SAMSUNG

User Manual

SBB-SS08E

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

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Chapter 01
Before Using the Product

Copyright

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Safety Precautions

Caution

RISK OF ELECTRIC SHOCK DO NOT OPEN

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

THERE ARE NO USER SERVICEABLE PARTS INSIDE.

REFER ALL SERVICING TO QUALIFIED PERSONNEL.

⚡

This symbol indicates that high voltage is present inside.

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

⚠

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

Symbols

Warning

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

🚫

Activities marked by this symbol are prohibited.

Caution

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

❗

Instructions marked by this symbol must be followed.

Electricity and Safety

Warning

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

- An electric shock or fire may result.

Do not use multiple products with a single power socket.

- Overheated power sockets may cause a fire.

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

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

- An unsecure connection may cause a fire.

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

- An electric shock or injury may result.

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

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

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

- A fire or electric shock may result.

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

- A fire may result.

Caution

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

- The product may become damaged by an electric shock.

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

- A fire or electric shock may result.

Keep the power socket where the power cord is connected unobstructed.

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

Hold the plug when disconnecting the power cord from the power socket.

- An electric shock or fire may result.

Installation

Warning

DO NOT PLACE CANDLES, INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT. DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.

- A fire may result.

Have a technician install the wall-mount hanger.

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

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

- An increased internal temperature may cause a fire.

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

- An increased internal temperature may cause a fire.

Keep the plastic packaging out of the reach of children.

- Children may suffocate.

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

- The product may fall and become damaged and/or cause an injury.
- Using the product in an area with excess vibration may damage the product or cause a fire.

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

- A fire or electric shock may result.

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

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

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

- The product may fall and injure children.

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.

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.

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

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.

Do not use humidifiers or stoves around the product.

- A fire or electric shock may result.

Store small accessories out of the reach of children.

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.

Do not dispose of batteries in a fire.

Cleaning

— Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.

— Take the following steps when cleaning.

1 Power off the product and computer.

2 Disconnect the power cord from the product.

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

3 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).

Checking the Components

Components

― Components may differ in different locations.

‒ Contact the vendor where you purchased the product if any components are missing.

‒ The pictures may look different from the actual components.
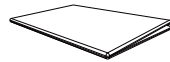
Quick Setup Guide

Warranty card
(Not available in some locations)

Regulatory guide

Power cord
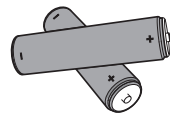
Batteries
(Not available in some locations)

Remote Control
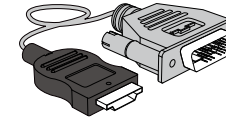
HDMI-DVI cable

DC power adapter
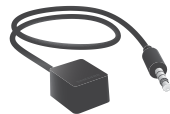
External IR cable

Velcro

11
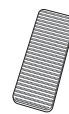
Reverse Side

― The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.
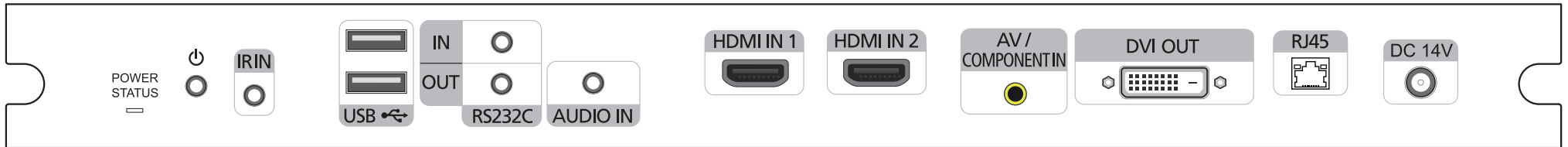
Port	Description
POWER STATUS	View the power status of the Signage Player Box.
⏻	Power on or off the Signage Player Box.
IR IN	Connect to the external IR cable.
USB ⛴	Connect to a USB memory device.
RS232C OUT	Connects to MDC using an RS232C adapter.
RS232C IN	

Port	Description
AUDIO IN	Receives sound from a PC via an audio cable.
HDMI IN 1, HDMI IN 2	Connects to a source device using a HDMI cable or HDMI-DVI cable.
AV / COMPONENT IN	Connects to a source device using the AV/Component adapter.
DVI OUT	Use the HDMI-DVI cable to connect the Signage Player Box to the display device.
RJ45	Connects to MDC using a LAN cable.
DC 14V	Connects to the DC power adapter.

Attaching the Signage Player Box

Check the correct attachment area for the Signage Player Box on the back of the display device.
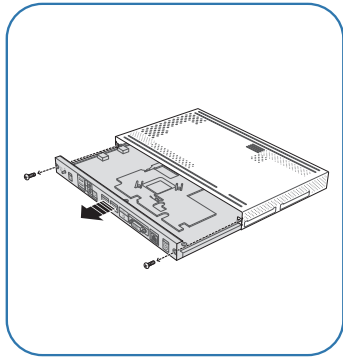
1 Uncover the Signage Player Box.
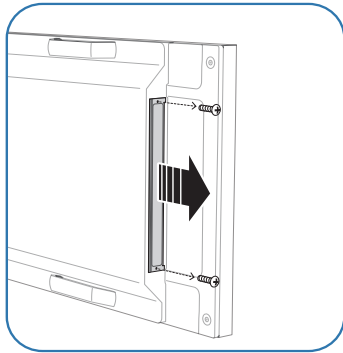
2 Uncover the area where the Signage Player Box will be attached on the back of the display device.
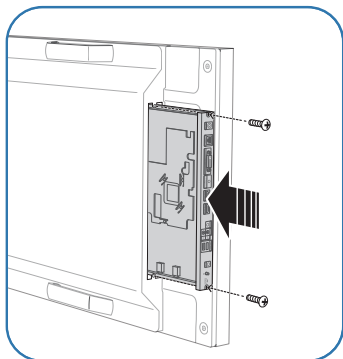
3 Push the Signage Player Box in the arrow's direction, then fix the Box using screws.
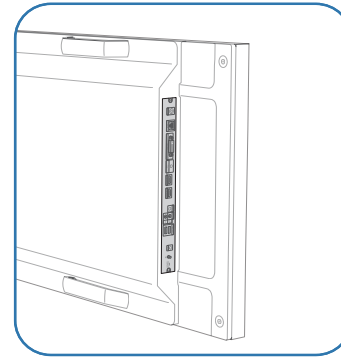
4 The Signage Player Box should be installed as shown.
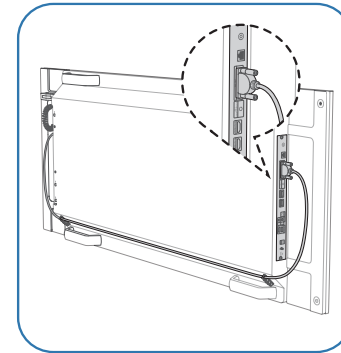
5 Use the HDMI-DVI cable to connect the Signage Player Box to the display device.
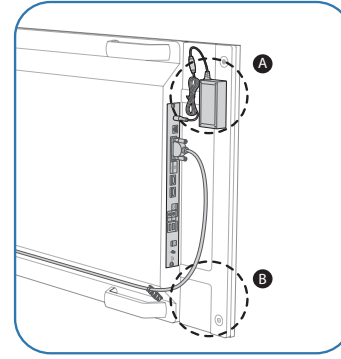
6 Use the supplied velcro to fix the adapter to either area Ⓐ or Ⓑ on the display device.

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.

Not Available.

Not Available.

Adjust the volume.

Mute the sound.

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

Change the input source.

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

Use this hotkey to directly access **MagicInfo**. This hotkey is available when a Signage Player Box is connected.

