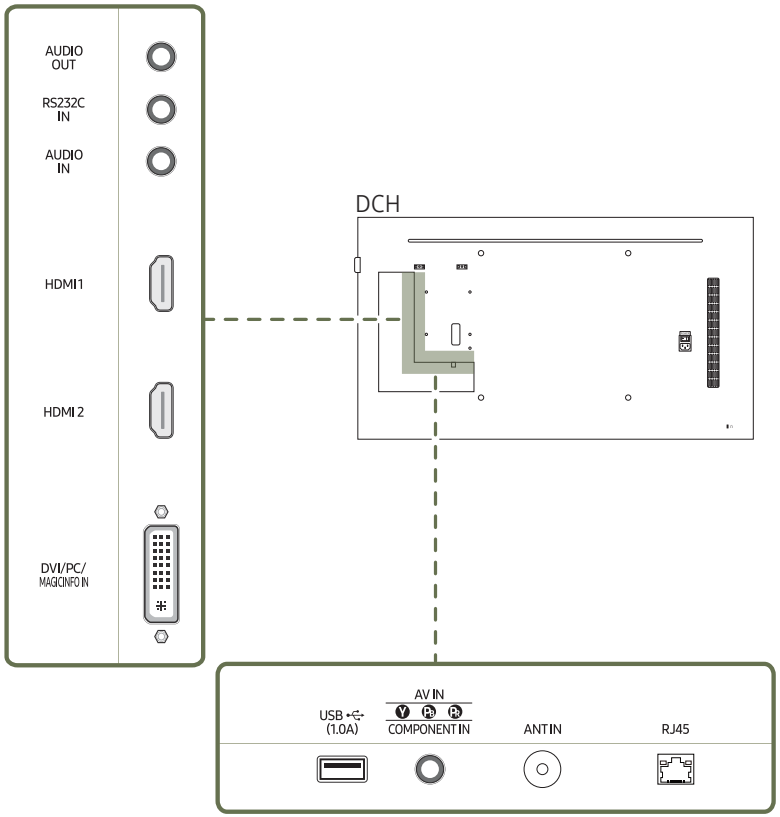
Buttons		Description
	Power Off	Power off the product. With the control menu screen displayed, briefly press the panel key to move the cursor to Power Off, and then press and hold the panel key to turn off the product.
	Source	Select the connected input source. With the control menu screen displayed, briefly press the panel key to move the cursor to Source, and then press and hold the panel key to display the input source screen. With the input source screen displayed, press and hold the panel key to switch to the desired input source.

— The panel key can only be used for Power Off and Source.

— To exit from the control menu screen, wait for 3 seconds or more without pressing the panel key.

Reverse Side

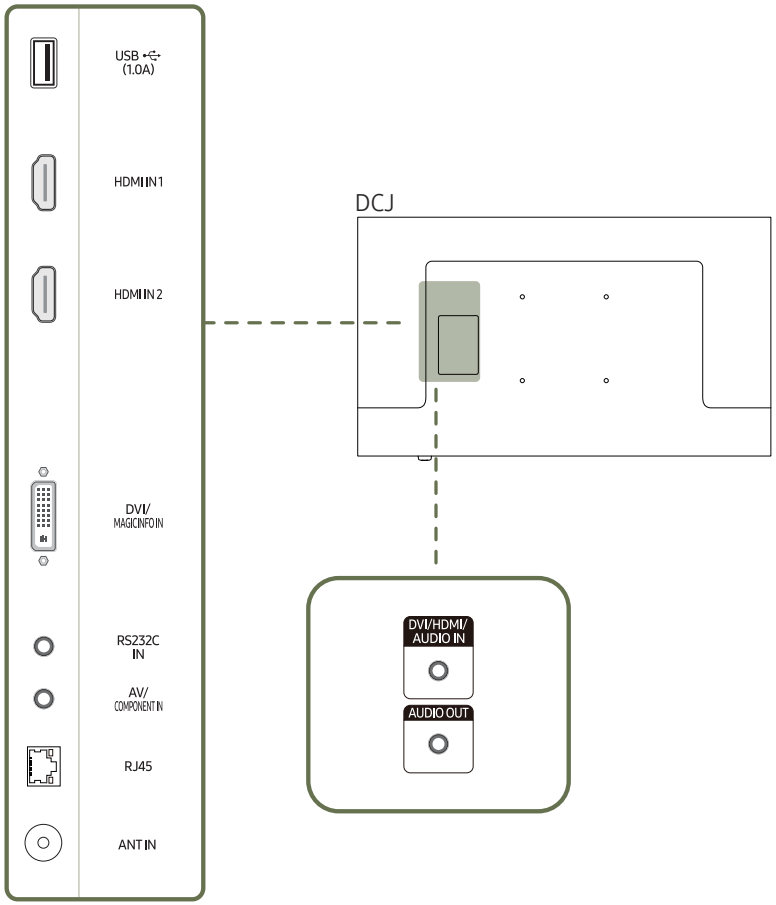
— The color and shape of parts may differ from what is shown.
Specifications are subject to change without notice to improve quality.



Port	Description
AUDIO OUT	Connects to the audio of a source device.
RS232C IN	Connects to MDC using an RS232C adapter.
AUDIO IN	Receives sound from a PC via an audio cable.
HDMI 1, HDMI 2	Connects to a source device using a HDMI cable or HDMI-DVI cable.
DVI/PC/MAGICINFO IN	DVI: Connects to a source device using a DVI cable or HDMI-DVI cable. PC: Connects a D-SUB cable (via a DVI-RGB adapter) or a DVI-RGB cable to a PC. MAGICINFO IN: Use the (dedicated) DP-DVI cable when connecting a network box (sold separately).
USB (1.0A)	Connect to a USB memory device. — The USB ports on the product accept a maximum constant current of 1.0A. If the maximum value is exceeded, USB ports may not work.
AV IN / COMPONENT IN	Connects to a source device using the AV/Component adapter.
ANT IN	Connect to an antenna cable.
RJ45	Connects to MDC using a LAN cable. (10/100 Mbps)

Reverse Side

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



Port	Description
USB (1.0A)	Connect to a USB memory device. — The USB ports on the product accept a maximum constant current of 1.0A. If the maximum value is exceeded, USB ports may not work.
HDMI IN 1	Connects to a source device using a HDMI cable or HDMI-DVI cable.
HDMI IN 2	
DVI/MAGICINFO IN	DVI: Connects to a source device using a DVI cable or HDMI-DVI cable. MAGICINFO IN: To use MagicInfo, make sure to connect the DP-DVI cable.
RS232C IN	Connects to MDC using an RS232C adapter.
AV/COMPONENT IN	Connects to a source device using the AV/Component adapter.
RJ45	Connects to MDC using a LAN cable. (10/100 Mbps)
ANT IN	Connect to an antenna cable.
DVI/HDMI/AUDIO IN	Receives sound from a PC via an audio cable.
AUDIO OUT	Connects to the audio of a source device.

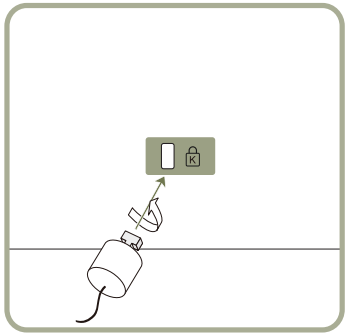
Anti-theft Lock

- An anti-theft lock allows you to use the product securely even in public places.
- The locking device shape and locking method depend on the manufacturer. Refer to the user guide provided with your anti-theft locking device for details.
- The following images are for reference only. Real-life situations may differ from what is shown in the images.

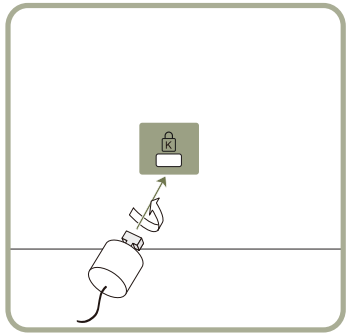
To lock an anti-theft locking device:

- Stand: Sold separately

DCH



DCJ



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.

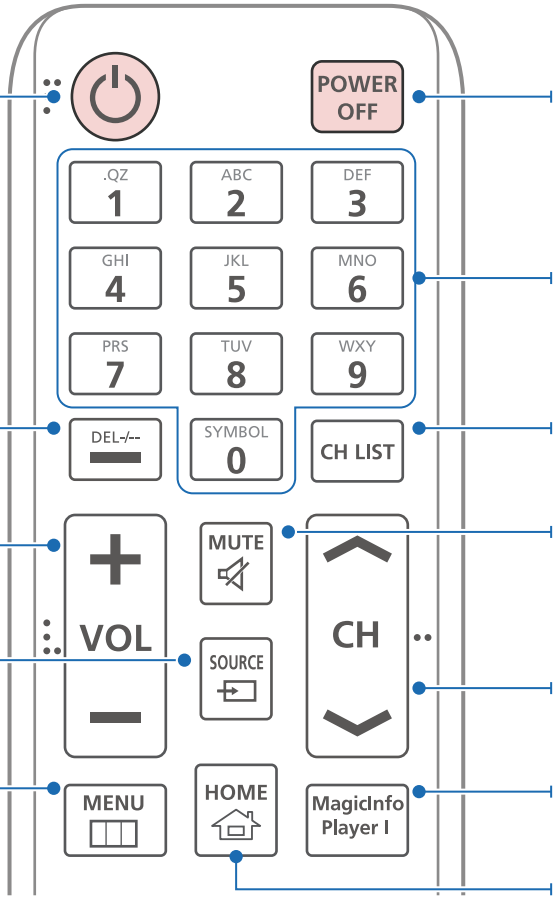
3 Insert the locking device into the anti-theft lock slot at the back of the product.

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.



Power on the product.

Power off the product.

Number buttons

Enter the password in the OSD menu.

Press to select additional channels (digital) being broadcasted by the same station. For example, to select channel “54-3”, press “54”, then press “-” and “3”.

Channel List Launch Button.

Mute the sound.

Adjust the volume.

Unmuting the sound: Press **MUTE** again or press the volume control(**+ VOL -**) button.

Change the input source.

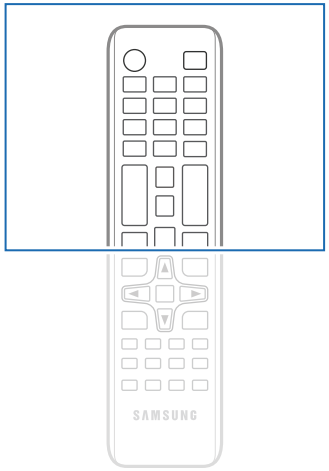
Change the channel in TV mode.

Use this hotkey to directly access MagicInfo Lite.

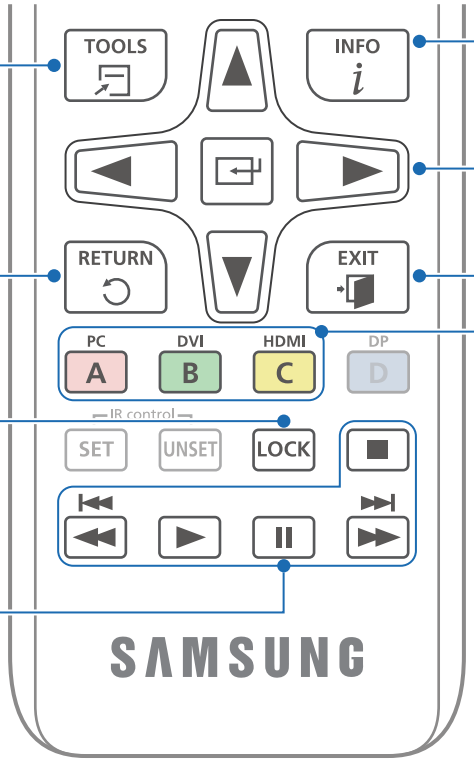
Display or hide the onscreen display menu, or return to the previous menu.

This hotkey is available when a network box or PIM (Plug In Module) is connected.

MagicInfo Lite launch Button.



– Remote control button functions may differ for different products.



Quickly select frequently used functions.

Return to the previous menu.

It sets safe lock function.

Used in Anynet+ mode and multimedia mode.

Display information about the current input source.

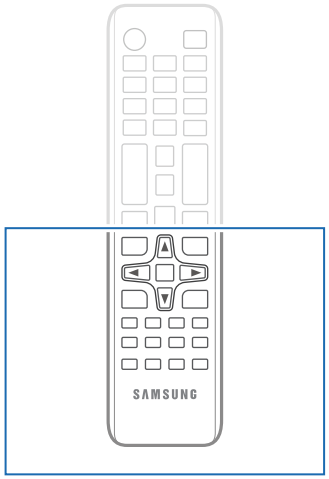
Move to the upper, lower, left or right menu, or adjust an option's setting.

Confirm a menu selection.

Exit the current menu.

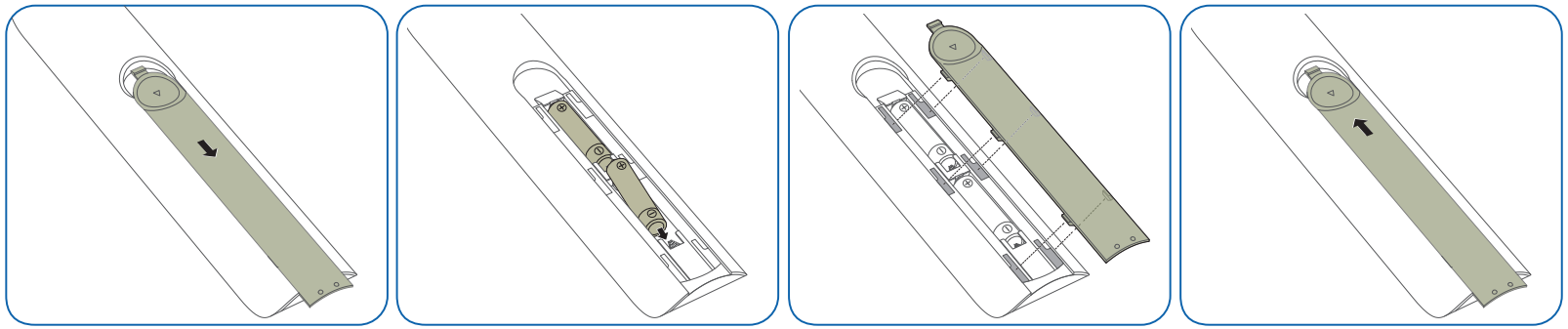
Manually select a connected input source from PC, DVI, HDMI1, HDMI2.

In TV mode, configure settings such as the program guide for digital channels. In other modes, manually select a connected source device. In media and HDMI-CEC modes, configure settings for the functions assigned to the color buttons on the remote control. Enable or disable lock mode.



– Remote control button functions may differ for different products.

To place batteries in the remote control



Before Installing the Product (Installation Guide)

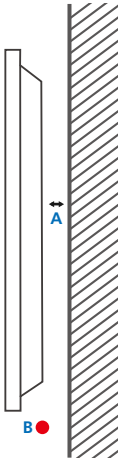
To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

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

Ventilation

— Contact Samsung Customer Service Center for further details.

Installation on a Perpendicular Wall

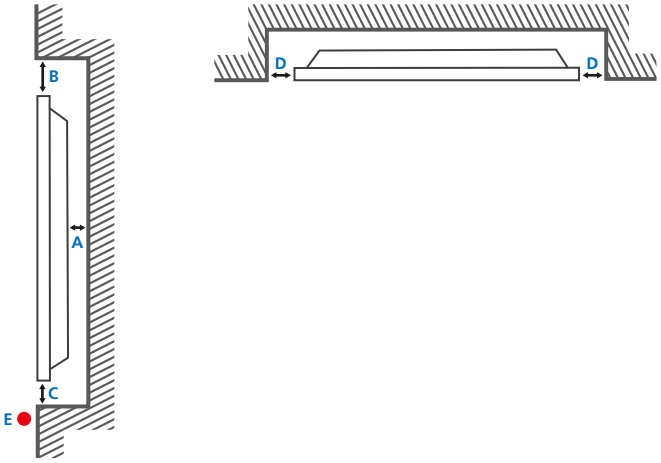


A Minimum 40 mm

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.

Installation on an Indented Wall



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.

Installing the Wall Mount

Installing the Wall Mount Kit

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

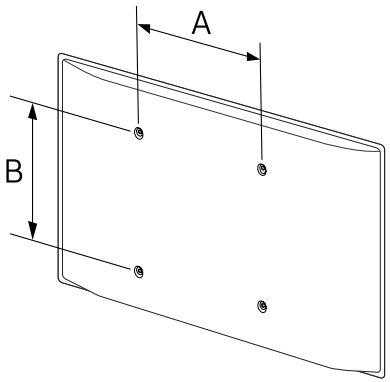
For detailed information on installing the wall mount, see the instructions provided with the wall mount.

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.
- Always have two people mount the product on a wall.
- Standard dimensions for wall mount kits are shown in the table below.