Go to Home Launch Button.

— Remote control button functions may differ for different products.

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Quickly select frequently used functions.

TOOLS

INFO

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.

Return to the previous menu.

RETURN

EXIT

Exit the current menu.

Not Available.

N.A
A

AV
B

HDMI
C

COMPONENT
D

Manually select a connected input source from **AV**, **HDMI1**, **HDMI2**, or **Component**.

Used in multimedia mode.

POWER ON **POWER OFF** **SOURCE**
Smart Signage

POWER ON / POWER OFF

Turn on or off the Smart Signage device.

SOURCE

View or select an external device connected to the Smart Signage device.

SAMSUNG

― Remote control button functions may differ for different products.

Press a button on the remote control pointing at the sensor on the front of 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.

― 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 place batteries in the remote control
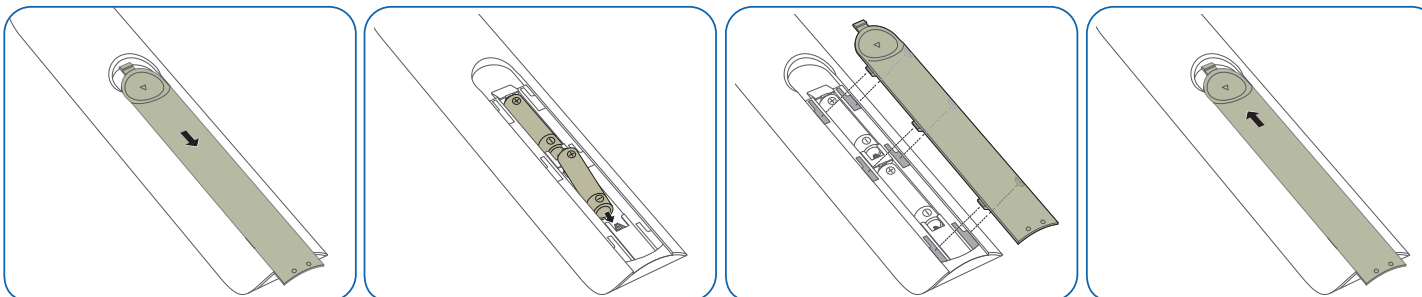
Dimensions
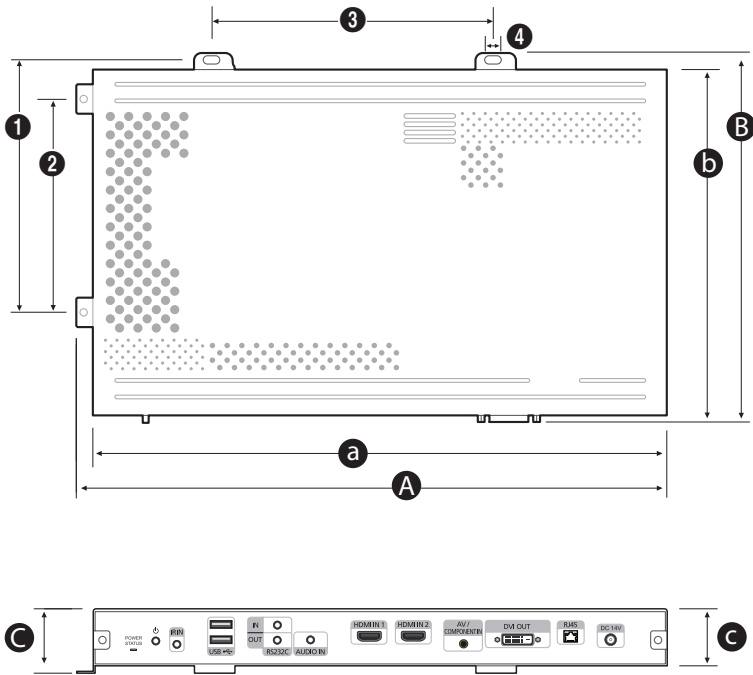
❶	❷	❸	❹
137.9 (5.4)	117.4 (4.6)	153.9 (6.1)	5.0 (0.2)

	Ⓐ	Ⓑ	Ⓒ
With Holder	321.6 (12.7)	203.4 (8.0)	35.1(1.4)

	ⓐ	ⓑ	ⓒ
Without Holder	312.4 (12.3)	194.2 (7.6)	32.4 (1.3)

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Remote Control (RS232C)

Cable Connection

RS232C Cable

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

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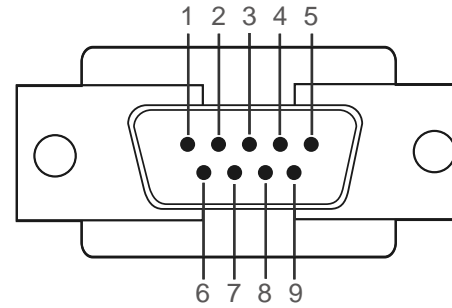
Pin	Signal
1	Detect data carrier
2	Received data
3	Transmitted data
4	Prepare data terminal
5	Signal ground
6	Prepare data set
7	Send request
8	Clear to send
9	Ring indicator

- RS232C cable
  Connector: 9-Pin D-Sub to Stereo Cable
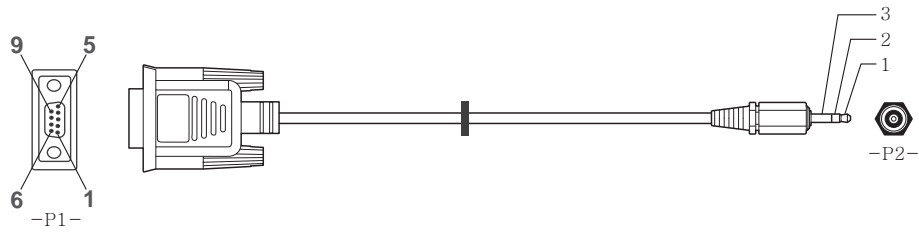
-P1-		-P1-		-P2-		-P2-
Female	Rx	2	-------->	3	Tx	STEREO
	Tx	3	<---------	2	Rx	PLUG
	Gnd	5	----------	5	Gnd	(3.5ø)

LAN Cable

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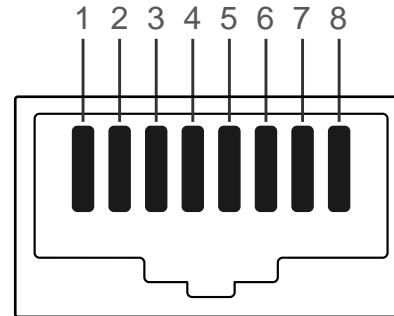
Pin No	Standard Color	Signal
1	White and orange	TX+
2	Orange	TX-
3	White and green	RX+
4	Blue	NC
5	White and blue	NC
6	Green	RX-
7	White and brown	NC
8	Brown	NC

- Connector : RJ45

Direct LAN cable (PC to HUB)
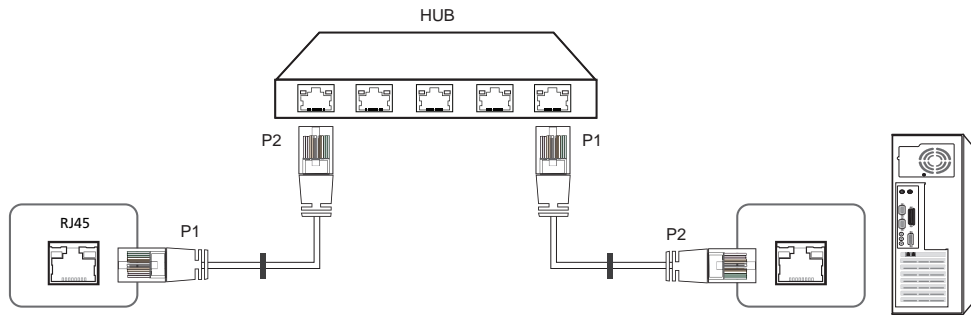
Signal	P1		P2	Signal
TX+	1	<-------->	1	TX+
TX-	2	<-------->	2	TX-
RX+	3	<-------->	3	RX+
RX-	6	<-------->	6	RX-