Model name	VESA screw hole specs (A * B) in millimeter (inches)	Standard Screw	Quantity
DC43H / DC43J / DC49J	200 x 200 (7.9 x 7.9)	M8	4
DC49H / DC55H	400 x 400 (15.8 x 15.8)		

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

— If you want to use a wall mount, make sure that it allows you to remove the product from it without using any additional tool. (Supported models: DCJ)

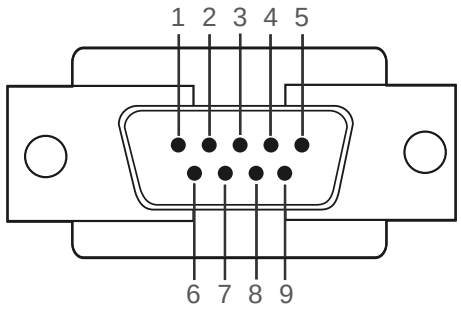
Remote Control (RS232C)

Cable Connection

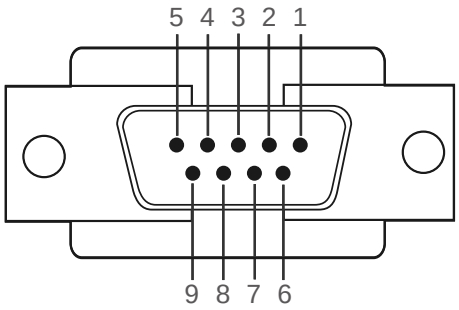
RS232C Cable

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



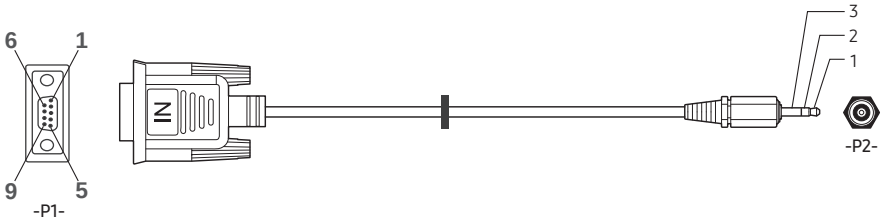
‹Male type›



‹Female type›

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

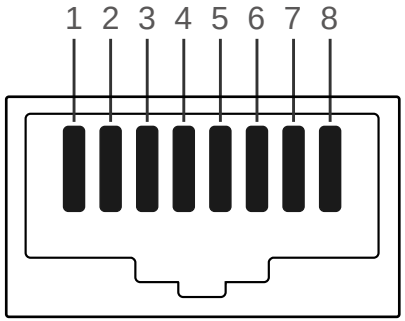
- RS232C cable
  Connector: 9-Pin D-Sub to Stereo Cable



-P1-		-P1-		-P2-		-P2-
Male type	Rx	3	----------	1	Tx	STEREO
	Tx	2	----------	2	Rx	PLUG
	Gnd	5	----------	3	Gnd	(3.5ø)

LAN Cable

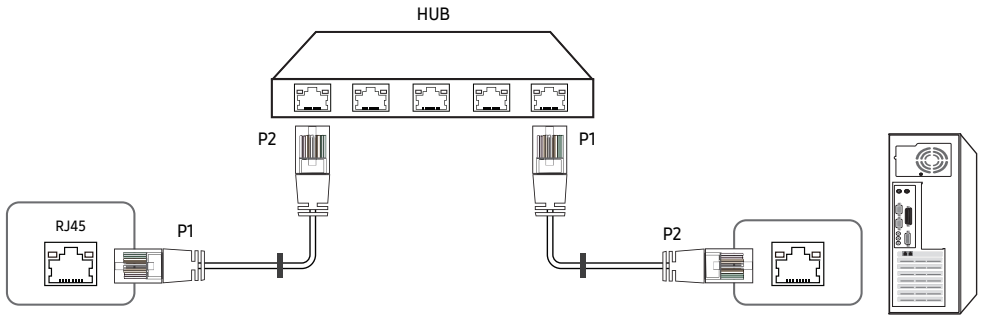
- Pin assignment



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

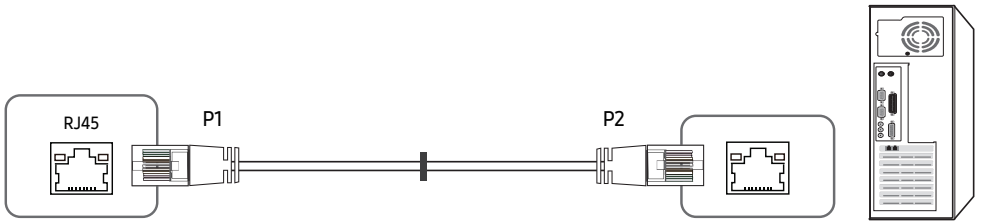
- Connector : RJ45

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-

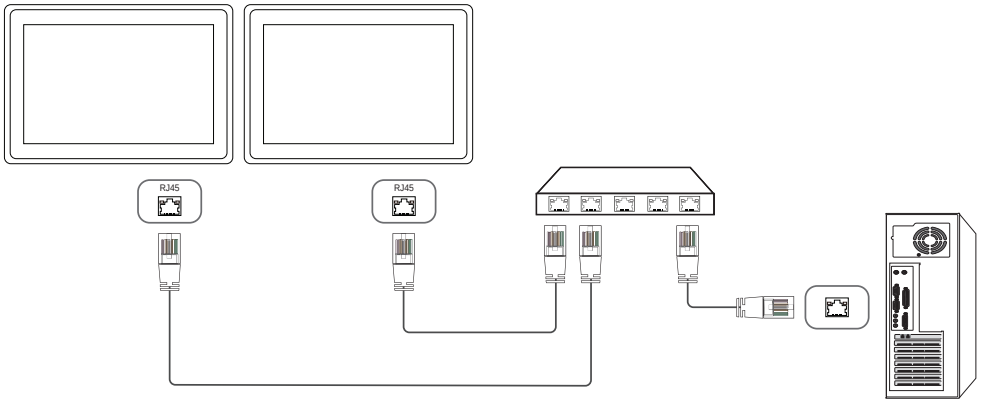
Cross LAN cable (PC to PC)



Signal	P1		P2	Signal
TX+	1	↔	3	RX+
TX-	2	↔	6	RX-
RX+	3	↔	1	TX+
RX-	6	↔	2	TX-

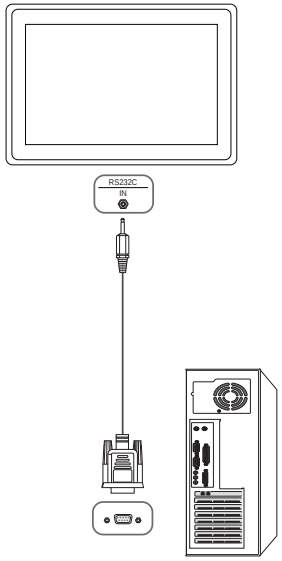
Connection

- Connection 1



- Connection 2

— Ensure that you connect the RS232C(IN) adapter to the RS232C IN port on the product.



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
10	Video Wall On	0x84	0~1
11	Video Wall User Control	0x89	-

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

E.g. Power On & ID=0

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(HDMI)
0x22	HDMI1_PC(HDMI_PC)
0x23	HDMI2
0x24	HDMI2_PC

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

— Available input sources may vary depending on the model.

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

— 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	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	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	N/A	N/A	N/A	N/A	N/A	N/A
13	0xD1	0xD2	0xD3	0xD4	0xD5	0xD6	0xD7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	0xE1	0xE2	0xE3	0xE4	0xE5	0xE6	0xE7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	0xF1	0xF2	0xF3	0xF4	0xF5	0xF6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Wall_SNo: Product Number code assigned to the product

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

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.

— Connect the sound ports correctly: left = white and right = red.

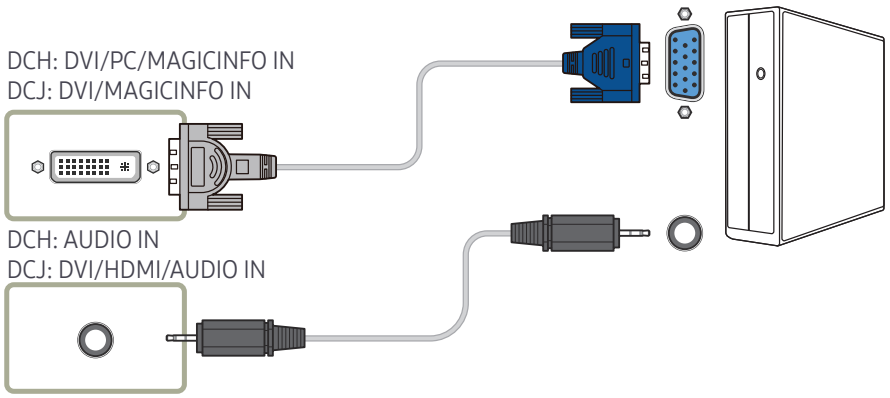
— Check the types of ports at the back of the product you want to connect.

Connecting to a PC

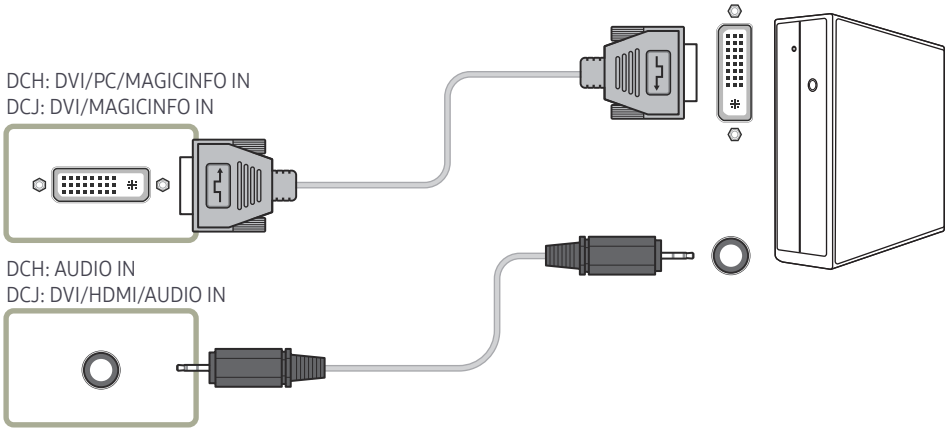
- Do not connect the power cable before connecting all other cables.
  Ensure you connect a source device first before connecting the power cable.
- A PC can be connected to the product in a variety of ways.
  Select a connection method suitable for your PC.

— Connecting parts may differ in different products.

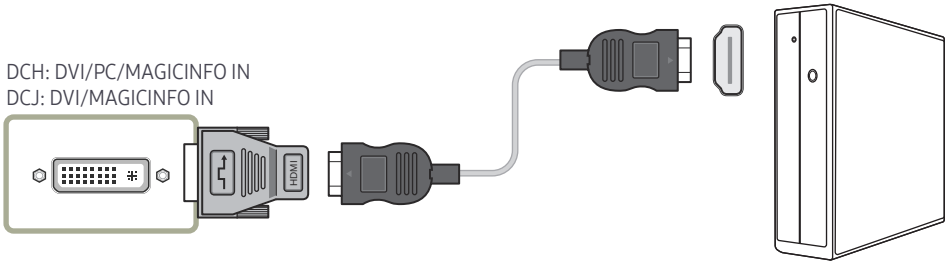
Connection using the DVI-RGB Cable



Connection using a DVI Cable (Digital type)

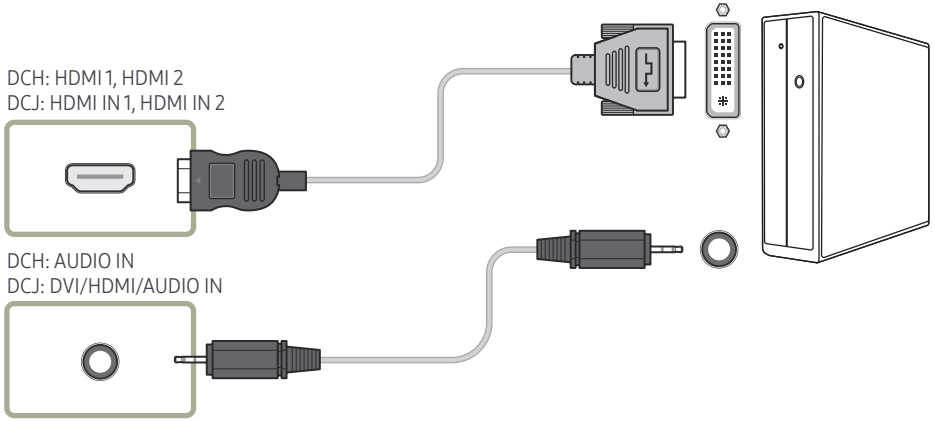


— You can use the DVI port on the product as an HDMI port by using a DVI-HDMI adapter.

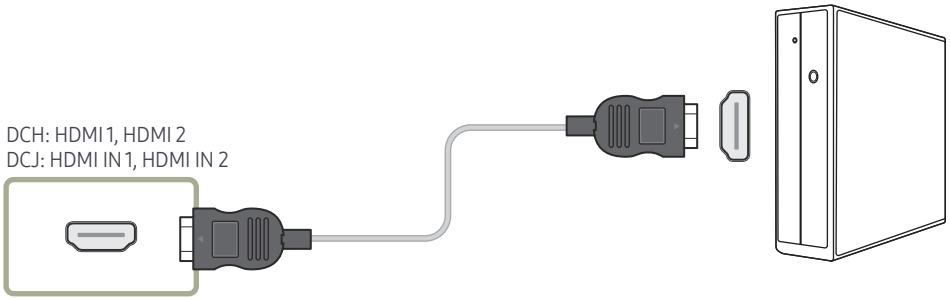


Connection Using an HDMI-DVI Cable

— 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.



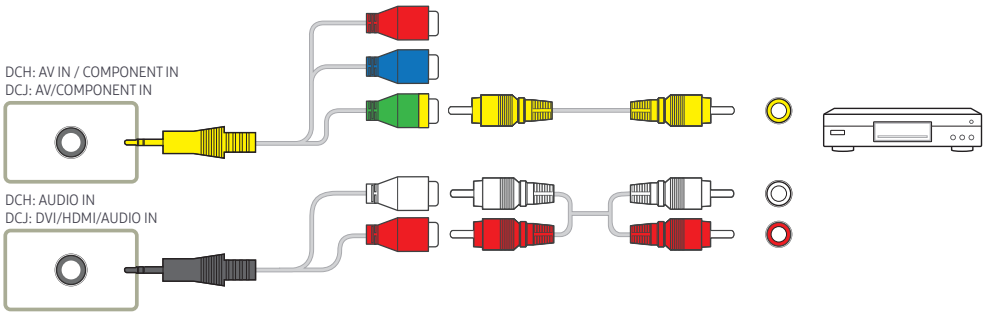
Connection Using an HDMI Cable



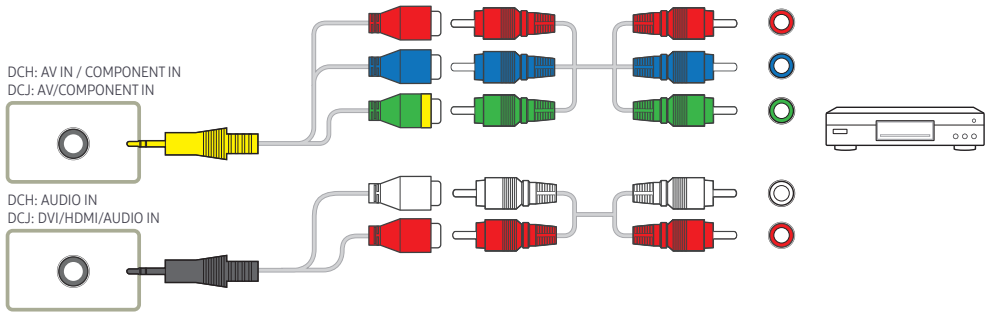
Connecting to a Video Device

- 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 the AV Cable



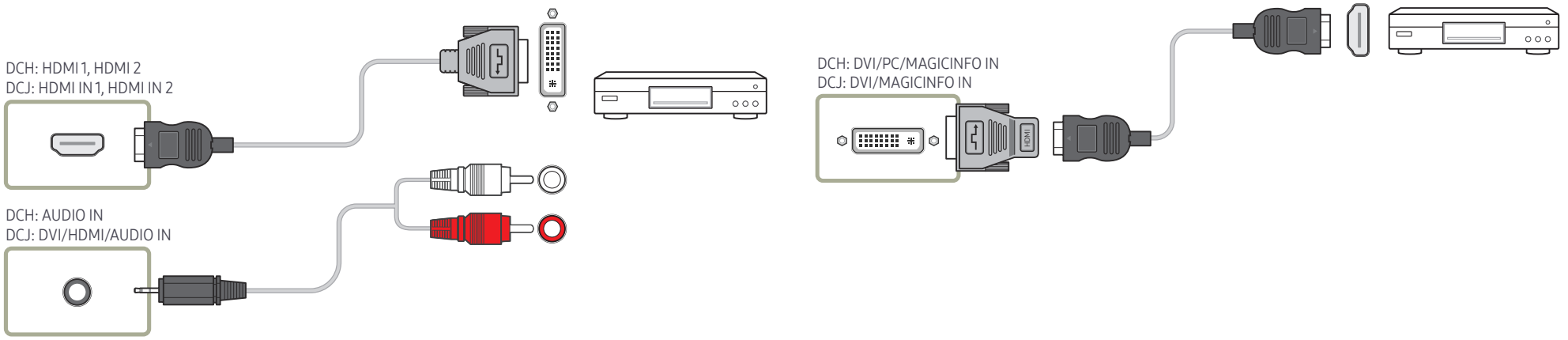
Connection Using the component Cable



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.

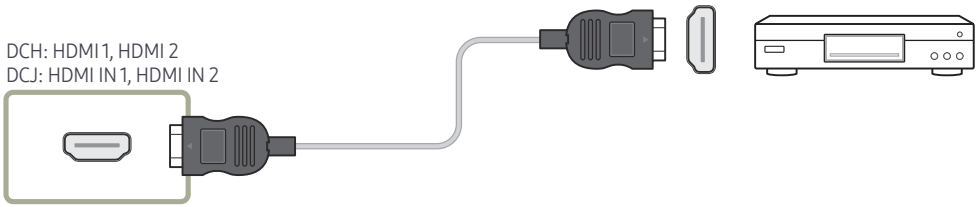
— Supported resolutions include 1080p (50/60Hz), 720p (50/60Hz), 480p, and 576p.



Connection Using an HDMI Cable

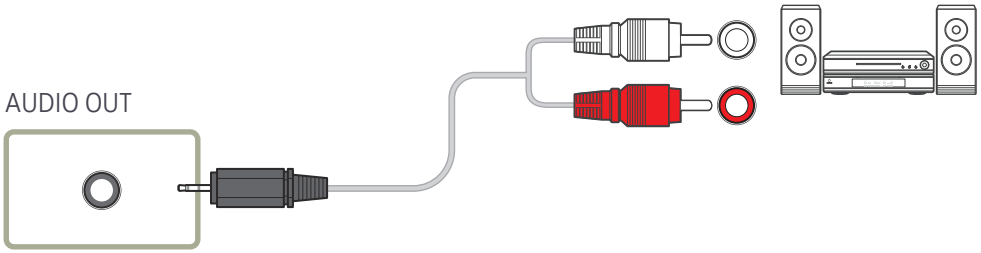
Using an HDMI cable or HDMI to DVI Cable (up to 1080p)

- 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 use an HDMI cable with a thickness of 14 mm or less.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- A basic high-speed HDMI cable or one with ethernet is recommended.
  This product does not support the ethernet function via HDMI.



Connecting to an Audio System

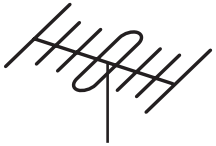
— Connecting parts may differ in different products.

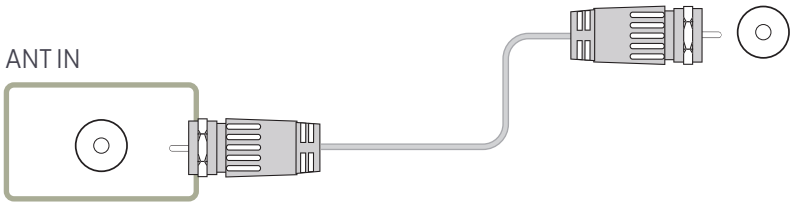


Connecting the Antenna

— Connecting parts may differ in different products.

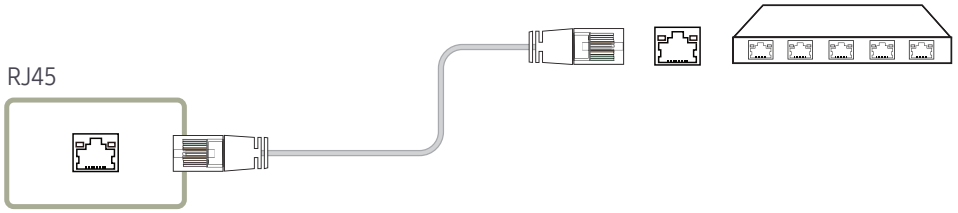
— When the product is powered on for the first time, basic settings are configured automatically. Take extra care to ensure the wires inside the antenna cable are not bent.





Connecting the LAN Cable

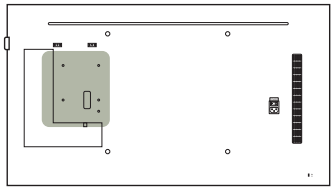
— Connecting parts may differ in different products.

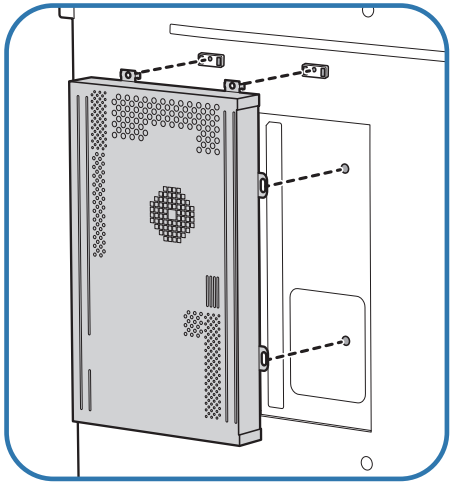


- Use Cat7(*STP Type) cable for the connection.
  *Shielded Twist Pair

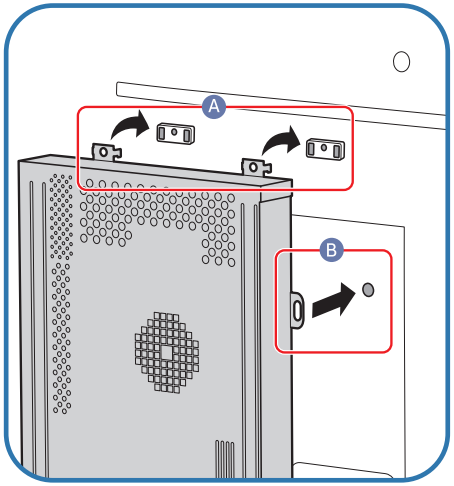
Attaching the Network box (Sold separately)

— Supported models: DCH

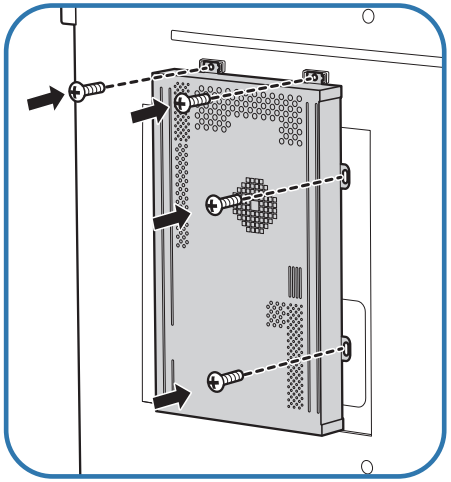




1 Place the network box as shown.



2 First insert the tabs of the network box into the slots marked (A) on the attachment frame. The tabs should hook onto the frame. Then, align the holes marked (B).



3 Attach the network box to the fixed attachment frames.

Connecting the Network box (Sold separately)

— For details on how to connect to a network box, refer to the user's manual provided with the network box upon purchase.

MagicInfo

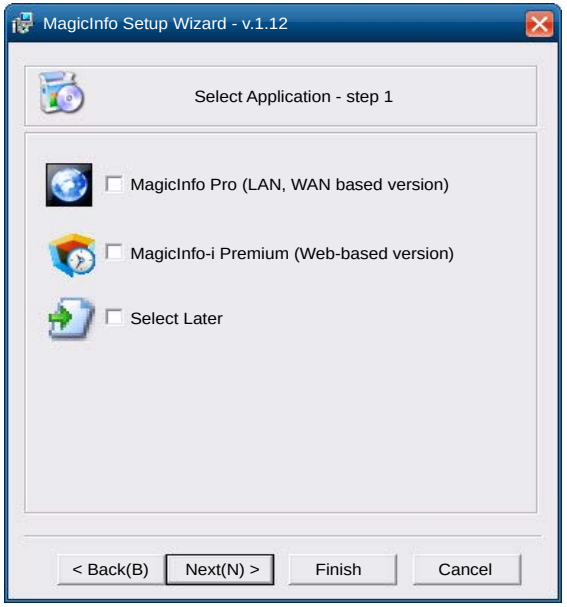
To use MagicInfo, a network box (sold separately) must be connected to the product.

— To change the MagicInfo settings, run "MagicinfoSetupWizard" on the desktop.

— For details on how to use MagicInfo, refer to the DVD provided with the network box.

— The information in this section is subject to change without notice for quality improvement.

— If a problem occurs after installing an operating system other than the one provided with the network box, restoring the previous version of the operating system, or installing software that is not compatible with the operating system provided, you will not be able to benefit from technical support and will be charged a fee for a visit from a service technician. A product exchange or refund will also not be available.



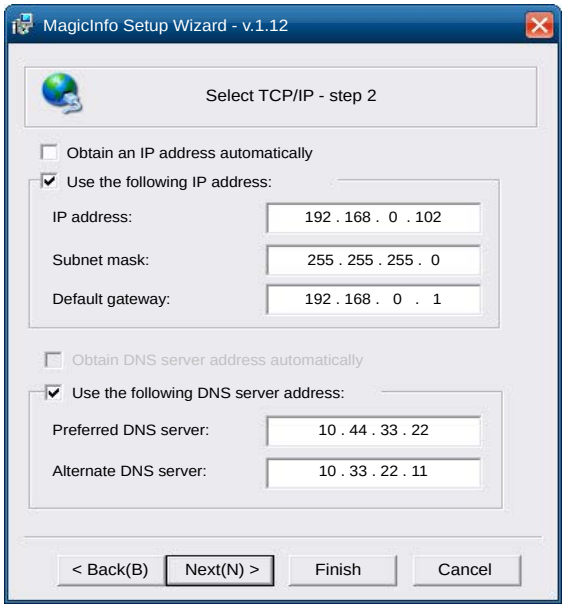
Entering MagicInfo mode

1 After installing and connecting the network box (sold separately) to the product, power on the product.

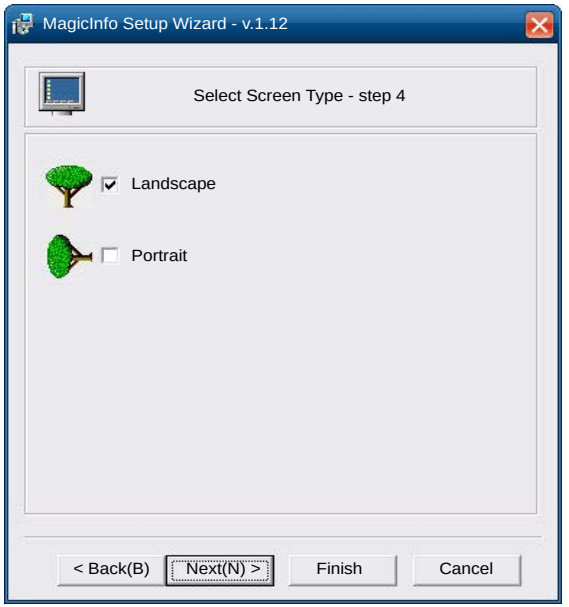
2 Press SOURCE on the remote control, and select MagicInfo.

— Connecting the network box to the DVI/MAGICINFO IN(DVI/PC/MAGICINFO IN) port on the product will change Source from DVI to MagicInfo.

3 Select the default application you want to run when MagicInfo starts.



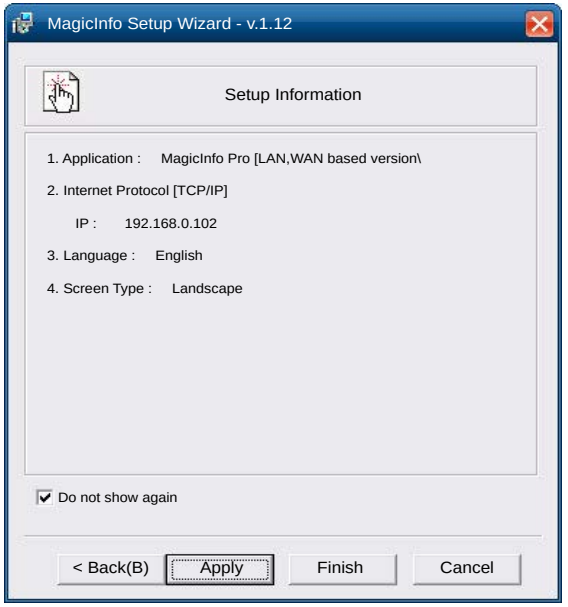
4 Enter the IP information.



6 Select a display mode.



5 Select a language. (The default language is **English**.)



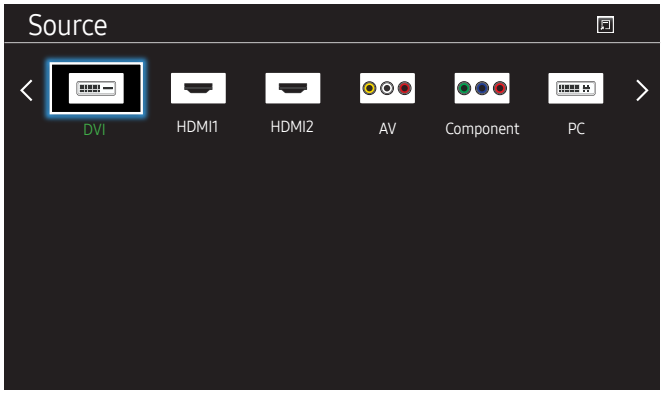
7 Double-check the settings you have just configured.

— If the execution icon does not appear, double-click the MagicInfo icon on the desktop. The icon will appear at the bottom right of the screen.

Changing the Input source

Source

SOURCE → Source



– The displayed image may differ depending on the model.

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

You can display the screen of a source device connected to the product. Select a source from source list to display the screen of the selected source.

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

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

Edit Name

SOURCE → Source → TOOLS → Edit Name → ENTER

Customize the name of a connected external device.

— 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

Information

SOURCE → Source → TOOLS → Information → ENTER

You can see detailed information about the selected external device.

Chapter 04
Using MDC

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

MDC Program Installation/Uninstallation

Installation

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

1 Click the **MDC Unified** installation program.

2 Select a language for installation. Next, click "OK".

3 When the "Welcome to the InstallShield Wizard for MDC_Unified" screen appears, click "Next".

4 In the "License Agreement" window displayed, select "I accept the terms in the license agreement" and click "Next".

5 In the displayed "Customer Information" window, fill out all the information fields and click "Next".

6 In the displayed "Destination Folder" window, select the directory path you want to install the program in and click "Next".

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

7 In the displayed "Ready to Install the Program" window, check the directory path to install the program in and click "Install".

8 Installation progress will be displayed.

9 Click "Finish" in the displayed "InstallShield Wizard Complete" window.

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

10 The **MDC Unified** shortcut icon will be created on the desktop after installation.

— The MDC execution icon may not be displayed depending on the PC system or product specifications.

— Press F5 if the execution icon is not displayed.

Uninstallation

1 Select **Settings** › **Control Panel** on the **Start** menu and double-click **Add/Delete Program**.

2 Select **MDC Unified** from the list and click **Change/Remove**.

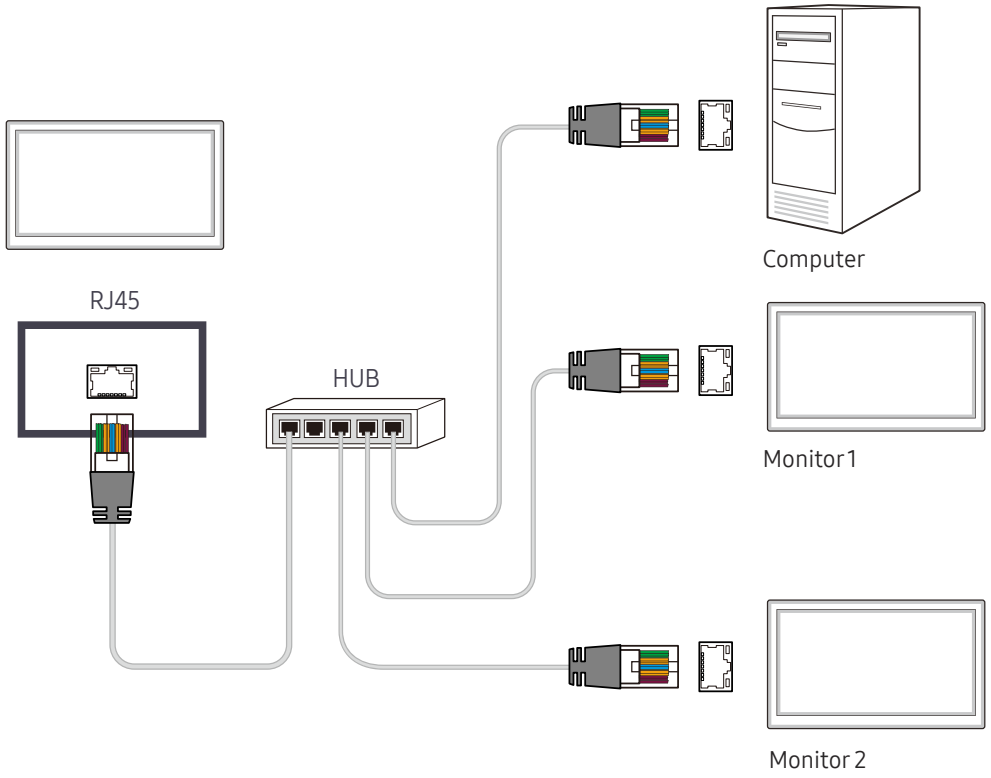
Connecting to MDC

Using MDC via Ethernet

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

Connection using a direct LAN cable

— Multiple products can be connected using the **RJ45** port on the product and the LAN ports on the HUB.

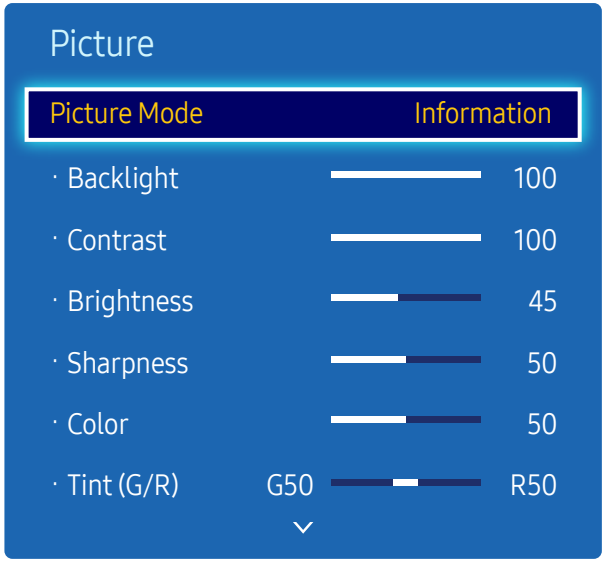


Chapter 05
Screen Adjustment

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, DVI(PC), HDMI(PC)

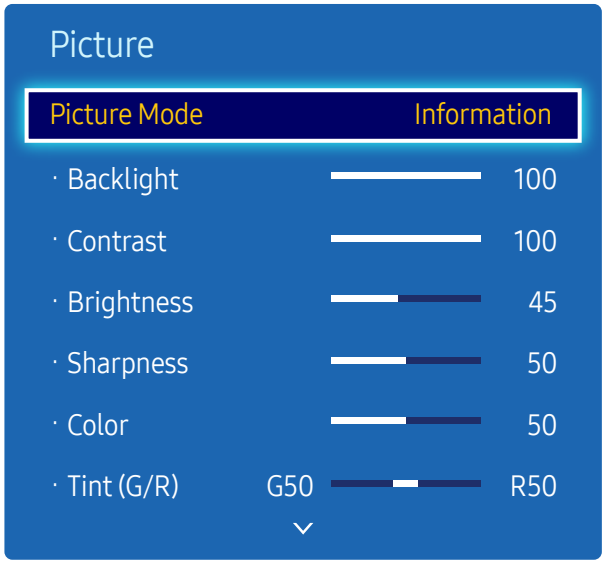
- Information: This mode reduces eye fatigue and is suitable for displaying information to the public.
- Advertisement: This mode is suitable for displaying video content and indoor/outdoor advertisements.
- Calibration: In this mode, the brightness, color, gamma and uniformity settings customized using the color calibration program **Color Expert** are applied.
  – To apply the Calibration mode properly, make sure you configure the picture quality settings, such as brightness, color, gamma and uniformity, using the color calibration program **Color Expert**.
  – To download the **Color Expert** program, visit www.samsung.com/displaysolutions.