Cross LAN cable (PC to PC)
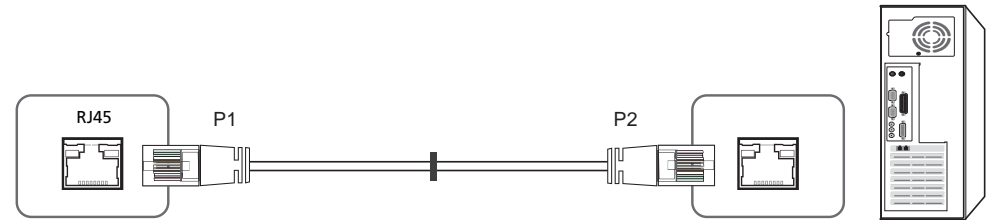
Signal	P1		P2	Signal
TX+	1	<-------->	3	RX+
TX-	2	<-------->	6	RX-
RX+	3	<-------->	1	TX+
RX-	6	<-------->	2	TX-

Connection

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

- Connection 1
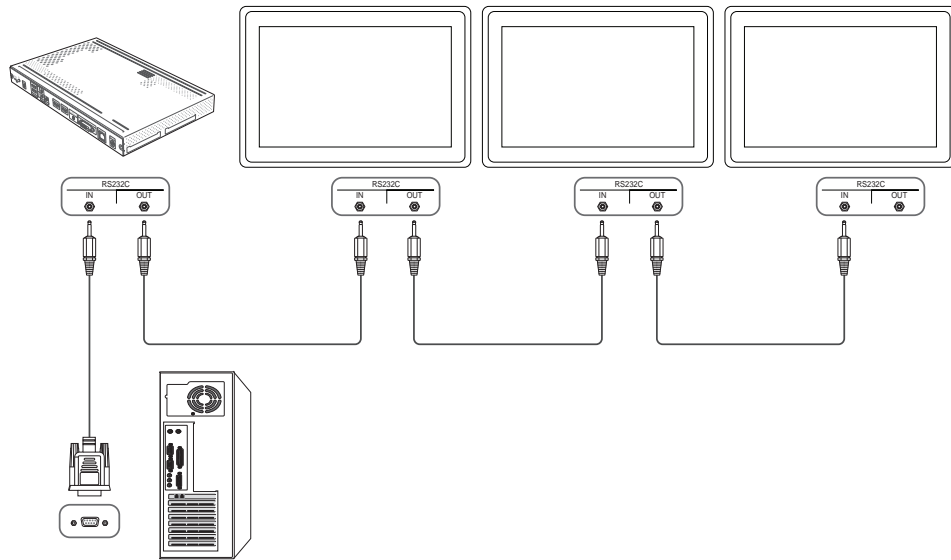
- Connection 2
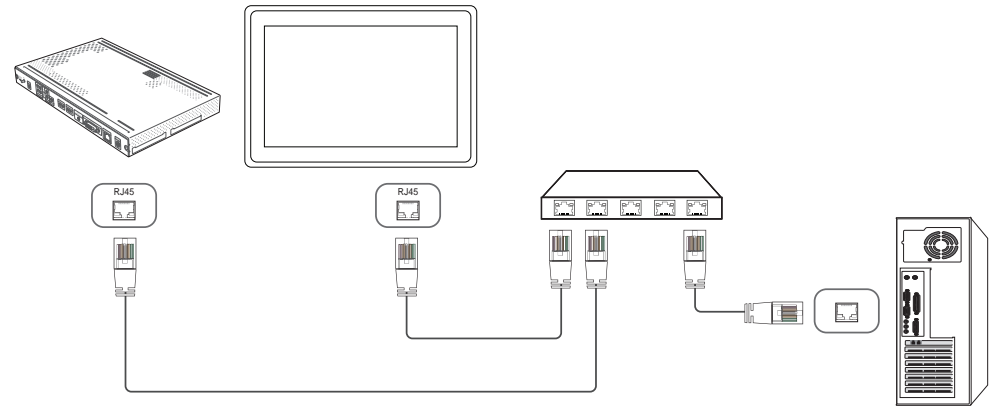
- Connection 3
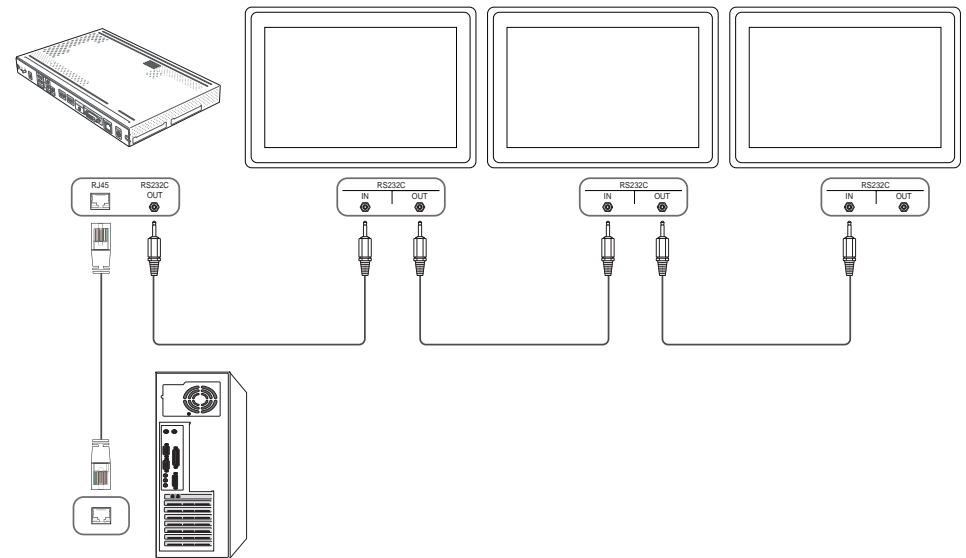
Control Codes

Viewing control state (Get control command)

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	PIP on/off control	0x3C	0~1
5	Safety Lock	0x5D	0~1

- 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.

0x0C	Input source
0x08	Component
0x20	MagicInfo
0x1F	DVI_video
0x21	HDMI1
0x22	HDMI1_PC
0x23	HDMI2
0x24	HDMI2_PC

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

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

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

- 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.

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.

  ― 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

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

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 an HDMI-DVI Cable

After connecting a computer to the product with an HDMI-DVI cable, make sure to configure the settings as shown below to enable the video and audio from the computer.

- **Sound** → set **HDMI Sound** to **PC(DVI)**

- **Picture** → set each screen mode to **Text** under **Picture Mode**

- **System** → **General** set **HDMI Hot Plug** to **Off**

HDMI IN 1 , HDMI IN 2

AUDIO IN

Connection Using an HDMI Cable

HDMI IN 1 , HDMI IN 2
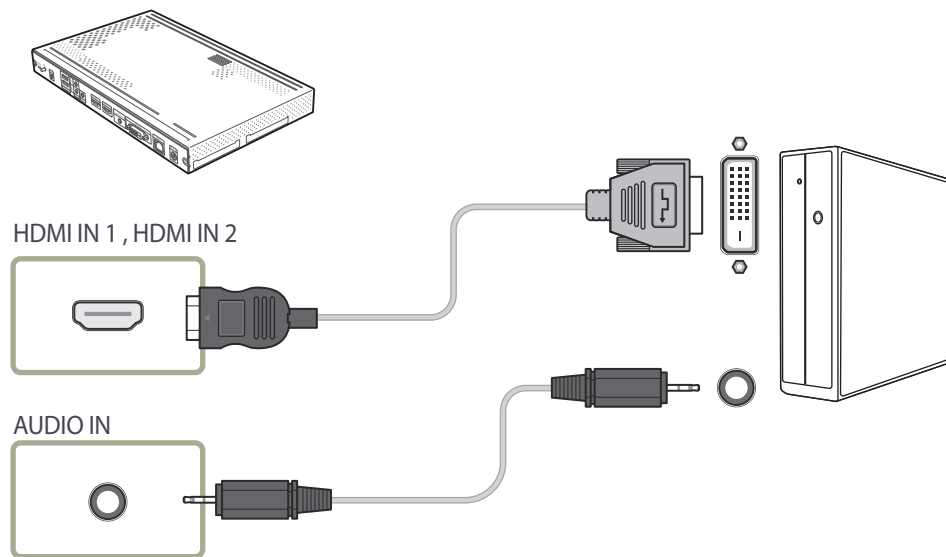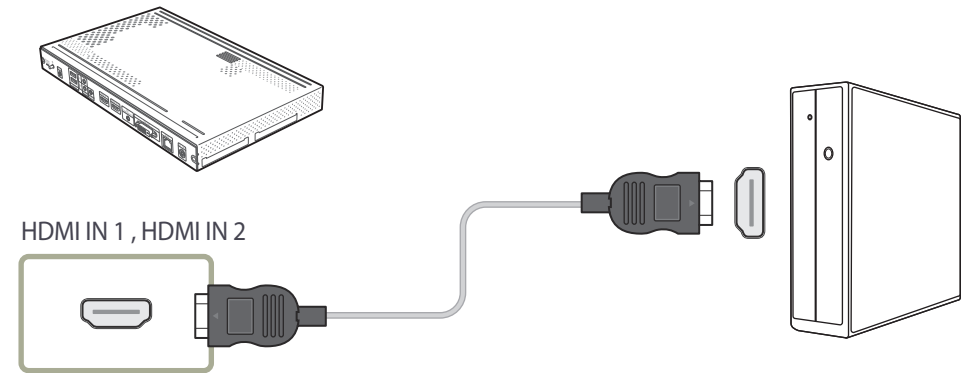
Connecting to a Video Device

- 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

AV / COMPONENT IN

AUDIO IN
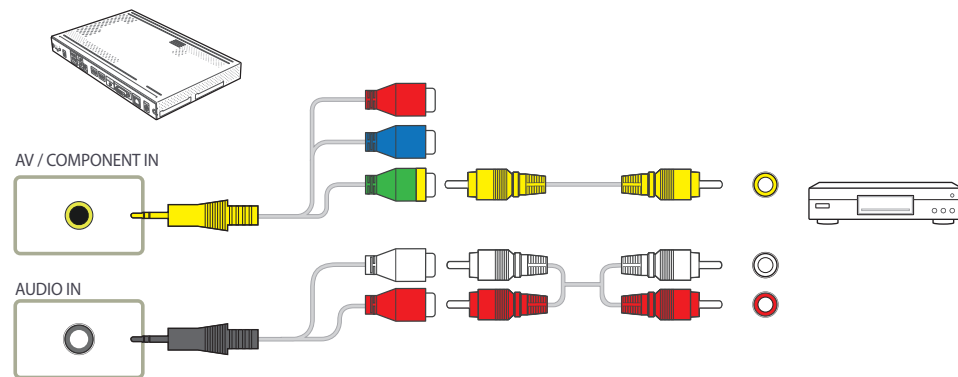
Connection Using the component Cable

AV / COMPONENT IN

AUDIO IN
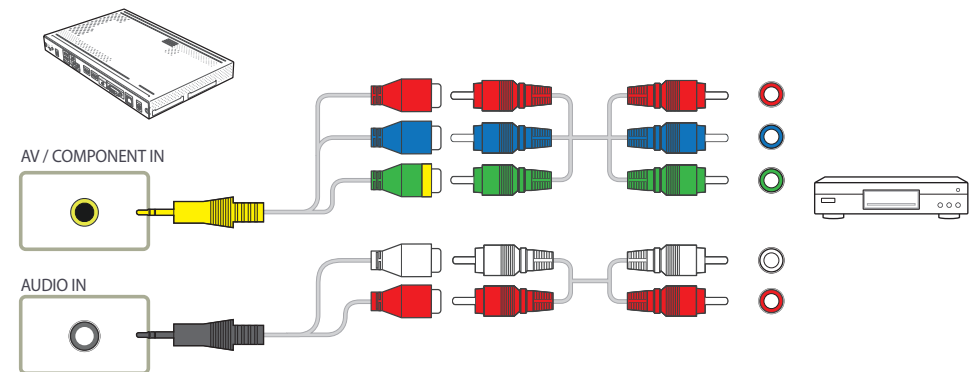
Connection Using an HDMI-DVI Cable

― 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.

― After connecting a video device to the product with an HDMI-DVI cable, make sure to configure the settings as shown below to enable the video and audio from the video device.

  ― **System** → set **HDMI Sound** to **AV(HDMI)**

  ― **Picture** → set each screen mode to **Video/Image** under **Picture Mode**

  ― **System** → **General** → set **HDMI Hot Plug** to **On**

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

HDMI IN 1 , HDMI IN 2

AUDIO IN
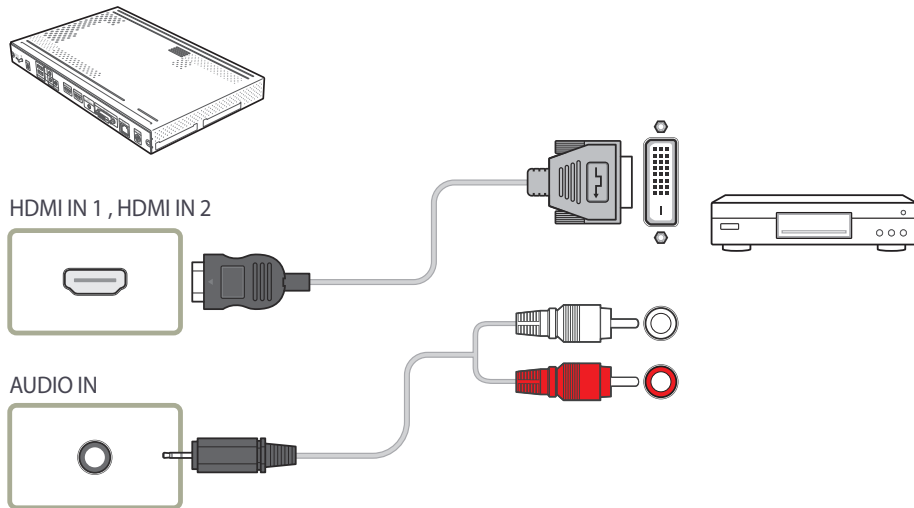
Connection Using an HDMI Cable

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.