If the input source is TV, AV, Component, DVI(AV), HDMI(AV)

- Dynamic: This mode is suitable when the ambient light is bright.
- Standard: This mode is generally suitable for any environment.
- Movie: This mode reduces eye fatigue.
- Calibration: In this mode, the brightness, color, gamma and uniformity settings customized using the color calibration program **Color Expert** are applied.
  – To apply the Calibration mode properly, make sure you configure the picture quality settings, such as brightness, color, gamma and uniformity, using the color calibration program **Color Expert**.
  – To download the **Color Expert** program, visit www.samsung.com/displaysolutions.

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, DVI, HDMI1, HDMI2, MagicInfo (when a PC is connected)	Information / Advertisement	Backlight / Contrast / Brightness / Sharpness
	Calibration	Backlight
TV, AV, Component, DVI, HDMI1, HDMI2 (720p, 1080i, 1080p)	Dynamic / Standard / Movie	Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R)
	Calibration	Backlight

— 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.

Gamma

MENU → Picture → Gamma → ENTER



– The displayed image may differ depending on the model.

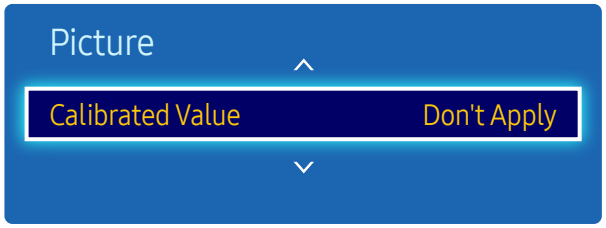
Adjust the primary color intensity.

— If Picture Mode is set to Dynamic, Gamma is disabled.

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

Calibrated Value

MENU → Picture → Calibrated Value → ENTER



– The displayed image may differ depending on the model.

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

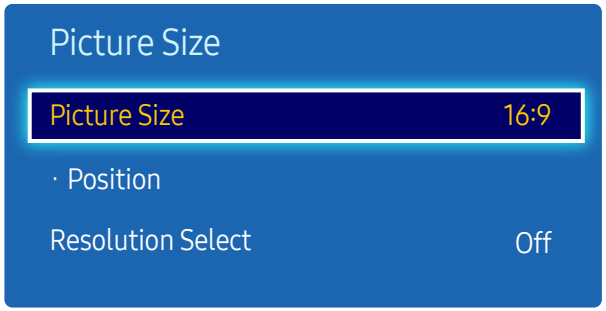
- Don't Apply / Apply

— To download the **Color Expert** program, visit www.samsung.com/displaysolutions.

— If Picture Mode is set to Calibration, Calibrated Value is disabled.

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.

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

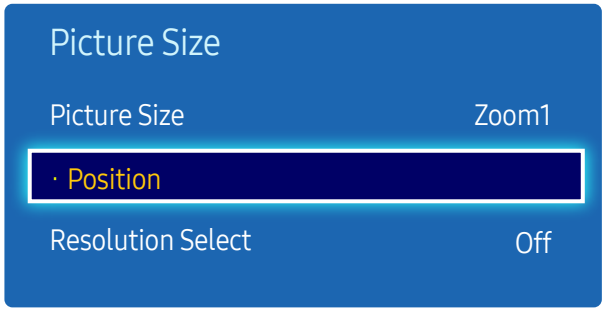
- 16:9: Sets the picture to 16:9 wide mode.
- Zoom1: Use for moderate magnification. Cuts off the top and sides.
- Zoom2: Use for a stronger magnification.
- Wide Fit: Enlarges the aspect ratio of the picture to fit the entire screen.
- 4:3: Sets the picture to basic (4:3) mode.

  — 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 HDMI1, HDMI2 (720p / 1080i / 1080p) or Component (1080i / 1080p) signals are inputted.
- Smart View 1: Reduces the 16:9 picture by 50%.
- Smart View 2: Reduces the 16:9 picture by 25%.
- Custom: Changes the resolution to suit the user's preferences.
- Original Ratio: If the input source is PC, DVI, HDMI1, HDMI2 (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.

Position



– 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.

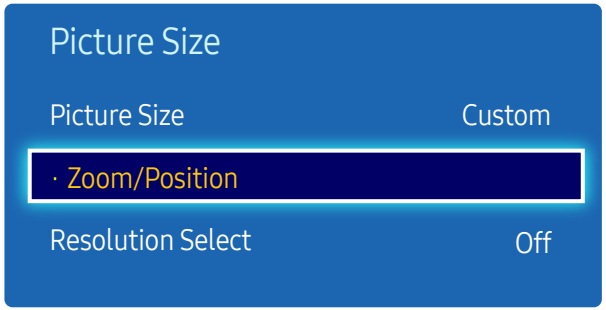
— To use the Position function after selecting Zoom1, Zoom2, Wide Fit or Screen Fit follow these steps.

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.

Zoom/Position



– The displayed image may differ depending on the model.

— To use the Zoom/Position function after selecting Custom in DVI, HDMI1, HDMI2 (1080i/1080p) or Component (1080i/1080p) or Custom, follow these steps.

1 Press the ▼ button to select Zoom/Position. Press the ↵ button.

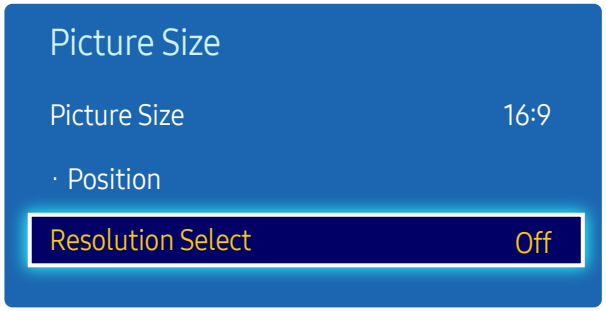
2 Select the Zoom or Position. Press the ↵ button.

3 Press the ▲/▼/◀/▶ button to move the picture.

4 Press the ↵ button.

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

Resolution Select



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

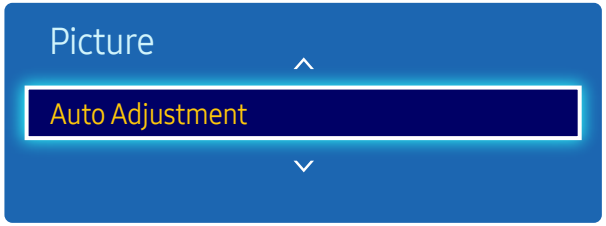
– Available in PC mode only.

– The displayed image may differ depending on the model.

Auto Adjustment

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

MENU → Picture → Auto Adjustment → ENTER

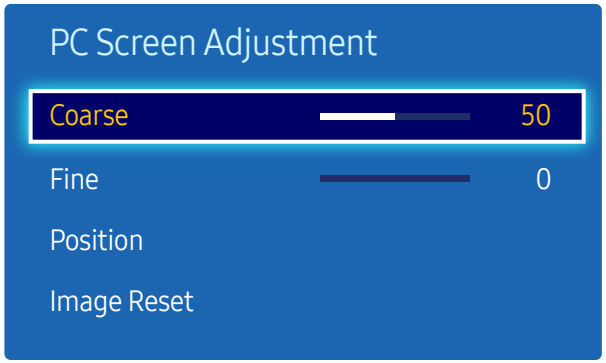


– Available in PC mode only.

– The displayed image may differ depending on the model.

PC Screen Adjustment

MENU → Picture → PC Screen Adjustment → ENTER



– Available in PC mode only.

– 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.

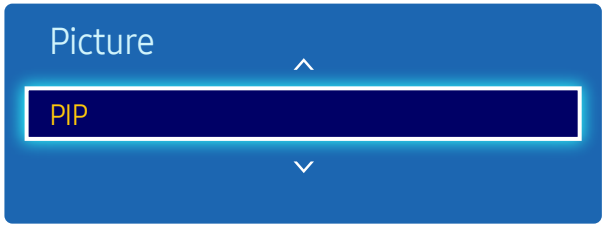
  Press the ▲ or ▼ button to adjust the Vertical Position. Press the ◀ or ▶ button to adjust the Horizontal Position.

- Image Reset

  Resets the image to the default settings.

PIP

MENU → Picture → PIP → ENTER



- The displayed image may differ depending on the model.
- For PIP sound, refer to the Sound Select instructions.
- 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.
- The PIP option is only enabled when Video Wall is set to Off.
- If Picture Mode is set to Calibration, PIP is disabled.

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.

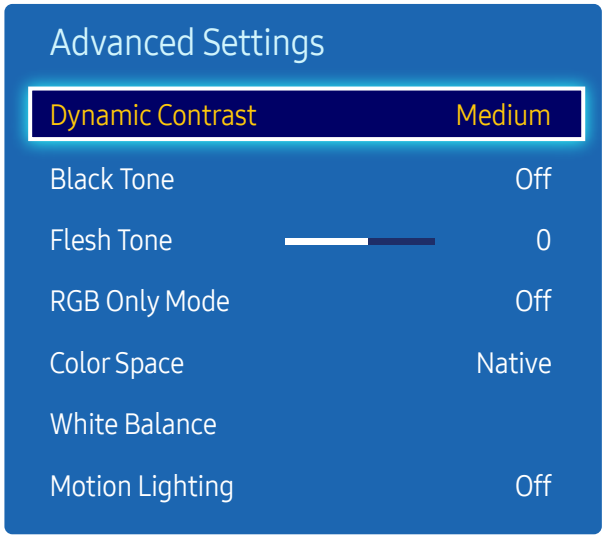
Main picture	Sub picture
TV	PC, DVI, Component, HDMI1, HDMI2, MagicInfo
AV	PC, DVI, HDMI1, HDMI2, MagicInfo
Component	TV, DVI, HDMI1, HDMI2, MagicInfo
PC	TV, AV, HDMI1, HDMI2, MagicInfo
DVI	TV, AV, Component
HDMI1, HDMI2	TV, PC, AV, Component

— Available input sources may vary depending on the model.

- PIP (Off / On): Activate or deactivate the PIP function.
- Source: You can select a source of the sub picture.
- Antenna (Air / Cable): Select either Air or Cable as the input source for the sub-screen.
  — This option is enabled if the secondary display is set to TV.
- Channel: Select the channel for the sub-screen.
  — This option is enabled if the secondary display is set to TV.
- 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



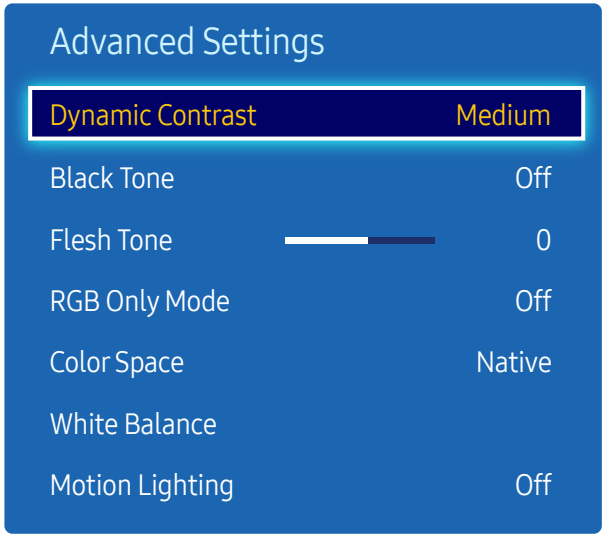
– The displayed image may differ depending on the model.

Input Source	Picture Mode	Advanced Settings
PC, DVI, HDMI1, HDMI2, MagicInfo (when a PC is connected)	Information / Advertisement	White Balance
TV, AV, Component, DVI, HDMI1, HDMI2	Standard / Movie	Dynamic Contrast / Black Tone / Flesh Tone / RGB Only Mode / Color Space / White Balance / Motion Lighting

– Available input sources may vary depending on the model.

– If Picture Mode is set to Dynamic, Advanced Settings is disabled.

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



– The displayed image may differ depending on the model.

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

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.

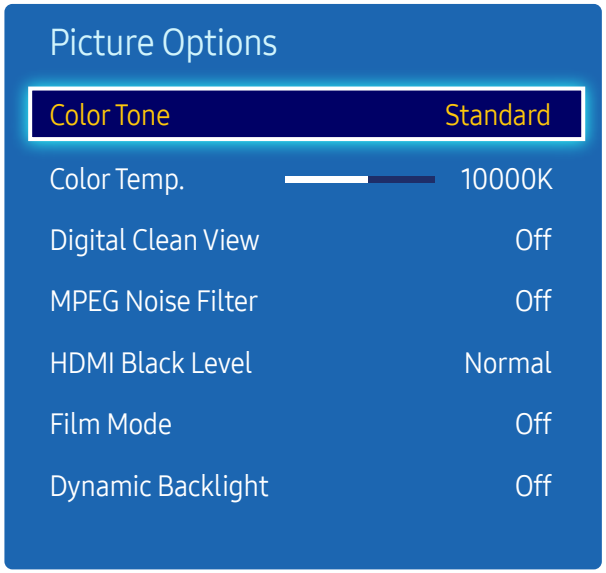
Motion Lighting

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



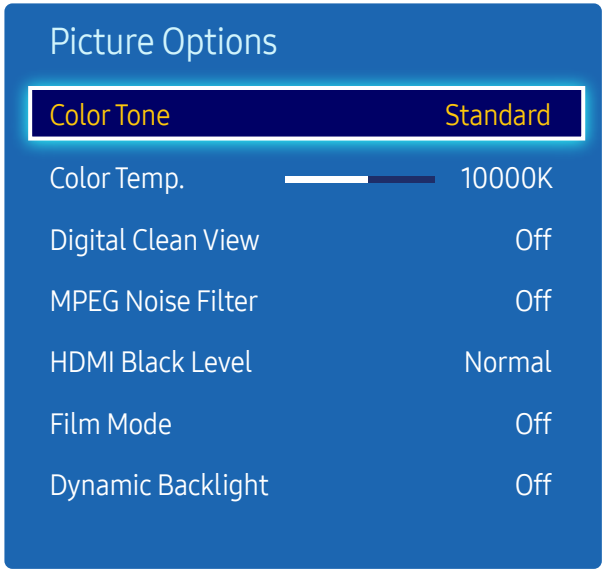
– The displayed image may differ depending on the model.

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, MagicInfo	Information / Advertisement	Color Tone / Color Temp. / Dynamic Backlight
	Calibration	Dynamic Backlight
DVI, HDMI1, HDMI2 (when a PC is connected)	Information / Advertisement	Color Tone / Color Temp. / HDMI Black Level / Dynamic Backlight
	Calibration	HDMI Black Level / Dynamic Backlight
TV, AV	Dynamic / Standard / Movie	Color Tone / Color Temp. / Digital Clean View / MPEG Noise Filter / Film Mode / Dynamic Backlight
	Calibration	Digital Clean View / MPEG Noise Filter / Film Mode / Dynamic Backlight
DVI, Component, HDMI1, HDMI2	Dynamic / Standard / Movie	Color Tone / Color Temp. / Digital Clean View / MPEG Noise Filter / Dynamic Backlight
	Calibration	Digital Clean View / MPEG Noise Filter / Dynamic Backlight

– Available input sources may vary depending on the model.



– The displayed image may differ depending on the model.

Color Tone

If the input source is PC, DVI, HDMI1, HDMI2, MagicInfo (PC connection).

- Off / Cool / Standard / Warm

If the input source is AV, Component, DVI, HDMI1, HDMI2 or TV.

- 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.

— Available input sources may vary depending on the model.

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 / Auto Visualization

— Auto Visualization: When changing analog channels, displays signal strength.

— Received signal intensity is the strongest when the bar is green.

— 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

HDMI Black Level

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

- Low / Normal

— This function is only available when the input signal, connected to the product via an HDMI1, HDMI2 or DVI connector, is set to RGB444.

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

Dynamic Backlight

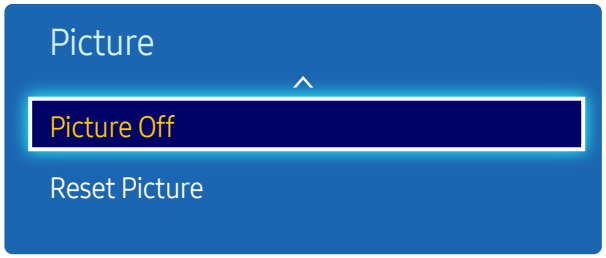
Automatically adjust the backlight to provide the best possible screen contrast under the current conditions.

- Off / On

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

Picture Off

MENU → Picture → Picture Off → ENTER



– The displayed image may differ depending on the model.

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

Reset Picture

MENU → Picture → Reset Picture → ENTER



– The displayed image may differ depending on the model.

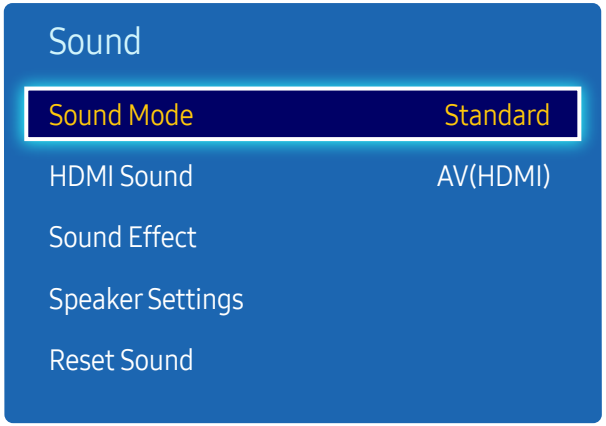
Resets your current picture mode to its default settings.

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.