HDMI IN 1 , HDMI IN 2
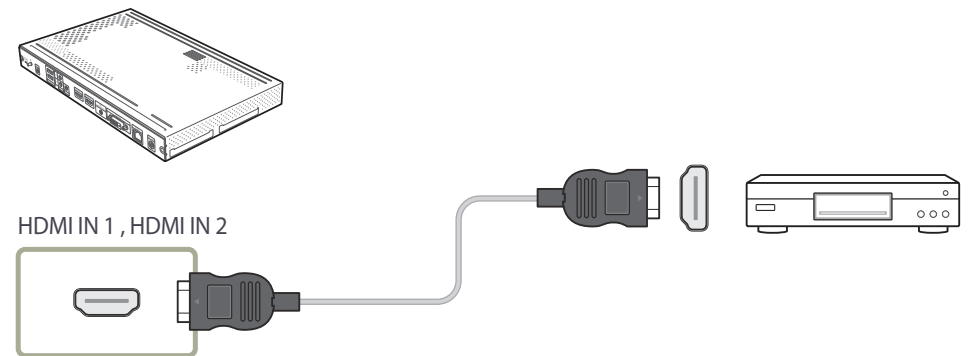
Connecting the LAN Cable

― Connecting parts may differ in different products.

RJ45
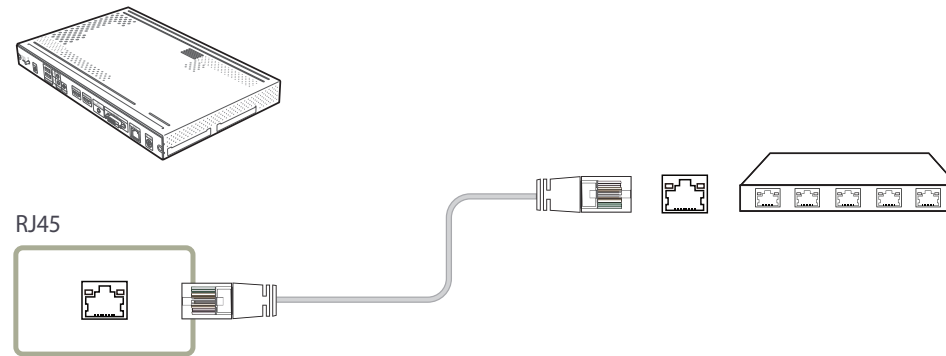
- Use Cat7(*STP Type) cable for the connection.

  *Shielded Twist Pair

Changing the Input source

Source

SOURCE → Source
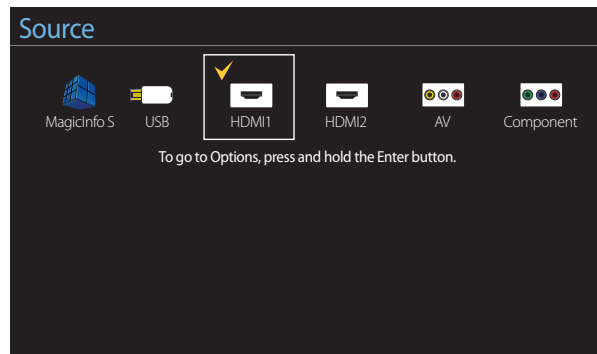
- The displayed image may differ depending on the model.

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.

― To view detailed information about connected source devices, press the **TOOLS** button from the **Source** page.

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.

    PC / **Cable STB** / **Satellite STB** / **PVR STB** / **Game** / **Blu-ray** / **DVD** / **VCR** / **AV Receiver** / **Camcorder** / **DVI PC** / **TV** / **IPTV** / **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 RS-232C (serial data communications standards)

An RS-232C serial cable must be connected to the serial ports on the PC and monitor.

RS232C IN

RS232C IN   RS232C OUT

RS232C IN

RS232C OUT

Monitor 1

RS232C IN

Monitor 2

Computer
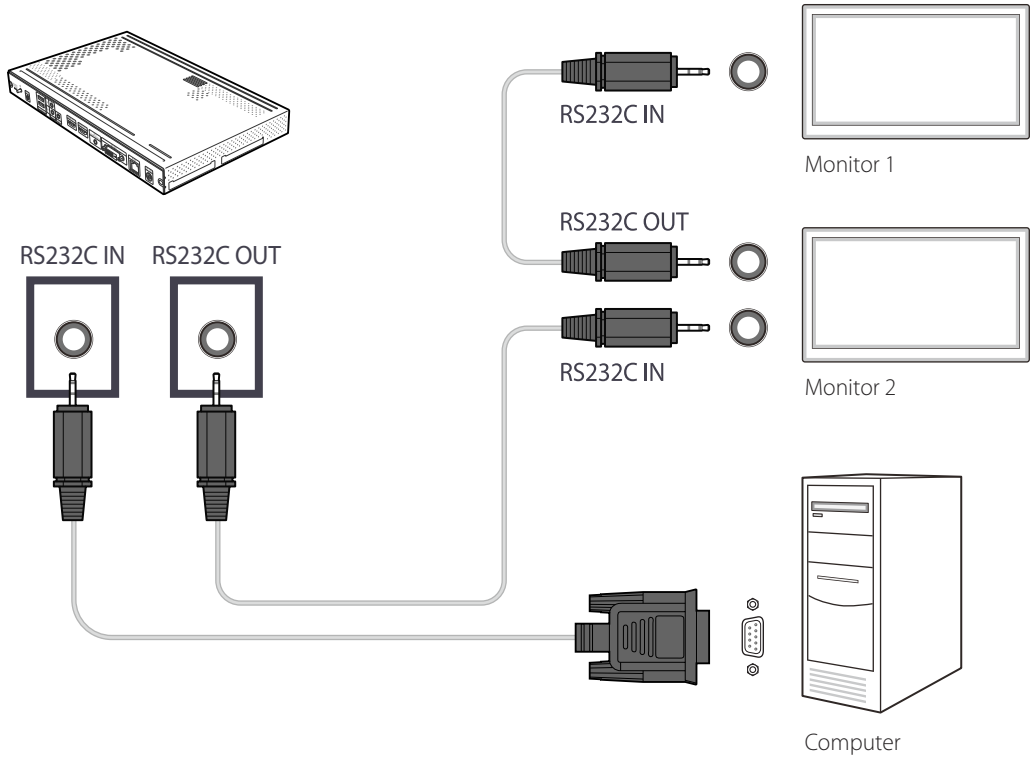
Using MDC via Ethernet

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.

RJ45

HUB

Computer

Monitor 1

Monitor 2
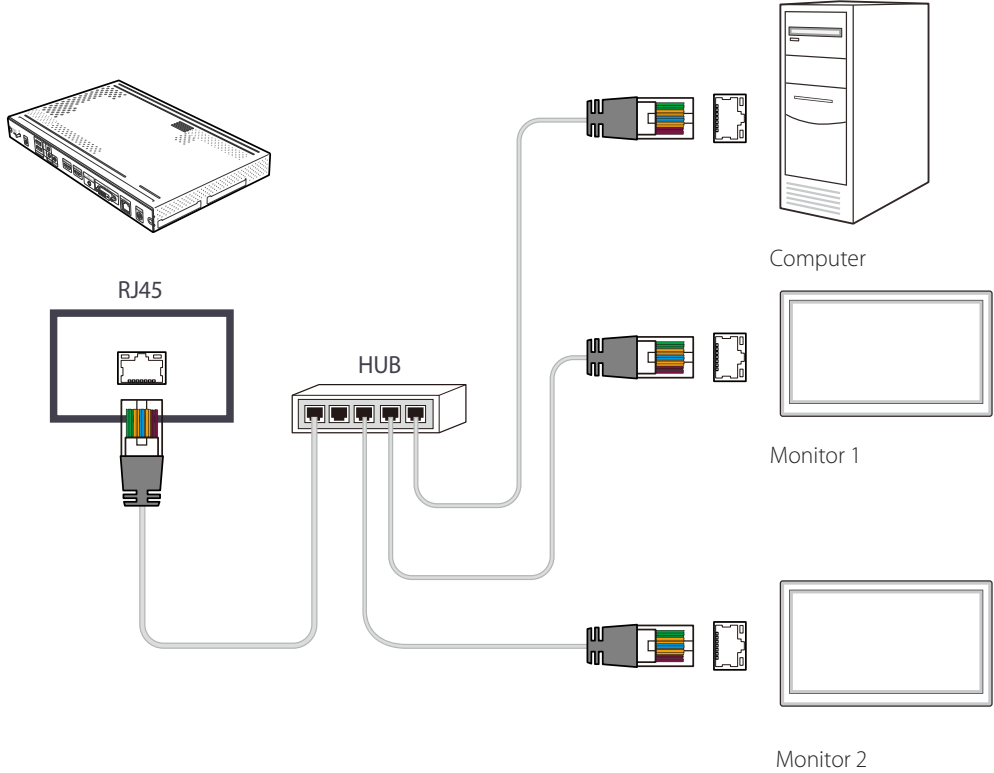
Connection using a cross LAN cable