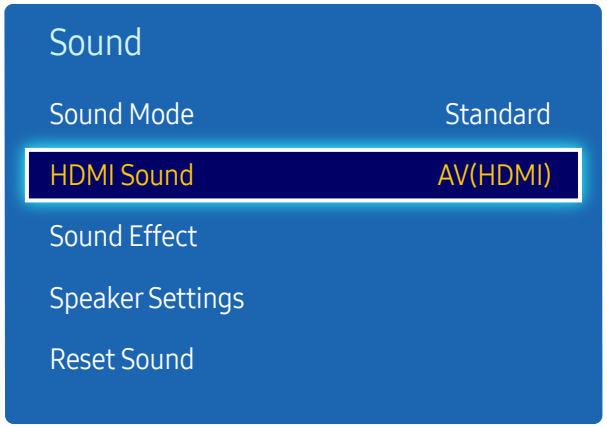
You can select a sound mode to suit your personal preferences.

- 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.

HDMI Sound

MENU → Sound → HDMI Sound → ENTER



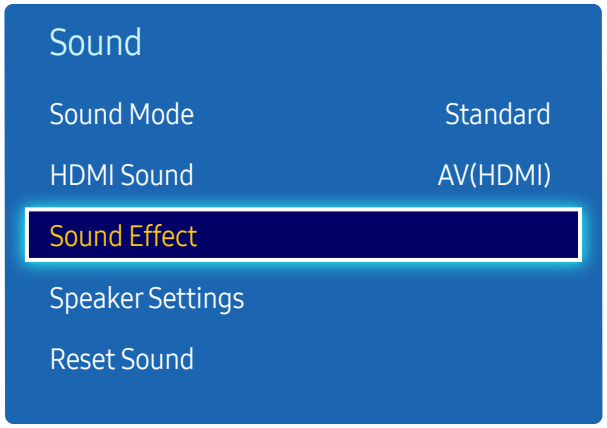
– The displayed image may differ depending on the model.

Select whether to hear from AV(HDMI) or PC(DVI).

- AV(HDMI) / PC(DVI)

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 HD

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

- Off / On

DTS TruDialog

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.

- Off / On

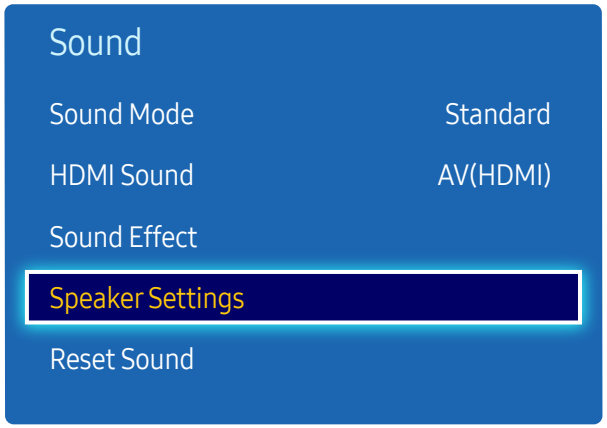
Equalizer

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.

Speaker Select

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.

- External / Internal / Receiver

— 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.

Auto Volume

The volume can vary depending on the channel.

Automatically equalize the volume level when switching to another channel.

- Off / Normal / Night

Normal equalizes the volume level on each channel, so that when you change channels, the volume level is the same.

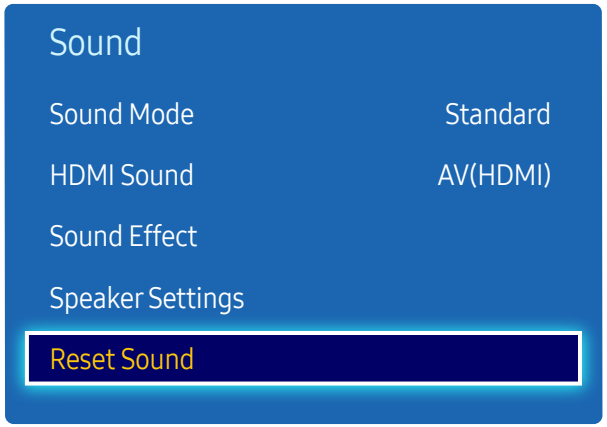
Night equalizes and decrease the volume level on each channel, so each channel is quieter. Night is useful at night, when you may want to keep the volume low.

— To use the volume control of a connected source device, set Auto Volume to Off. A change to the volume control of the connected source device may not be applied if Auto Volume is set to Normal or Night.

— If Speaker Select is set to External, Auto Volume is disabled.

Reset Sound

MENU → Sound → Reset Sound → ENTER



– The displayed image may differ depending on the model.

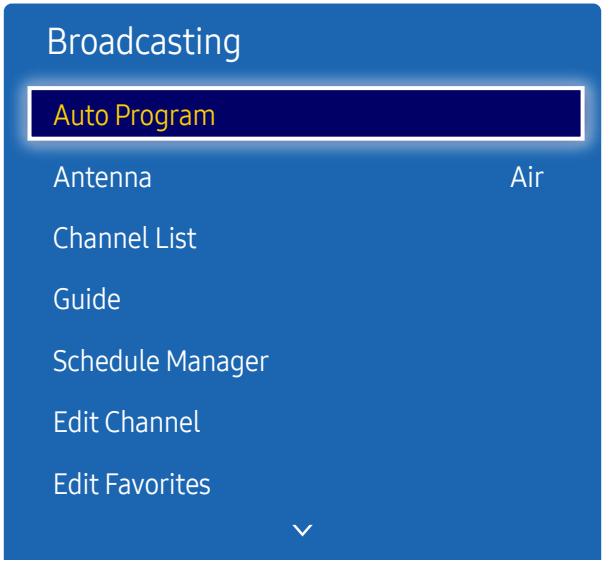
Reset all sound settings to the factory defaults.

Chapter 07
Broadcasting

Configure the Broadcasting settings for the product.

Auto Program

MENU → Broadcasting → Auto Program → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

The Auto Program function memorizes all channels that are available over the air or through your cable system and adds them to the Channel List.

— Channel memorization can take up to 45 minutes, depending on your cable system.

— Memorized channels are added to the Added Ch. list. These are the channels you will see when you use the channel buttons on your remote.

Cancelling Auto Program

1 Press the Stop button.

2 A Stop Auto Program? message appears.

3 Press the Yes button.

Antenna

MENU → Broadcasting → Antenna → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the LED display.

- Air / Cable

Channel List

MENU → Broadcasting → Channel List → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

Register or delete channels. Add favorite channels or rename analog channels.

Select a desired channel from Channel List to view the channel instantly.

— To navigate Channel List faster, press the channel buttons. The channel list changes page by page.

Icons found in the channel list page

- A: Analog channel
- ♥: A channel set in the favorite list

Pressing the right cursor (▶) button on the remote control displays the Mode page.

Mode

Antenna

Select either Air or Cable as digital channel mode.

Edit Favorites

Edit favorite channel lists from Edit Favorites.

Favorites 1 ~ Favorites 5

Shows all favorite channels, in up to five groups. Each group has a separate screen.

— The TV displays favorite groups only if you have added favorites using Favorites 1 - to - Favorites 5.

Added Ch.

Shows all added channels.

Guide

MENU → Broadcasting → Guide → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

The Guide provides an overview of each digital channel's program lineup. You can check the program schedules and set up a Schedule Manager.

— The information in the Guide is for digital channels only. Analog channels are not supported.

You can press the color keys on the remote to access optional functions.

Schedule Manager

Access the Schedule Manager function.

You can view information on the Schedule Manager.

Schedule Manager

MENU → Broadcasting → Schedule Manager → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

Watch a desired channel at a scheduled time.

- Channel: Select the desired channel.
- Repeat: Once / Manual / Sat~Sun / Mon~Fri / Everyday

  — Select Manual if you want to configure settings by day of the week.
- Date: Select the desired date.
- Start Time: Set the time to watch the desired channel.

Edit Channel

MENU → Broadcasting → Edit Channel → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

Manage channels saved on your TV. Delete channels, re-register deleted channels or rename analog channels.

— Conveniently configure settings using the remote control buttons displayed at the bottom of the screen.

Icons found in the edit channel page

- A: Analog channel
- ♥: A channel set in the favorite list

Deleting/registering channels

Deleting channels

Delete channels, if required. Note that deleting channels from the Recently Viewed or Mostly Viewed category does not remove the channels permanently. The channels are only removed from the categories.

1 Select channels to delete from the screen. To cancel, select again.

2 After selecting channels, select Delete from the screen to delete the channels.

Re-registering deleted channels

Register deleted channels again, if required. Deleted channels are grayed out and can only be found in the list of all channels. The register function is enabled for deleted channels only.

1 Press TOOLS on the screen to display the Tools page. Select Category from the sub-menu items and then select All.

2 From the list of all channels, select deleted channels you want to register again.

3 After selecting channels, select Add from the screen to re-register the channels.

Editing registered channels

Pressing **TOOLS** from the Edit Channel page displays the following menu items. Provided functions may vary depending on the broadcast signal.

Option Name	Operations
Category	Channels saved on your TV are classified under the All, Added Ch., Recently Viewed and Mostly Viewed categories. Select a desired category.
Edit Favorites	Set frequently viewed channels as favorite channels.
Rename Channel	Change the names of analog channels to suit your preferences. A channel name can be up to five characters long.
Information	View information about the current broadcast program on the air.

Edit Favorites

MENU → Broadcasting → Edit Favorites → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

Creating a favorite channel list

Set frequently viewed channels as favorite channels. Favorite channels are indicated by a symbol in the Edit Channel or Channel List page. A maximum of five favorite channel lists are allowed. Create different favorite channel lists for each family member.

— Conveniently configure settings using the remote control buttons displayed at the bottom of the screen.

Adding the current channel to a favorite channel list

Add the channel you are currently watching to a favorite channel list.

1 When watching TV, press TOOLS to display the Tools page. Select Edit Favorites from the sub-menu items.

2 From the displayed prompt box, select a favorite channel list to save the current channel to. Select OK.

3 The current channel is added in the selected favorite channel list. Select OK.

Adding multiple channels to a favorite channel list

Add multiple channels to a favorite channel list, if required.

1 Select Category from the screen to change the channel list in the center of the screen to the channel list that contains the channels to add. Each time Category is selected, the category switches in the order Recently Viewed, Mostly Viewed, and Added Ch..

— Recently Viewed and Mostly Viewed are only enabled if they contain saved channels.

2 Select desired channels from the channel list in the center of the screen.

3 Select Change Fav. from the screen to change the favorite channel list on the right to another desired favorite channel list.

4 Select Add from the screen. The selected channels will create a favorite channel list.

Viewing channels saved under a favorite channel list

— Favorite channel lists are only displayed if they have been created previously.

When changing the channel using the channel buttons, channels saved in favorite channel lists can only be accessed.

1 Select Channel List from the Broadcasting menu. The channel list is displayed.

2 Pressing the right cursor (▶) button on the remote control displays the Mode page.

3 Select a favorite channel list among Favorites 1 – Favorites 5.

4 Select channels from the selected favorite channel list.

— Selecting Channel List while watching a favorite channel will display the updated favorite channel list.

Editing favorite channel lists

Pressing TOOLS from one of the Favorites 1 - to - Favorites 5 pages displays the following menu items.

Option Name	Operations
Copy to Favorites	Copy channels from a favorite channel list to another favorite channel list. — This option is only available when channels under a favorite channel list are selected.
Rename Favorites	Change the name of a favorite channel list. — This option is only available when channels under a favorite channel list are selected.
Antenna	Select either the Air or Cable signal.
Edit Channel	Manage saved channels.
Information	View information about the current broadcast program on the air.

Deleting channels from a favorite channel list

Delete channels from a favorite channel list, if required.

1 Select Change Fav. from the screen to change the favorite channel list on the right to another desired favorite channel list.

2 Select channels to delete from the selected favorite channel list.

3 Select Delete from the screen. The selected channels are deleted from the favorite channel list.

Changing the order of channels in a favorite channel list

Change the order of channels saved in a favorite channel list, if required.

1 Select Change Fav. from the screen to change the favorite channel list on the right to another desired favorite channel list.

2 Select channels to rearrange from the selected favorite channel list.

3 Select Change order from the screen, and then change the order of the selected channels. To apply the new order of the channels, press the ↵ button.

Copying channels between favorite channel lists

Copy channels from a favorite channel list to another favorite channel list, if required.

1 Select Change Fav. from the screen to change the favorite channel list on the right to another desired favorite channel list.

2 Select channels to copy from the favorite channel list on the right.

3 Press TOOLS on the screen. Sub-menu items are displayed.

4 Select Copy to Favorites from the sub-menu items. A prompt box appears.

5 Select favorite channel lists to copy the channels to using the prompt box. The channels are saved to the selected favorite channel lists.

— To use Copy to Favorites, make sure channels are saved in a favorite channel list.

Renaming a favorite channel list

Change the name of a favorite channel list, if required.

1 Select Change Fav. from the screen to change the favorite channel list on the right to another desired favorite channel list.

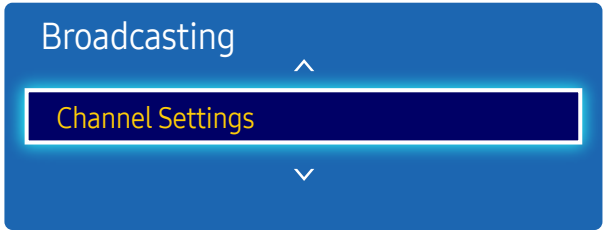
2 Press TOOLS on the screen. Sub-menu items are displayed.

3 Select Rename Favorites from the sub-menu items. A prompt box appears.

4 Change the favorite channel list using the prompt box. The name for a favorite channel list can be up to 20 characters long.

Channel Settings

MENU → Broadcasting → Channel Settings → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

Fine Tune

(analog channels only)

If the reception is clear, you do not have to fine tune the channel, as this is done automatically during the search and store operation. If the signal is weak or distorted, fine tune the channel manually. Scroll to the left or right until the image is clear.

— Settings are applied to the channel you're currently watching.

— Fine tuned channels that have been saved are marked with an asterisk "*" on the right-hand side of the channel number in the channel banner.

— To reset the fine-tuning, select Reset.

Clear Scrambled Channel

(digital channels only)

This function filters out scrambled channels after Auto Program is completed. This process may take up to 20~30 minutes.

How to Stop the Clear Scrambled Channel function

1 Press the button to select Stop.

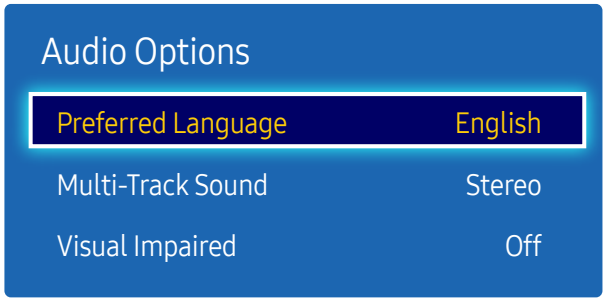
2 Press the ▲ button to select Yes.

3 Press the button.

— This function is only available in Cable mode.

Audio Options

MENU → Broadcasting → Audio Options → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

Preferred Language

(for digital broadcasts)

Use the up and down arrow keys to select a language, and then press .

Digital-TV broadcasts can simultaneously transmit many audio tracks (for example, simultaneous translations of the program into foreign languages).

— You can only select a language from among the ones being broadcasted.

Multi-Track Sound

Select an option using the up and down arrow keys, and the press .

- Mono: Choose for channels that are Broadcasting in mono or if you are having difficulty receiving a stereo signal.
- Stereo: Choose for channels that are Broadcasting in stereo.
- SAP: Choose to listen to the Separate Audio Program, which is usually a foreign-language translation.

— Depending on the program being broadcast, you can listen to Mono, Stereo or SAP.

Visual Impaired

Audio description service is available for visually impaired viewers.

(for digital broadcasts)

- Off / On

Program Rating Lock

MENU → Broadcasting → Program Rating Lock → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

When turned on, the Program Rating Lock feature can automatically block programs that you deem inappropriate for your children. You must enter a PIN (personal identification number) before you can set or change any of the Program Rating Lock restrictions.

- Off / On

— This option is available when the input source is TV.

— The default PIN number for a new product set is “0-0-0-0”.

- TV Rating: You can block TV programs based on their ratings. This function allows you to control what your children can watch. TV Rating displays a grid with locks. The following categories are on the left side. TV-Y: Young children / TV-Y7: Children 7 and over / TV-G: General audience / TV-PG: Parental guidance / TV-14: Viewers 14 and over / TV-MA: Mature audience
  All: Lock all TV ratings. / FV: Fantasy violence / V: Violence / S: Sexual situation / L: Adult Language / D: Sexually Suggestive Dialog

  — To block certain content, you select a lock, and press (That is, you “click it”.). For example, click the lock at the intersection of V and TV-MA, and you block all programs that are rated violent and for mature adults. The locks are also assigned to related groups. For example, if you click TV-Y under All, then TV-Y7 will also automatically be blocked. Similarly, if you click TV-G under All, then all the categories in the young adult group will be blocked (TV-G, TV-PG, TV-14 and TV-MA). The sub-ratings (D, L, S, V) work similarly. So, if you block the L sub-rating in TV-PG, then the L sub-ratings in TV-14 and TV-MA will automatically be blocked.

  — To unblock a category, click the lock. To unblock all the categories in a row, click the lock under All.

  — To watch a blocked program, you must enter the Security code when requested.

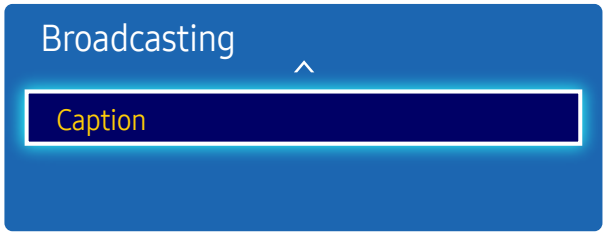
- Movie Rating (MPAA): You can block movies based on their MPAA rating. The Motion Picture Association of America (MPAA) has implemented a rating system that provides parents or guardians with advanced information on which films are appropriate for children.
  Movie Rating (MPAA) displays a column with locks and the following ratings categories.
  G: General audience (no restrictions). / PG: Parental guidance suggested. / PG-13: Parents strongly cautioned. / R: Restricted. Children under 17 should be accompanied by an adult. / NC-17: No children under age 17. / X: Adults only. / NR: Not rated.

  — To block certain content, you select a lock, and press E (That is, you “click it”.). For example, click the X lock and you block all X-rated movies. The rating categories are also grouped so that clicking one category blocks all the categories a parent would block along with it. For example, if you block the PG-13 category, then R, NC-17 and X will automatically be blocked also.

- Canadian English Rating: You can block TV programs based on their Anglophone Canadian rating.
  Canadian English Rating displays a column with locks and the following ratings categories.
  C: Programming intended for children under age 8. / C8+: Programming generally considered acceptable for children 8 years and over to watch on their own. / G: General programming, suitable for all audiences. / PG: Parental Guidance. / 14+: Programming contains themes or content which may not be suitable for viewers under the age of 14. / 18+: Adult programming.
  - To block certain content, you select a lock, and press ↵ (That is, you "click it".). For example, click the 18+ lock and you block all TV programs rated 18+. The rating categories are also grouped so that clicking one category blocks all the categories a parent would block along with it. For example, if you block the G category, then PG, 14+ and 18+ will automatically be blocked.
  - To unblock a category, click the lock.
- Canadian French Rating: You can block TV programs based on their French Canadian rating. Canadian French Rating displays a column with locks and the following ratings categories. G: General / 8 ans+: Programming generally considered acceptable for children 8 years and over to watch on their own. / 13 ans+: Programming may not be suitable for children under the age of 13. / 16 ans+: Programming is not suitable for children under the age of 16. / 18 ans+: Programming restricted to adults.
  - To block certain content, you select a lock, and press ↵ (That is, you "click it".). For example, click the 18 ans+ lock and you block all TV programs rated 18 ans+. The rating categories are also grouped so that clicking one category blocks all the categories a parent would block along with it. For example, if you block the 18 ans+ category, then 13 ans+, 16 ans+ and 18 ans+ will automatically be blocked also.
  - To unblock a category, click the lock.
- Downloadable U.S. Rating: Parental restriction information you can use while watching DTV channels.
  - If information is not downloaded from the Broadcasting station, Downloadable U.S. Rating menu is deactivated.
  - Parental restriction information is automatically downloaded while you watch DTV channels. It may take several seconds.
  - The Downloadable U.S. Rating menu is available for use after information is downloaded from the Broadcasting station. However, depending on the information from the Broadcasting station, it may not be available for use.
  - Parental restriction levels differ depending on the Broadcasting station. The default menu name and Downloadable U.S. Rating change depending on the downloaded information.
  - Even if you set the on-screen display to another language, the Downloadable U.S. Rating menu will appear in English only.
  - Blocking one rating level will automatically block other categories that deal with more sensitive material.
  - The rating titles (For example: Humor Level..etc) and TV ratings (For example: DH, MH, H..etc) may differ depending on the Broadcasting station.

Caption

MENU → Broadcasting → Caption → ENTER



– The displayed image may differ depending on the model.

– Available in TV mode only.

Caption

You can switch the caption function on or off.

If captions are not available, they will not be displayed on the screen.

- Off / On

— The Caption feature does not work with devices connected to the product through the HDMI1, HDMI2 input jacks.

Caption Mode

You can select the desired caption mode.

— The availability of captions depends on the program being Broadcasted.

- Default / CC1 ~ CC4 / Text1 ~ Text4: (analog channels only) The analog Caption function operates in either analog product channel mode or when a signal is supplied from an external device to the product.
  (Depending on the broadcasting signal, the analog Caption function may or may not work with digital channels.)
- Default / Service1 ~ Service6 / CC1 ~ CC4 / Text1 ~ Text4: (digital channels only) The Digital Captions function works with digital channels.

  — Service1 ~ Service6 may not be available in digital caption mode depending on the broadcast.

Digital Caption Options

(digital channels only)

Configure the subtitle settings such as size and color.

Adjusts the each option. When done, select Close.

- Size: Options include Default, Small, Standard and Large. The default is Standard.
- Font Style: Select the caption fonts.
- Font Color: You can change the color of the letters. Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan. The default is White.
- Background Color: You can change the background color of the caption. Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan. The default is Black.
- Font Opacity: This adjusts the opacity of text. Options include Default, Transparent, Translucent, Solid and Flashing.
- Background Opacity: This adjusts the opacity of the caption background. Options include Default, Transparent, Translucent, Solid and Flashing.
- Return to Default: This option sets each Size, Font Color, Background Color, Font Opacity and Background Opacity to their default.

— Digital Caption Options are available only when you can select Return to Default and Service1 ~ Service6 in Caption mode.

— The availability of captions depends on the program being Broadcasted.

— The Return to Default setting follows the standards set by the broadcaster.

— You cannot set the Font Color and Background Color to the same color.

— You cannot set both the Font Opacity and the Background Opacity to the same color.

Chapter 08
Network

Network Status

MENU → Network → Network Status → ENTER

You can check the current network and Internet status.

Network Settings

MENU → Network → Network Settings → ENTER

Configure network settings to use various smart hub features such as Internet search, content sharing through a home network and feature updates.

Network type

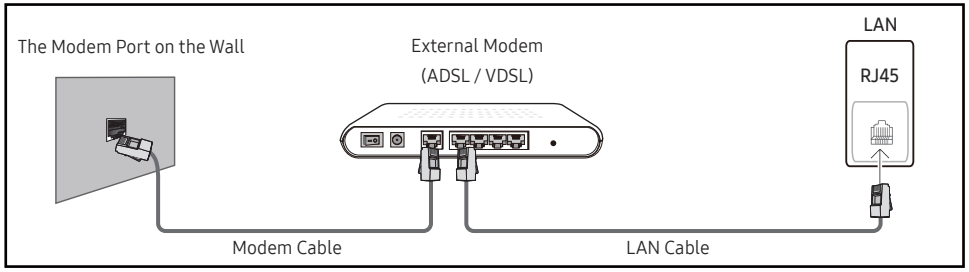
- Wired

Network Settings (Wired)

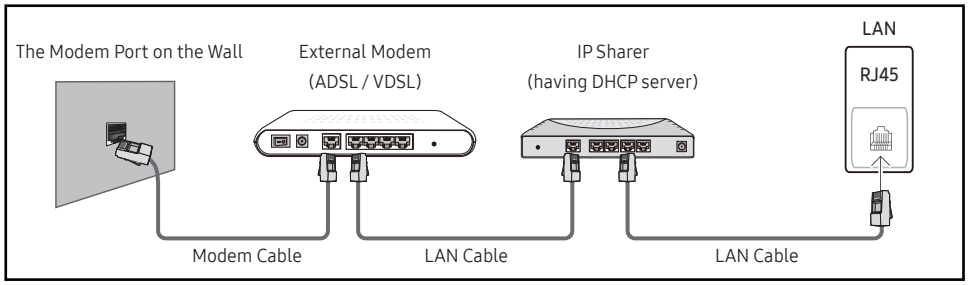
Connecting to a Wired Network

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

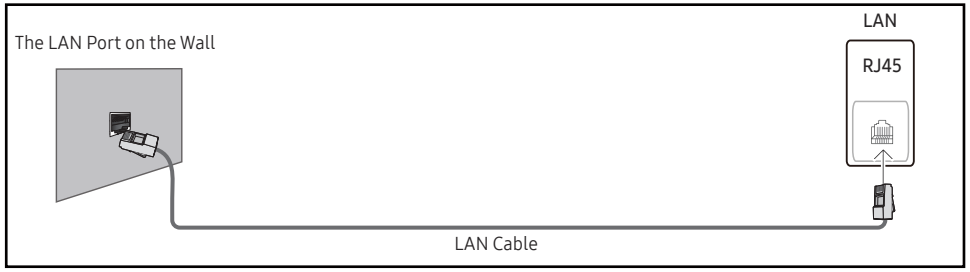
- You can attach your product to your LAN by connecting the LAN port on the back of your product to an external modem using a LAN cable.
  See the diagram below.



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



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



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

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

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

— You can use ADSL modems that support DHCP if your network requires a Static IP address.

— ADSL modems that support DHCP also let you use Static IP addresses.

Set the network connection to use Internet services such as perform software upgrades.

Automatic Network Settings (Wired)

Connect to the network using a LAN cable.

Make sure a LAN cable is connected first.

How to set up automatically

1 Set Network type to Wired from the Network Settings page.

2 Press the Connect button to start Network Settings.

– The Connect button is only enabled when the LAN cable is properly connected.

3 The network test screen appears and verifies the network connection.

When the connection has been verified, the "Wired network and Internet connection completed." message appears.

— If the connection process fails, check the LAN port connection.

— If the automatic process cannot find the network connection values or if you want to set the connection manually, go to the next section, network setup.

Manual Network Settings (Wired)

Offices may use static IP addresses.

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

Getting the Network Connection Values

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

1 Right click the Network icon on the bottom right of the screen.

2 In the pop-up menu that appears, click Status.

3 On the dialog that appears, click the **Support** tab.

4 On the **Support** Tab, click the **Details** button. The Network connection values are displayed.

How to set up manually

1 Set Network type to Wired from the Network Settings page.

2 Press the Connect button to start Network Settings.

– The Connect button is only enabled when the LAN cable is properly connected.

3 The network test screen appears and the verification process starts. Press Stop. The verification process stops.

4 Select IP Settings on network connection screen. The IP Settings screen appears.

5 Select the field at the top, press ↵, and then set IP Settings to Enter manually. Repeat the entry process for each field in the IP Address.

— Setting IP Settings to Enter manually automatically changes DNS Setting to Enter manually.

6 When done, select OK at the bottom of the page, and then press ↵. The network test screen appears and the verification process starts.

7 When the connection has been verified, the "Wired network and Internet connection completed." message appears.

AllShare Settings

MENU → Network → AllShare Settings → ENTER

Share experiences by connecting a variety of smart devices. Set up Content Sharing.

Content Sharing

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

Server Network Settings

MENU → Network → Server Network Settings → ENTER

Connect to Server

Connect to MagicInfo server.

- Server Address / SSL / Port

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

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

Server Access

Select a method to connect the server network.

- Allow / Deny

FTP Mode

Specify the FTP operating mode.

- Active / Passive

Device Name

MENU → Network → Device Name → ENTER

Select or enter a device name.

This name can be shown on network remote controls over the network.

- User Input / [Signage]Display 1 ~ 6

Chapter 09
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.

Refresh

MENU → Applications → Source List → TOOLS → Refresh → ENTER

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

Edit Name

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

Customize the name of a connected external device.

— 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

Information

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

You can see detailed information about the selected external device.

MagicInfo Lite

MENU → Applications → MagicInfo Lite → ENTER

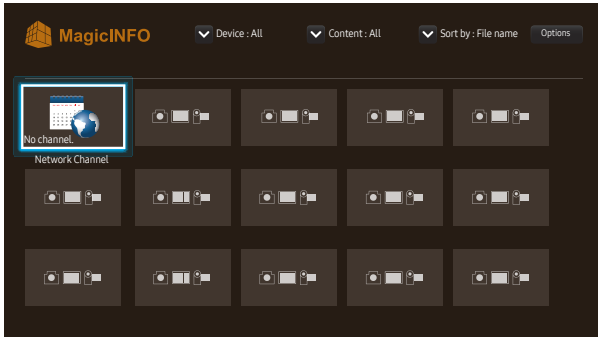


– The displayed image may differ depending on the model.

MagicInfo is a business solution that allows the product to be used as a signage (advertising media). Using the solution, play image and video files from the internal memory or a connected USB storage device.

Playing content from the internal memory or USB

Play content from the internal memory or a connected USB storage device.



– The displayed image may differ depending on the model.

Network Channel

- You can view whether the server is connected (approval) in the MagicInfo menu screen.
  To view whether the server is connected when a Network Channel is running, press INFO on the remote.

1 Select Network Channel from the MagicInfo menu.

— The No channel. message appears if no channel has been registered in Network Channel.

2 Network Channel will run.

Available features in the MagicInfo page

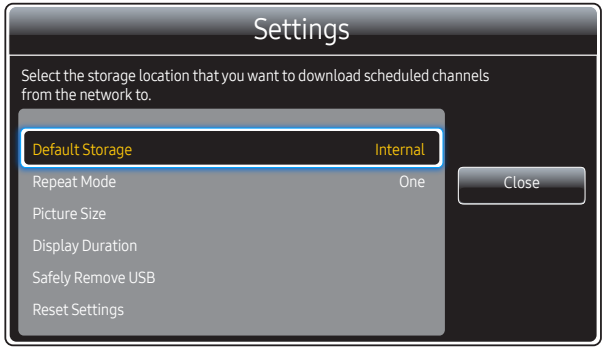
The MagicInfo list page provides the following features.

- Device
  – Select either Internal or USB to search for a desired device list.
  All / Internal / USB
- Content
  – Select a content type as criterion to search for a desired content list.
  All / Video / Image
- Sort by
  Specify the content sort criterion.
  – File name / Recently Played
- Options

Options menu items in the MagicInfo screen

Option Name	Operations
Play Selected	Select and play desired content.
Send	Copy content to another storage device.
Delete	Delete desired content.
Settings	Configure detailed properties of content. — See the following page for details on the Settings feature.

Settings



– The displayed image may differ depending on the model.

Default Storage

Select the storage location that you want to download scheduled channels from the network to.

- Internal / USB

Repeat Mode

Set repeat mode whether to repeat playing contents or not.

- One / All

Picture Size

Set Picture Size to either Screen Fit or Original Size.

- Screen Fit / Original Size

— Available only for Video and Image content.

Display Duration

Set the duration for each page in a slideshow.

Safely Remove USB

Safely removes USB memory

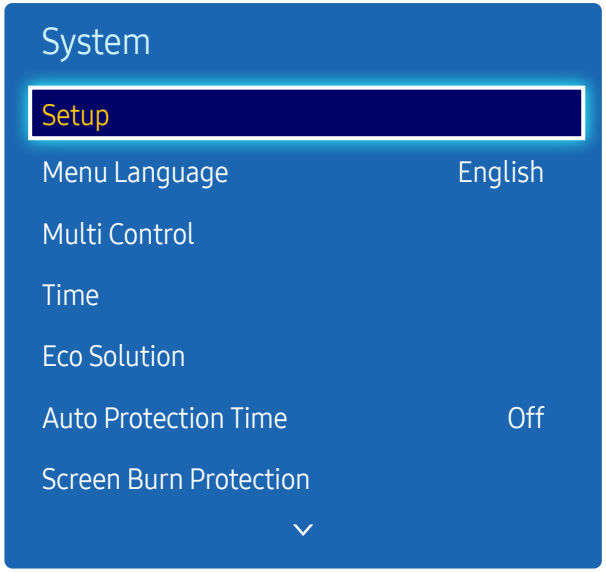
Reset Settings

Restore all the values under Settings to the default when the product was purchased.

Chapter 10
System

Setup

MENU → System → Setup → ENTER



– The displayed image may differ depending on the model.

Go through the initial setup steps like you did the first time you used this product.

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

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.

Multi Control

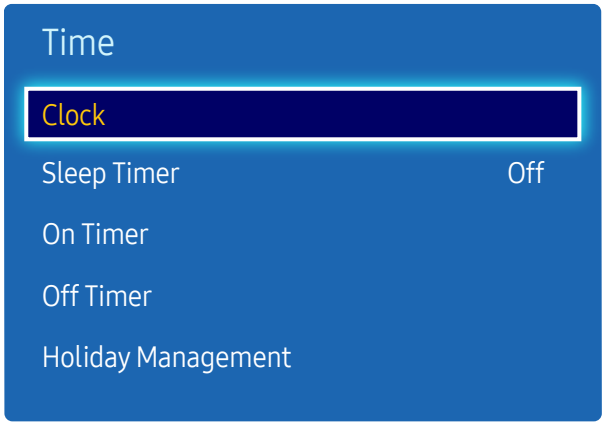
MENU → System → Multi Control → ENTER

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.
- PC Connection
  Select a method to connect to MDC to receive the MDC signal.
  - RS232C cable
    Communicates with the MDC via a RS232C cable.
  - RJ-45 (LAN)/Wi-Fi Network
    Communicate with MDC over Wi-Fi.

Time

MENU → System → Time → ENTER



– The displayed image may differ depending on the model.

You can configure Clock Set or Sleep Timer. Configure various time-related settings.

Clock

Set the current year, date and time.

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

Clock Mode

Set the current time manually or automatically.

— This function is only available for models that include a TV tuner.

Auto: Have the product set the current time automatically using the time from a digital channel.

— You must have the cable or an antenna connected to the product to set the time automatically.

Manual: Set the current time manually.

Clock Set

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.

— Available only when Clock Mode is set to Manual.

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

DST

- Off / On

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

— This function is only available when the Clock Mode is set to Auto.

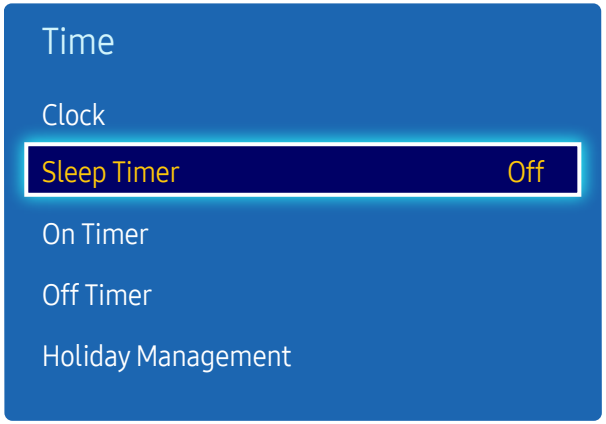
— This function is only available for models that include a TV tuner.

Time Zone

Select your time zone.

— This function is only available when the Clock Mode is set to Auto.

— This function is only available for models that include a TV tuner.



– The displayed image may differ depending on the model.

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.

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.