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

RS232C IN

Monitor 1

RS232C OUT

RS232C IN

Monitor 2

RJ45   RS232C OUT

Computer
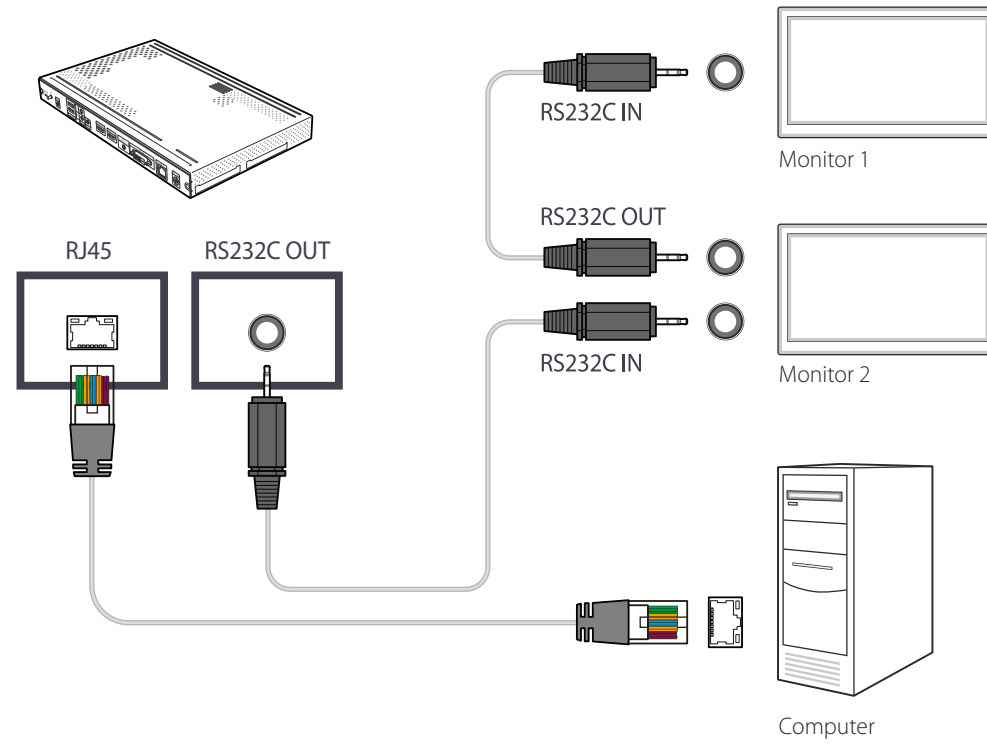
Chapter 05

Home feature

This feature is provided in **Support** → **Go to Home**.
Accessible using the **HOME** button on the remote control.

Player

HOME ⌂ → **Player** →**ENTER** ⏎
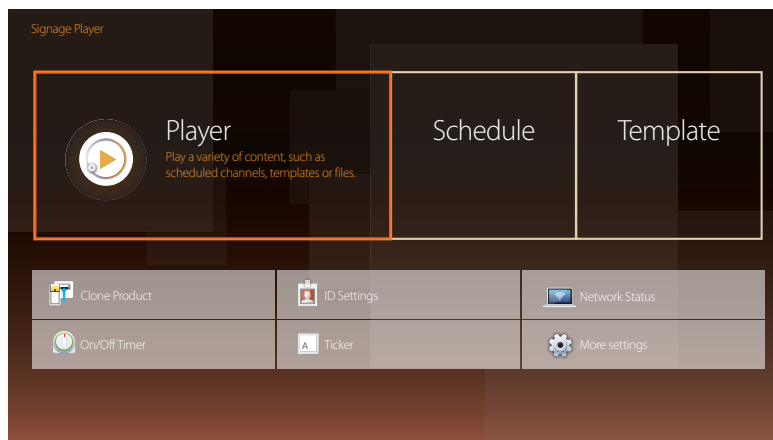
― The displayed image may differ depending on the model.

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

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

Play channels or content using any of the following methods.

- **Network Channel**: Play content using the server.

    ――To run **Network Channel**, make sure the product is connected to the server.

- **Local Channel**: Play content in internal memory or from external memory.

Approving a connected device from the server

Approving the Lite server

- Set **MagicInfo Mode** to **Lite** in **Server Network Settings**.
  Approve and use the **Lite** server now.

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

1 Access the server you have assigned to your device.
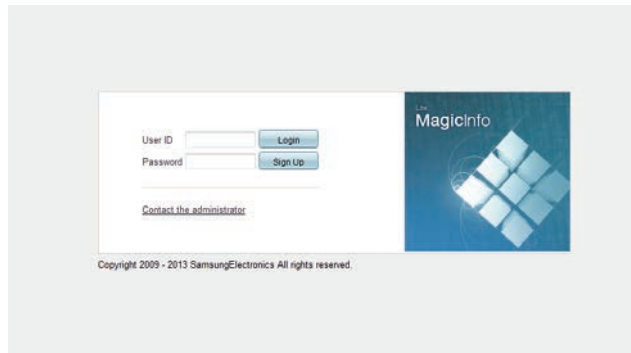
2 Enter your ID and password to log in.

3 Select **Device** from the top menu bar.
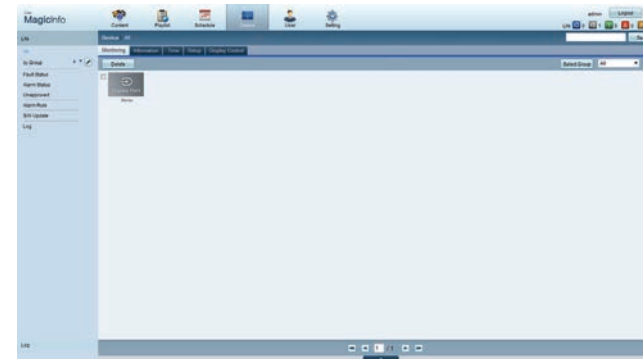
4 Select **Lite** from the menus on the left.

5 Select **Unapproved** from the sub-menus of **Lite**.
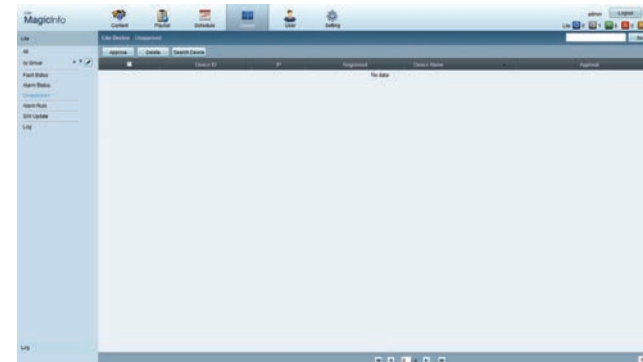
6 Select the **Approve** button for your device from the list of unapproved Lite devices.

7 Enter the information required to approve the device.

- **Device Name**: Enter the device name.
- **Device Group**: Select ⋯ to specify the group.
- **Location**: Enter the current location of the device.

― Pressing the **INFO** button on the remote when a network schedule is running will display the details of the schedule. Check that the correct device has been selected by viewing the device ID in the details.

8 Select the **All** menu to check that the device has been registered.

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

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

Setting the current time

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

1 Go to the tabs **Device → Time**.

2 Select your device.

3 Select **Clock Set**, and sync the time with the server.

- When connecting to the server for the first time, the time on the product is set using the GMT time of the region where the server is installed.
- The time on the product can be changed from the server as shown in step 3.
- Turning the product off and then on again will restore the time setting on the product to the last time that was set from the server.

― For further details on how to manage the time (scheduling, holiday management, etc.), refer to the <MagicInfo Lite Server user's manual>.

Approving the Premium server

- Set **MagicInfo Mode** to **Premium** in **Server Network Settings**. Approve and use the **Premium** server now.

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

1 Access the server you have assigned to your device.

**2** Enter your ID and password to log in.

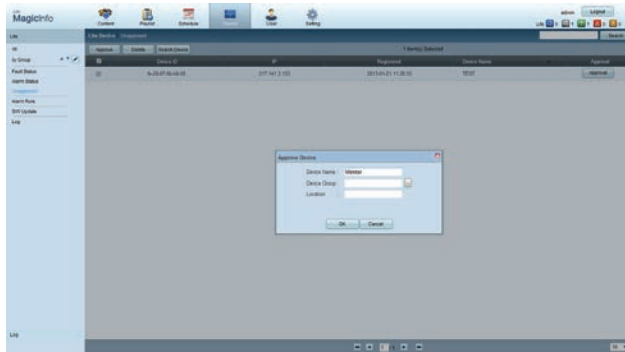**3** Select **Device** from the top menu bar.
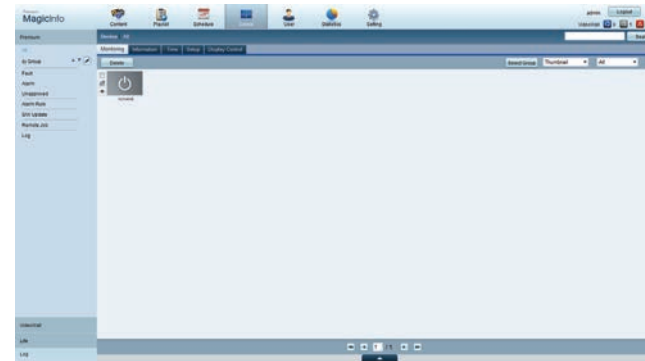
4 Select **Premium** from the menus on the left.

5 Select **Unapproved** from the sub-menus of **Premium**.
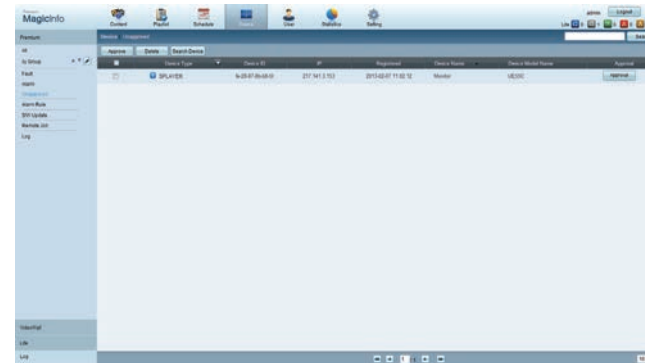
6 Select the **Approve** button for your device from the list of unapproved Premium devices.
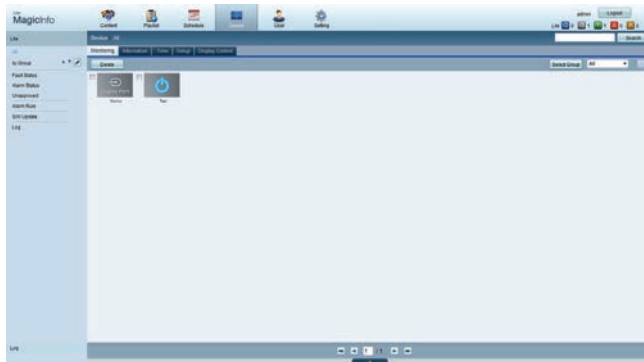
7 Enter the information required to approve the device.

- **Device Name**: Enter the device name.
- **Device Group**: Select ⋯ to specify the group.
- **Location**: Enter the current location of the device.

― Pressing the **INFO** button on the remote when a network schedule is running will display the details of the schedule. Check that the correct device has been selected by viewing the device ID in the details.

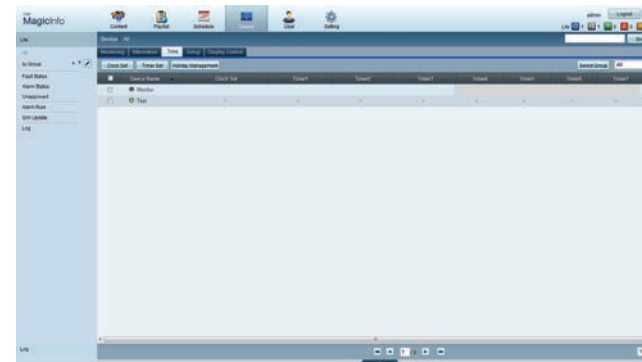**8** Select the **All** menu to check that the device has been registered.

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

― For further details on how to configure a schedule, refer to the <MagicInfo Premium Server user's manual>.

― If a device is deleted from the list of devices approved by the server, the device will reboot to reset its settings.

Setting the current time

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

1 Go to the tabs **Device → Time**.

2 Select your device.

3 Select **Clock Set**, and sync the time with the server.

- When connecting to the server for the first time, the time on the product is set using the GMT time of the region where the server is installed.
- The time on the product can be changed from the server as shown in step 3.
- Turning the product off and then on again will restore the time setting on the product to the last time that was set from the server.

― For further details on how to manage the time (scheduling, holiday management, etc.), refer to the <MagicInfo Premium Server user's manual>.

- The displayed image may differ depending on the model.

Network Channel

Play content, templates and schedules configured on the server.

- You can view whether the server is connected (approval) in the **Player** 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 **Player** menu.

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

2 **Network Channel** will run.

Local Channel

Play a schedule or channel that was configured in the product.

1 Select **Local Channel** from the **Player** menu.

― The **No channel.** message appears if no channel has been registered in **Local Channel**.

2 **Local Channel** will run.

My Templates

Play a template in **My Templates** stored in the internal memory of the product.

Available features in the Player page

The **Player** 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** / **PDF** / **Flash** / **Office** / **My Templates**

- **Sort By**

  Specify the content sort criterion.

  – **File name** / **Recently Played**

- **Options**

Menu items in the Player page

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.

Player page Settings menu

Settings

Settings

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

Default Storage	Internal
Picture Size	
Display Duration	
Transition Effect	Random
Content Orientation	Landscape

⌄

Close
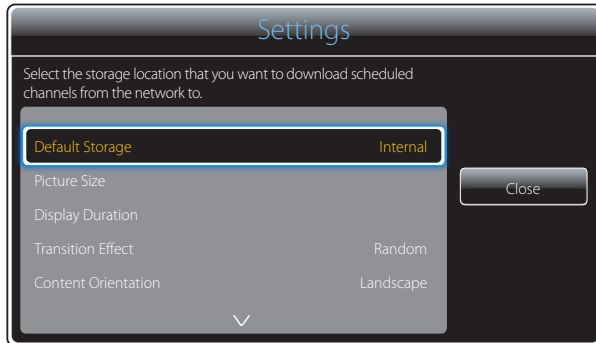
‒ The displayed image may differ depending on the model.