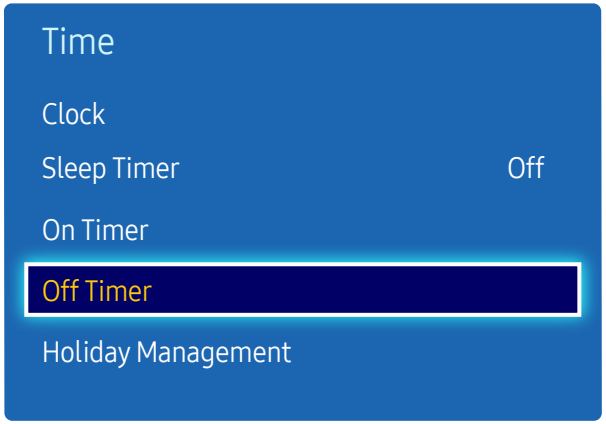
(On Timer 1 ~ On Timer 7)

— 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.

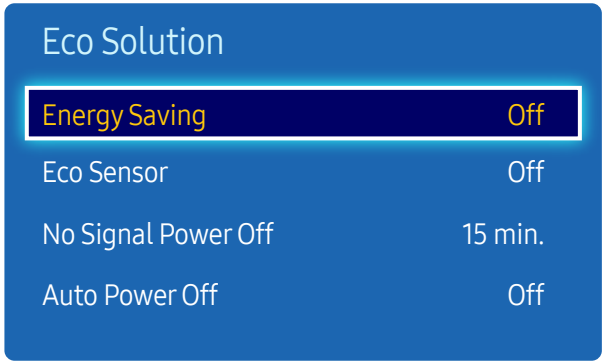
Holiday Management

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.
- 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.

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

Min. Backlight

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

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

No Signal Power Off

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

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

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

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

Auto Power Off

The product will automatically turn off if you don’t press a button on the remote or touch a button on product front panel within 4 hours to prevent overheating.

- Off / On

Auto Protection Time

MENU → System → Auto Protection Time → ENTER



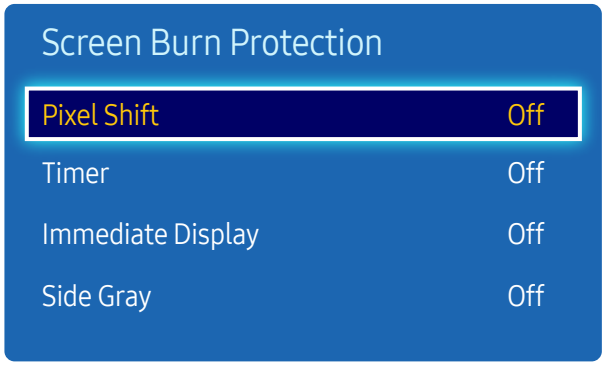
– The displayed image may differ depending on the model.

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

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

Screen Burn Protection

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

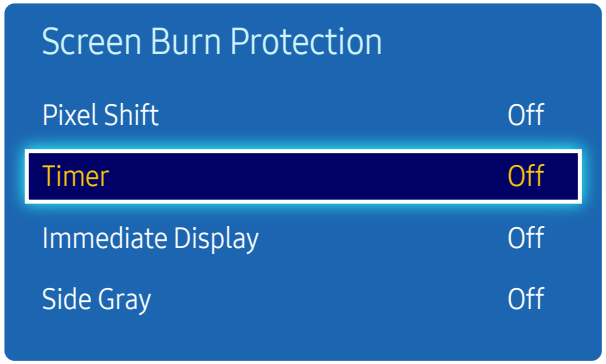
Minimize image retention by finely moving pixels horizontally or vertically.

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

Available Pixel Shift Settings and Optimum Settings.

	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.
- If Picture Size is set to Screen Fit, Pixel Shift is disabled.



– The displayed image may differ depending on the model.

Timer

You can set the timer for Screen Burn Protection.

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

Timer

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

  — The option is enabled only when Clock Set is configured.

  — Mode, Period, Time, Start Time and End Time are enabled only when Timer is set to Repeat or Interval.
- Mode: Select a screen protective pattern to display.
  - Pixel: Pixels on the screen alternate black continuously.
  - Rolling Bar: A vertical bar moves left to right.
  - Fading Screen: The entire screen becomes brighter, then darker.

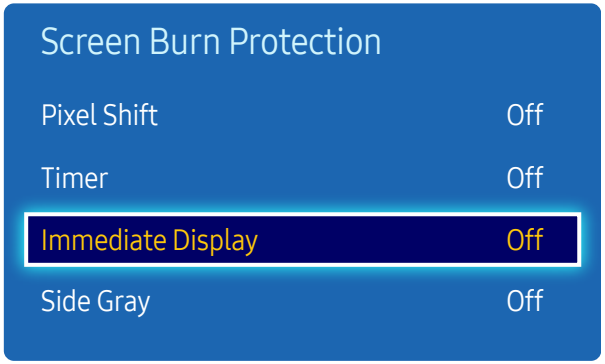
  — The Rolling Bar and Fading Screen patterns appear only once regardless of the specified repeat period or time.
- Period: Specify the time interval to activate the Screen Burn Protection function.
  - 1 hour ~ 10 hour

  — The option is enabled when Repeat is selected for Timer.
- Time: Specify the duration to keep the Screen Burn Protection function on.
  - 10 sec ~ 50 sec

  — Enabled when Timer is set to Repeat and Mode is set to Pixel.
- Start Time: Set the start time to activate the screen protection function.

  — The option is enabled when Interval is selected for Timer.
- End Time: Set the end time to deactivate the screen protection function.

  — The option is enabled when Interval is selected for Timer.



– The displayed image may differ depending on the model.

Immediate Display

Select the screen saver you want to display immediately.

- Off / Pixel / Rolling Bar / Fading Screen

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

Ticker

MENU → System → Ticker → ENTER

– The Ticker function is only available when Menu Language is set to English.

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

- Off / On

  ¯ Message, Time, Position, Motion, and Font Style are enabled only when Ticker is set to On.

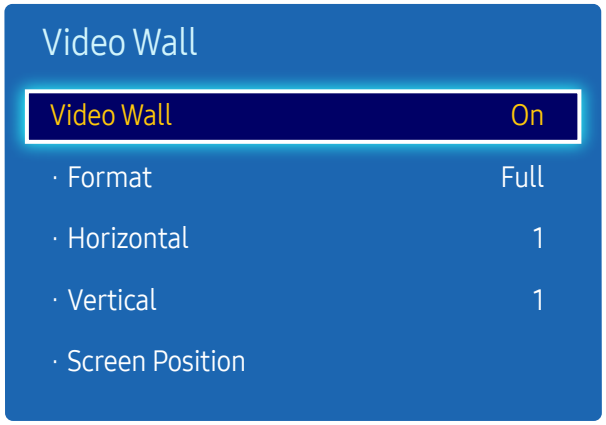
- Message: Enter a message to display on the screen.
- Time: Set the Start Time and End Time to display a Message.
- Position: Select an orientation to display a Message from Horizontal and Vertical.
  – Horizontal (Left / Center / Right)
  – Vertical (Top / Middle / Bottom)
- Motion: Specify the Direction and Speed to display a Message.
  – Motion (Off / On)
  – Direction (To Left / To Right / To Top / To Bottom)
  – 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.
  – Size / Font Color / Background Color / Font Opacity / Background Opacity / Reset

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.

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

Video Wall

You can activate or deactivate Video Wall.

To organize a video wall, select On.

- Off / On

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.

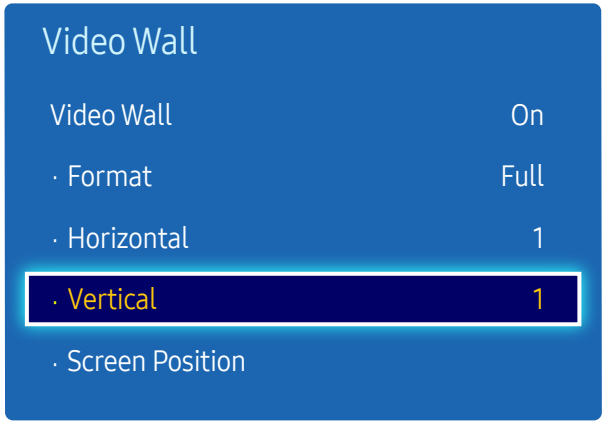
Enter the number of horizontally arranged displays.

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 ↵.

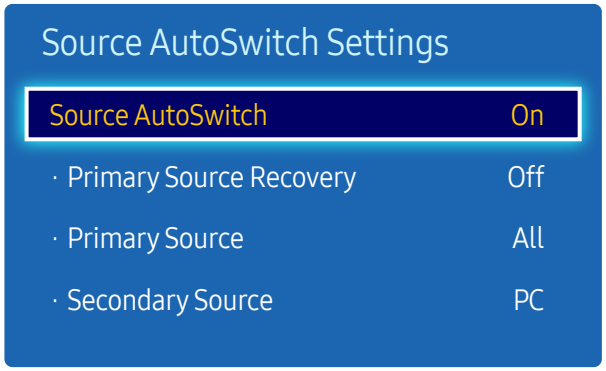
— A maximum of 100 displays can be arranged in Screen Position.

— 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.

– The Source AutoSwitch Settings option is only enabled when PIP is set to Off.

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.

— The Secondary Source function is disabled if Primary Source is set to All.

Primary Source	Secondary Source
TV	PC, DVI, Component, HDMI1, HDMI2, MagicInfo
PC	TV, AV, HDMI1, HDMI2, MagicInfo
DVI	TV, AV, Component
AV	PC, DVI, HDMI1, HDMI2, MagicInfo
Component	TV, DVI, HDMI1, HDMI2, MagicInfo
HDMI1, HDMI2, MagicInfo	TV, PC, AV, Component

— When Primary Source Recovery is set to On, you can set Primary Source and Secondary Source as shown in the table above.

Change PIN

MENU → System → Change PIN → ENTER



– The displayed image may differ depending on the model.

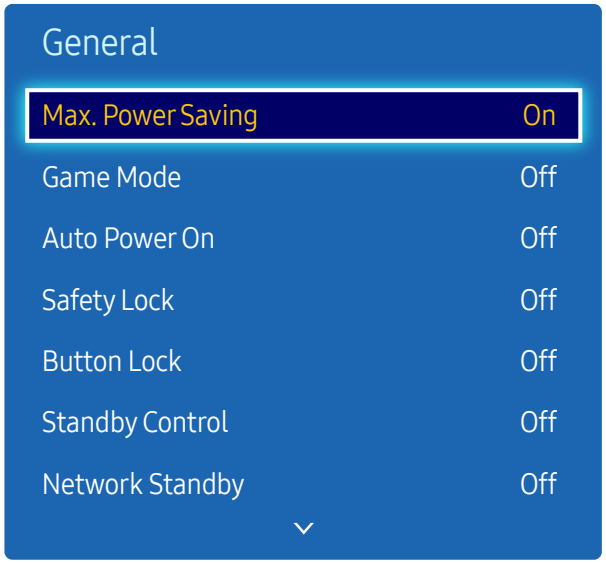
The Change PIN screen will appear.

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, DVI, HDMI1, HDMI2 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 Game and Sound Mode is set to Game.

Auto Power On

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

- Off / On

Safety Lock

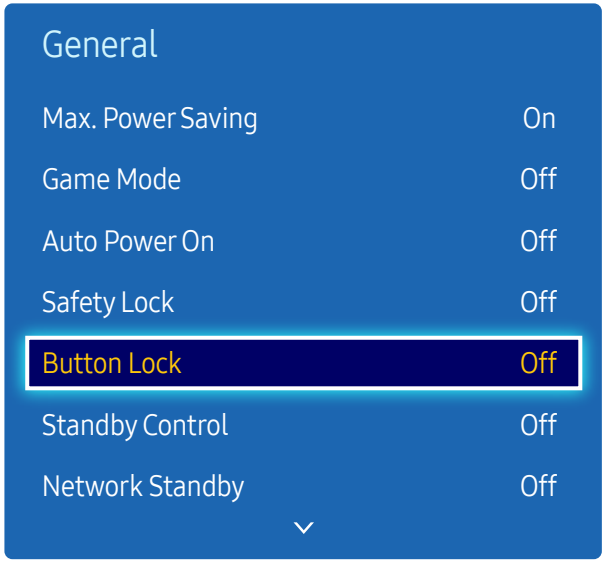
— Enter your 4 digit PIN number. The default PIN number is "0-0-0-0".
If you want to change the PIN number, use the Change PIN function.

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.

Button Lock

This menu can be used to lock the buttons on the product.

Only the remote control can control the product if Button Lock is set to On.

- Off / On

Standby Control

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

- Auto
  Power-saving mode will activate if no input signals are detected even though a source device is connected to the display.
  The message No Signal will appear if no source device is connected.
- 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 is set to PC, DVI, HDMI1, HDMI2.

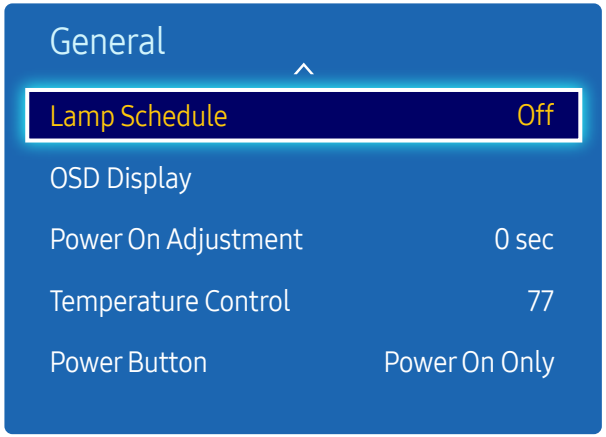
— If No Signal is displayed although a source device is connected, check the cable connection.

Network Standby

This feature keeps the network power on when the product turns off.

- Off / On

— This function is only available for models that can connect to a network.



– The displayed image may differ depending on the model.

Lamp Schedule

It sets whether to adjust screen brightness automatically to the set value at the set time.

— The option is enabled only when Clock Set is configured.

Lamp Schedule

Enable or disable the lamp schedule.

- Off / On

Schedule1, Schedule2

Time

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

Lamp

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

- 0 ~ 100

OSD Display

Displays or hides a menu item on the screen.

Source OSD

Select whether to display the source OSD when the input source changes.

- Off / On

No Signal OSD

Select whether to display the no-signal OSD when no signal is detected.

- Off / On

MDC OSD

Select whether to display the MDC OSD when the product is controlled by the MDC.

- Off / On

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.

Power Button

Set the function of the Power button. You can set the button to only turn on the product, or to toggle between on and off states.

- Power On Only / Power On/Off

Anynet+ (HDMI-CEC)

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



- The displayed image may differ depending on the model.
- The Anynet+ 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 TV	Changes Anynet+ mode to TV mode.
Select Device	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.



– 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 Select Device, 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 Select Device 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 Select Device.

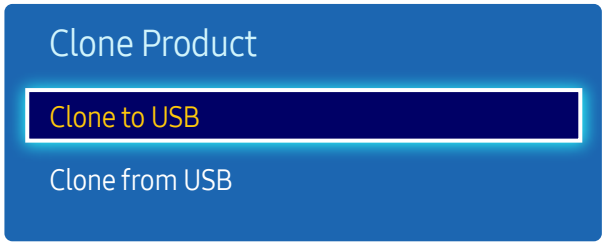
Troubleshooting for Anynet+

Problem	Possible Solution
Anynet+ does not work.	• 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+.	• 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+.	• Select View TV in the Anynet+ menu. • Press the SOURCE button on the product remote control and select a non- Anynet+ device.
The message "Disconnecting Anynet+ device ..." appears on the screen.	• You cannot use the remote control when you are configuring Anynet+ or switching to a view mode. • Use the remote control after the product has completed Anynet+ configuration or has finished switching to Anynet+.
The Anynet+ device does not play.	• You cannot use the play function when initial setup is in progress.

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.

Clone Product

MENU → System → Clone Product → 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.

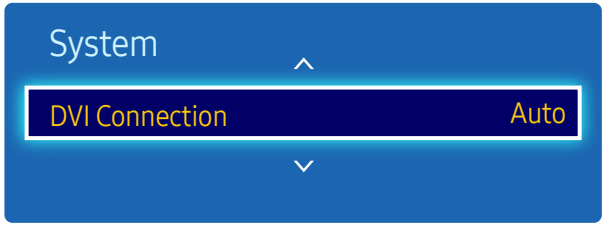
— The option may not work properly if the USB device contains a file other than a settings file.

— 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.

DVI Connection

MENU → System → DVI Connection → ENTER



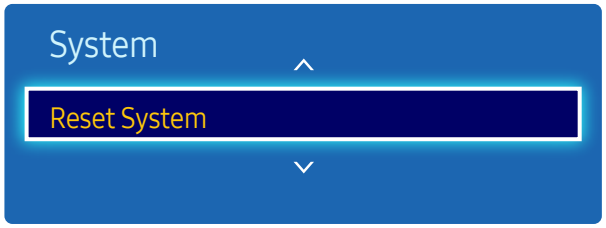
– The displayed image may differ depending on the model.

Select the source device that is connected to the DVI input.

- Auto / PC / DVI

Reset System

MENU → System → Reset System → ENTER

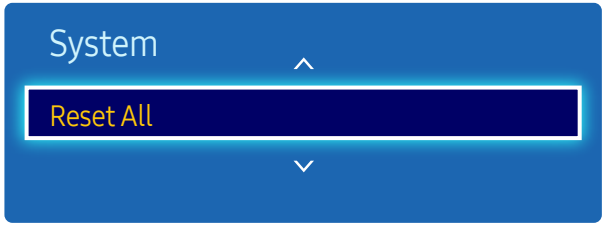


– The displayed image may differ depending on the model.

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

Reset All

MENU → System → Reset All → ENTER



– The displayed image may differ depending on the model.

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

PC Module Power

MENU → System → PC Module Power → ENTER



– The displayed image may differ depending on the model.

The PC module can be turned on/off separately from the LFD.

Synced Power-On

Set to Off to turn on the PC module without turning on the LFD.

- Off / On

Synced Power-Off

Set to Off to turn off the PC module without turning off the LFD.

- Off / On

Chapter 11
Support

Software Update

MENU → Support → Software Update → ENTER

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

— Be careful not to turn off the power until the upgrade is complete. The product will turn off and on automatically after completing the software upgrade.

— When you upgrade software, all video and audio settings you have made will return to their default settings. We advise you to write down your settings so that you can easily reset them after the upgrade.

Update now

Update the software to the latest version.

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 12
Playing photos, videos and music (Media Play)

Enjoy videos, photos, music files saved on a USB Mass Storage Class (MSC) device.

Play photos, videos or music saved on a storage device.

Play a variety of content using the following methods.

- Using a USB device: Play media content such as videos, photos and music from a USB device.
- Connecting a storage device: Play media content saved on a storage device such as a smartphone, camera, PC or cloud service.

Read the following before using media play with a USB device

Caution

- Before connecting a USB device to the product, back up files to ensure your data is not damaged or lost.
  Samsung Electronics is not liable for any damage or loss of data.
- Do not remove a USB device while it is loading.
- If a USB device is connected using a USB extension cable, the USB device may not be recognized or files saved on the device may not be able to be read.
- If the product does not recognize a connected USB device, the files on the USB device may be corrupted or may not be able to be played.
  If this occurs, connect the USB device to the PC to format the device, then make sure the device is connected properly.
- USB HDD greater than 2TB is not supported.

Compatible devices with media play

- Some USB digital cameras, smartphones and audio devices may not be compatible with the product.
- Media play is only compatible with USB MSC devices.
- MSC device refers to a Mass Storage Class Bulk-Only Transport device.
  Examples of MSC devices include Thumb drives, Flash card readers and USB HDDs. (USB hubs are not supported.)
  These MSC devices must be connected directly to a USB port on the product.
- If more than one Picture Transfer Protocol (PTP) device is connected, only one will work at a time.
- If multiple MSC devices are connected, some devices may not be recognized. USB devices that require high power (higher than 500mA or 5V) may not be supported.
- If an overheating warning message appears when a USB device is connected or used, the USB device may not be recognized or function properly.
- The screensaver activates if the product is left idle for a period of time specified in Auto Protection Time.
- Power-saving mode on some external hard disk drives may automatically deactivate after connecting to the product.

File system and formats

- Media play may not function properly with unlicensed multimedia files.
- Media Transfer Protocol (MTP) is not supported.
- Supported file systems include FAT16, FAT32 and NTFS (read only).
- Media play supports the sequential JPEG format.
  It does not support the progressive JPEG format.
- Images with a higher resolution take longer to be displayed on the screen.
- The maximum JPEG resolution supported is 15360x8640 pixels.
- If a file is incompatible or corrupted, a message Not Supported File Format. appears.
- When sorting files in folder view mode, a maximum of 1000 files can be displayed in each folder.
- If a USB device contains 8000 files and folders or more, some files and folders may not open.
- DRM MP3 files downloaded from websites that charge a fee cannot be played.

  — Digital Rights Management (DRM) refers to a system for protecting the copyrights of data circulated via the Internet or other digital media by enabling secure distribution and/or disabling illegal distribution of the data.

Using a USB device

It is recommended to use a USB HDD that has a power adapter.

Connecting a USB device

1 Turn on your product.

2 Connect a USB device containing photo, music and/or movie files to the USB port on the back or side panel of the product.

3 The USB device connected. page automatically appears as soon as a USB device connects to the product.

— If only one USB device is connected, files saved on the USB device are displayed automatically.

— To view content saved on a USB device, connect the USB device to a USB port on the product.

Removing a USB device

It is recommended to remove a USB device using the Remove USB function.

Removing a USB device from Source

1 Press SOURCE on the remote control. Alternatively, go to Source using the OSD menu.

SOURCE → Source

2 Select USB from Source, and then press the TOOLS button on the remote control. Optional menu items are displayed.

3 Select Remove USB and wait until the USB device is disconnected. The USB device is disconnected.

Menu items in the media content list page

Option Name	Operations	Photos	Videos	Music
Slide Show	Start a slideshow.	✓		
Encoding	Select an encoding language if the title of media content appears corrupted.			✓
Play Selected	Select and play desired content from the media content list.	✓	✓	✓

Available buttons and features during photo playback

Pressing the INFO button while a file is selected will display information about the selected file.

Pressing the ⏎ or TOOLS button displays the following buttons. The RETURN button makes the buttons disappear.

- Previous / Next
  View the previous or next photo.
- Start Slide Show / Stop Slide Show
  Start or stop a slideshow. Using a slideshow, it is possible to play all photos in a folder.
- Slideshow Settings
  – Speed: Change the slideshow speed.
  – Effects: Apply transition effects between photos.
- Zoom
  Zoom in on photos up to 4x.
- Rotate
  Rotate photos.
- Background Music
  Play background music while viewing photos.
  – Background Music / Mini Player
  — Make sure a music file is saved on the same device.
  — Pause the current music playing or switch to another music file using Mini Player.
- Settings

Option Name	Operations
Picture Mode	Change the Picture Mode.
Sound Mode	Change the Sound Mode. — This menu item is only available when Background Music is playing.
Information	View information about a file.

Available buttons and features during video playback

Pressing the ⏎ or **TOOLS** button displays the following buttons. The **RETURN** button makes the buttons disappear.

- Pause / Play
  Pause or play a video.
  The following features are available in pause mode. Note that sound cannot be heard in pause mode.
- Rewind / Fast forward
  Rewind or fast forward a video. Speed up playback up to 3x, if required. To change the playback speed to the original speed, select ▶.
- Previous / Next
  To play the previous video, select ⏮ twice. Selecting ⏮ once will play the current video from the beginning.
  To play the next video, select ⏭.
- Search
  Select and play another video in the same folder. (Search Titles / Search Time Bar)
- Repeat Mode
  Configure Repeat Mode. (Off, Repeat One, Repeat All)
- Picture Size
  Change the screen size (Picture Size). Supported screen sizes vary depending on the image. (Original / Mode1 / Mode2)
- Settings

Option Name	Operations
Subtitle Settings	Subtitle Language / Subtitle Sync / Subtitle Sync Reset / Subtitle Size / Encoding — If the subtitle is displayed incorrectly, change Encoding options.
Picture Mode	Change the Picture Mode.
Sound Mode	Change the Sound Mode.
Audio Language	Play a video using a desired language. This feature only activates when a streaming file that supports multiple audio formats is playing.
Information	View information about a file.

Available buttons and features during music playback

Pressing the ↵ or TOOLS button displays the following buttons. The RETURN button makes the buttons disappear.

- Pause / Play
  Pause or play music.
- Rewind / Fast forward
  Rewind or fast forward music. Speed up playback up to 3x, if required. To play the previous music file, select ▶ twice.
- Previous / Next
  To play the previous music file, select ⏮ twice. Selecting ⏮ once will play the current music from the beginning.
  To play the next music file, select ⏭.
- Repeat
  Configure Repeat mode. One Song plays the current music file repeatedly. All plays all files in a folder repeatedly.
- Shuffle
  Enable or disable shuffle playback mode.
- Sound Mode
  Change the Sound Mode.

Supported Subtitle and Media play file formats

Subtitle

External	Internal
• MPEG-4 timed text (.ttxt) • SAMI (.smi) • SubRip (.srt) • SubViewer (.sub) • Micro DVD (.sub or .txt) • SubStation Alpha (.ssa) • Advanced SubStation Alpha (.ass) • Powerdivx (.psb)	• Xsub Container: AVI • SubStation Alpha Container: MKV • Advanced SubStation Alpha Container: MKV • SubRip Container: MKV • MPEG-4 timed text Container: MP4

Compatible image file format

Type	
JPEG	4096 x 4096
PNG	
BMP	

Supported music file formats

File Extension

*.avi, *.mkv, *.asf, *.wmv, *.mp4, *.3gp, *.vro, *.mpg,
*.mpeg, *.ts, *.tp, *.trp, *.mov, *.flv, *.vob, *.svi, *.divx

Supported Video Formats

- Video content will not play, or not play correctly, if there is an error in the content or the container.
- Sound or video may not work if the contents have a standard bitrate/frame rate above the compatible Frame/sec listed in the table above.
- If the Index Table is in error, the Seek (Jump) function is not supported.
- You may experience file stuttering while playing a video through a network connection.
- The menu may take longer to appear if the video's bit rate exceeds 10Mbps.
- Some USB/digital camera devices may not be compatible with the player.

Video Decoder

Supports up to H.264, Level 4.1

H.264 FMO / ASO / RS, VC1 SP / AP L4 and AVCHD are not supported.

For all Video codecs except MVC, VP8, VP6:

- Below 1280 x 720: 60 frame max
- Above 1280 x 720: 30 frame max

GMC 2 over is not supported.

Supports only BD MVC Spec.

Audio Decoder

Supports up to WMA 10 Pro 5.1 channel.

WMA lossless audio is not supported.

QCELP, AMR NB/WB are not supported.

If Vorbis is only in Webm container, supports up to 2 channel.

Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
3gpp asf avi flv mkv mov mp4 ps ts vob vro	DivX 3.11 /DivX4	1280 x 720	60	30	AAC AC3 ADPCM DD+ DTS Core HE-AAC LPCM MP3 WMA
	XVID				
	H.264 BP/MP/HP				
	MPEG-4 SP/ASP				
	WINDOW MEDIA VIDEO V9				
	MPEG2				
	MPEG1				
	H.263				
	DivX5				
	DivX6				

Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
3gpp asf avi flv mkv mov mp4 ps ts vob vro	DivX 3.11 /DivX4	1920 x 1080	30	30	AAC AC3 ADPCM DD+ DTS Core HE-AAC LPCM MP3 WMA
	XVID				
	H.264 BP/MP/HP				
	MPEG-4 SP/ASP				
	WINDOW MEDIA VIDEO V9				
	MPEG2				
	MPEG1				
	H.263				
	DivX5				
	DivX6				
	MOTION JPEG	640 x 480	30	8	

Chapter 13
Troubleshooting Guide

Requirements Before Contacting Samsung Customer Service Center

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

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

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.)
PC is shown in Source when a PC is not connected.	PC is always shown in Source irrespective of whether or not a PC is connected.

Screen issue

The power LED is off. The screen will not switch on.	Make sure that the power cord is connected.
No Signal is displayed on the screen.	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.

Screen issue

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.
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.
The product will turn off automatically.	Go to System and make sure Sleep Timer is set to Off.
	If a PC is connected to the product, check the power status of the PC.
	Make sure the power cable is connected properly to the product and power outlet.
	If the signal from a connected device is not detected, the product automatically turns off after 10 to 15 minutes.
Picture quality of the product is different from the dealer shop where it was purchased.	Use an HDMI cable to obtain high-definition (HD) picture quality.

Screen issue

The screen display does not look normal.	Encoded video content may cause the display to appear corrupted in scenes featuring fast moving objects such as in a sports event or action video.
	Low signal level or low picture quality may cause the display to appear corrupted. This does not mean the product is defective.
	A cell phone within a distance of one-meter radius may cause static on analog and digital products.
The brightness and color do not look normal.	Go to Picture and adjust the screen settings such as Picture Mode, Color, Brightness and Sharpness.
	Go to System and adjust the Energy Saving settings.
	Reset the screen settings to the default settings.
Broken lines are displayed on the edges of the screen.	If Picture Size is set to Screen Fit, change the setting to 16:9.
Lines (red, green or blue) are displayed on the screen.	These lines are displayed when there is a defect in DATA SOURCE DRIVER IC on the monitor. Contact a Samsung Service Center to resolve the issue.
The display looks unstable and then freezes.	The screen may freeze when a resolution other than the recommended resolution is used or if the signal is not stable. To resolve the issue, change the PC resolution to the recommended resolution.
The screen cannot be displayed in full screen.	A scaled SD (4:3) content file can cause black bars on both sides of an HD channel screen.
	A video with an aspect ratio different from the product can cause black bars at the top and bottom of the screen.
	Change the screen size setting to full screen on the product or source device.

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.
Video is available but there is no sound.	If an HDMI cable is connected, check the audio output settings on the PC.
	Go to Sound and change Speaker Select to Internal.
	If a source device is used • Make sure the audio cable is properly connected to the audio input port on the product. • Check the audio output settings for the source device. (For example, if an HDMI cable is connected to the monitor, the audio setting for the cable box may need to be changed to HDMI.)
	If a DVI-HDMI cable is used, a separate audio cable is required.
	If the product has a headphone port, make sure nothing is connected to it.
	Reconnect the power cable to the device and then reboot the device.
There is static coming from the speakers.	Check the cable connection. Make sure a video cable is not connected to an audio input port.
	Check the signal strength after connecting a cable.
	Low signal level can cause corrupted sound.

Sound issue

There is audible sound when the volume is muted.	When Speaker Select is set to External, the volume button and mute function are disabled. Adjust the volume for the external speakers.
	Audio settings for main speakers are separate from the internal speakers on the product. Changing or muting the volume on the product does not affect an external amplifier(decoder).
Sound from the monitor does not change after Sound Mode is changed.	Audio settings for main speakers are separate from the internal speakers on the product. Audio settings on a source device do not affect the internal speaker settings on the product.
There is an echo sound coming from the speakers.	Different decoding speeds between the product speakers and external speakers can cause an echo. In this case, set Speaker Select to External.

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.

Other issue

Caption is grayed out and not selectable.	If the selected input source is not TV, Caption cannot be selected from the Channel menu.
Small particles are found on the edges of the product.	The particles are part of the product design. The product is not defective.
The PIP menu is not available.	The menu is enabled or disabled depending on the Source mode.
When I try to change the PC resolution, a message "The defined resolution is not currently supported." appears.	The message "The defined resolution is not currently supported." appears if the input source resolution exceeds the maximum resolution of the display. To resolve the issue, change the PC resolution to a resolution supported on the display.
There is no sound from the speakers in HDMI mode when a DVI-HDMI cable is connected.	DVI cables do not transmit sound data. Make sure to connect the audio cable to the correct input jack to enable audio.
HDMI Black Level is not functioning properly on an HDMI device with YCbCr output.	This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.
There is no sound in HDMI mode.	Displayed picture colors may not look normal. Video or sound may not be available. This can occur if a source device that only supports an older version of the HDMI standard is connected to the product. If these issues occur, connect an audio cable along with the HDMI cable.
	Some PC graphics cards may not automatically recognize HDMI signals that do not include sound. In this case, manually select a sound input.

	Sound input	Screen mode
PC	Auto	PC settings
DVI PC	Audio In(Stereo ports)	PC settings

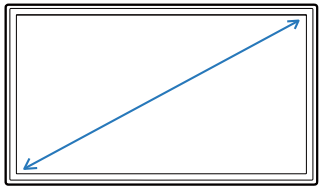
Q & A

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

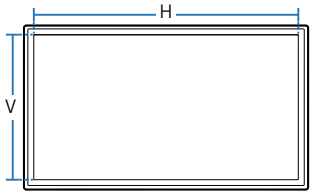
Question	Answer
How can I change the frequency?	Set the frequency on your graphics card. • Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings** → **Display adapter properties** → **Monitor**, and adjust **Screen refresh rate** under **Monitor settings**.
How can I change 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. • Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings**, and adjust the resolution.
How do I set powersaving mode?	• 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. • Windows 10: Set power-saving mode in **Settings** → **Personalization** → **Lock screen** → **Screen timeout settings** → **Power & sleep** or BIOS SETUP on the PC.

Chapter 14
Specifications

- Size



- Display area



General

Model Name		DC43H / DC43J	DC49H / DC49J	DC55H
Panel	Size	43 CLASS (42.5 inches / 107.9 cm)	49 CLASS (48.5 inches / 123.2 cm)	55 CLASS (54.6 inches / 138.7 cm)
	Display area	940.89 mm (H) x 529.25 mm (V) 37.0 inches (H) x 20.8 inches (V)	1073.779 mm (H) x 604.00 mm (V) 42.3 inches (H) x 23.8 inches (V)	1209.6 mm (H) x 680.4 mm (V) 47.6 inches (H) x 26.8 inches (V)
Audio Output		10 W + 10 W	10 W + 10 W	10 W + 10 W
Power Supply		AC100-240V~ 50/60Hz Refer to the label at the back of the product as the standard voltage can vary in different countries.		
Environmental considerations	Operating	Temperature : 32 °F - 104 °F (0 °C - 40 °C) * For installing the housing, keep the internal temperature at 40 °C or below. 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 is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

— For detailed device specifications, visit the Samsung Electronics website.

(USA only)

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website: www.samsung.com/recyclingdirect or call, (877) 278 - 0799

Preset Timing Modes

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

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

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

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	+/+

– 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.

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
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	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 x 720	45.000	60.000	74.250	+/+
VESA, 1280 x 800	49.702	59.810	83.500	-/+
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 RB	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 15
Appendix

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 separatly 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.

Prevention of Afterimage Burn-in

What is afterimage burn-in?

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

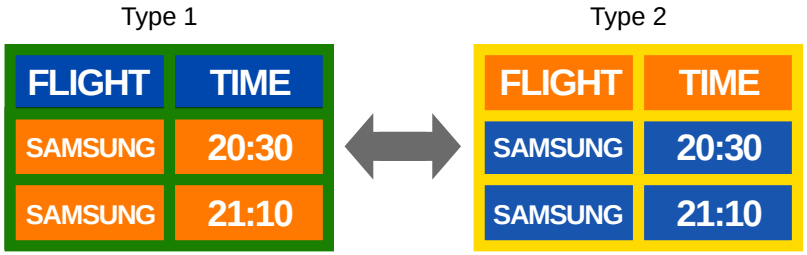
Such a voltage difference between electrodes increases with time and makes the liquid crystals thinner. When this occurs, a previous image can remain on the screen when the pattern changes.

This information is a guide to prevent afterimage burn-in. Viewing a fixed screen for an extended period of time may cause afterimage burn-in. This problem is not included in warranty.

Recommended prevention practices

Viewing a fixed screen for an extended period of time may cause afterimage burn-ins or smudges. Turn off the product when it is not used for a long time, activate the Power Saving mode, or run a moving screen saver.

- Change the colors regularly.



- Avoid combinations of a text color and background color of contrasting brightness.

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



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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.

For information on the Open Source Licence Notice, contact the Samsung Customer Center or send email to oss.request@samsung.com.

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.

Component ports (green, blue and red)____ The component ports, which identify, transmit and receive contrast signals, provide superior picture quality to any other video connection methods.

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.