Default Storage

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

• **Internal** / **USB** / **SD Card**

Picture Size

Set the screen size for content.

If **Picture Size** is set to **Video** or **Image**

• **Full Screen** / **Original Size** / **Screen Fit**

If **Picture Size** is set to **PDF** or **Office**

• **Full Screen** / **Original Size**

― This feature is only available for **Video**, **Image**, **PDF** and **Office** files.

Display Duration

Set the duration for each page in a slideshow.

― This feature is only available for **Image**, **PDF**, **Flash** and **Office** files.

Transition Effect

Configure transition effects between pages or scenes in a slideshow or video file.

• **None** / **Fade1** / **Fade2** / **Blind** / **Spiral** / **Checker** / **Linear** / **Stairs** / **Wipe** / **Random**

― This feature is only available for **Image** files.

Content Orientation

Switch the orientation of playing content to **Landscape** or **Portrait** mode.

• **Landscape** / **Portrait**

― If **Content Orientation** is **Portrait** view, it does not support VP8 video codec.

― **Source** is not available when **Content Orientation** is set to **Portrait**.

Default Content

This default content will be displayed if you run a channel while no programs are scheduled on the channel.

- **None**

Safely Remove

Safely removes USB memory

Reset

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

When Content is Running

Viewing the details of the content that is running

```
┌─────────────────────────────────────────┐
│              Information                 │
├─────────────────────────────────────────┤
│  Current Time              00:00pm       │
│  Type:                Network Channel    │
│  CH Number:        No channels selected  │
│  CH Name:          No channels selected  │
│  Software Version:    DTP-EP-APP-5371    │
│              ˅                           │
│                            ┌──────────┐  │
│  No Schedule to download   │    OK    │  │
│                            └──────────┘  │
│                                          │
│                                          │
│                                          │
└─────────────────────────────────────────┘
```
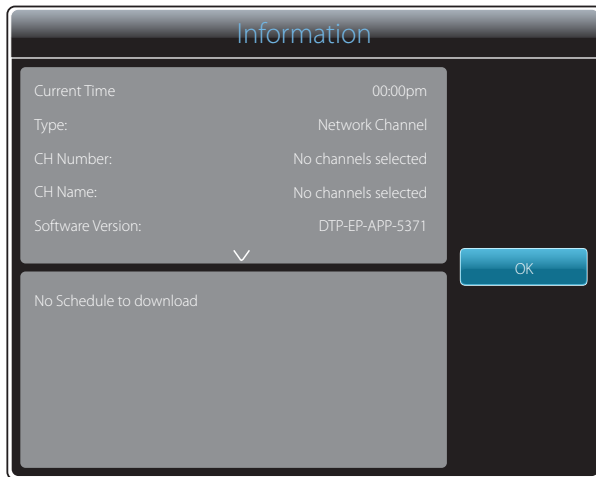
― The displayed image may differ depending on the model.

Press the **INFO** button on the remote control.

- **Current Time**
- **Type**: Type of channel currently playing
  ― Only applicable during **Network Channel** / **Local Channel** playback.
- **CH Number**: Number assigned to the channel currently playing
  ― Only applicable during **Network Channel** / **Local Channel** playback.
- **CH Name**: Name of the channel currently playing
  ― Only applicable during **Network Channel** / **Local Channel** playback.
- **Software Version**: Displays the software version of a device
- **MAC ID**: Displays the original identification number of a device
- **Tags**: Tag settings assigned to a device from the server
  ― Only applicable during **Network Channel** / **Local Channel** playback.
- **Server**: Displays the connection status (**Connected**, **Not connected** or **Non-Approval**) of the server
- **USB**: Displays the connection status of a USB device

Changing the settings for the content that is running

Playlist   Music   Repeat
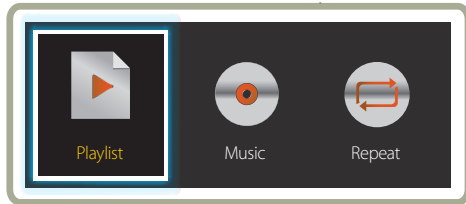
― The displayed image may differ depending on the model.

Press the **TOOLS** button on the remote control during content playback to configure settings such as **Playlist** and **Music**.

- **Playlist**

  View a list of content items currently playing.

- **Music**

  Set the background music for the content currently playing.

- **Repeat**

  Set the repeat mode.

  ‒ **One** / **All**

File Formats Compatible with Player

- Supported file systems include FAT32 and NTFS.
- A file with a vertical and horizontal resolution larger than the maximum resolution cannot be played.
  Check the vertical and horizontal resolution of the file.
- Check the supported video and audio Codec types and Versions.
- Check the supported file versions.
  - Flash player 11.0 and older and Flash Air 3.0 and older versions are supported.
  - PowerPoint version up to 97 – 2007 is supported
- Only the last USB device that was connected is recognized.

Network Schedule Multiframe

Playback restrictions

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

Sound output restrictions

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

  ― Network BGM: Settings can be configured in step 1 when creating a server schedule.

  ― Local BGM: BGM settings can be configured using the tools displayed after the **TOOLS** button is pressed during **Player** playback.

  ― User-selected main frame: Main frame settings can be configured in step 2 when creating a server schedule.

Template files and LFD(.lfd) files

Restrictions

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

Playback restrictions

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

Sound output restrictions

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

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Contents

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
*.avi	AVI	DivX 3.11 / 4.x / 5.x / 6.x	1920 x 1080	6~30	30	**AC3**
*.mkv	MKV					**LPCM**
*.asf	ASF					**AAC**
*.wmv	MP4	MPEG4 SP / ASP				**HE-AAC**
*.mp4	3GP					**WMA**
*.mov	VRO	H.264 BP / MP / HP				**DD+**
*.3gp	VOB					**MPEG(MP3)**
*.vro	PS					**DTS Core**
*.mpg	TS	Motion JPEG				**G.711(ALaw,μ-Law)**
*.mpeg						
*.ts		Window Media Video v9				
*.tp						
*.trp		MPEG2				
*.flv						
*.vob		MPEG1				
*.svi						
*.m2ts						
*.mts		VP6	640 x 480		4	
*.divx						

Video	Audio	Image
• 3D video is not supported.	• Audio content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy audio during playback.	• Compatible image file format : JPEG, PNG, BMP
• Content with a resolution larger than the resolution specified in the table above is not supported.		― 32-bit, 24-bit and 8-bit BMP files are supported.
• Video content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy video during playback.	• Video content will not play, or not play correctly, if there is an error in the content or the container.	• Supported maximum resolution : 4096 x 4096
• Video content will not play, or not play correctly, if there is an error in the content or the container.	• Some USB/digital camera devices may not be compatible with the player.	• Supported maximum file size: 20MB
• Some USB/digital camera devices may not be compatible with the player.	• Supports up to WMA 10 Pro 5.1 channel. WMA lossless audio is not supported.	• Supported image effects : 9 effects (**Fade1**, **Fade2**, **Blind**, **Spiral**, **Checker**, **Linear**, **Stairs**, **Wipe**, **Random**)
• Supports up to H.264, Level 4.1	• QCELP, AMR NB/WB are not supported.	
• H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported.		
• For all Video codecs except MVC, VP8, VP6: ― Below 1280 x 720: 60 frame max ― Above 1280 x 720: 30 frame max		
• GMC 2 or higher is not supported.		
• Supports only BD MVC Spec.		
• Only one video file can play at a time if video files on the monitor use incompatible codecs or the resolution is 1080 x 1920.		
• When a single video file is playing, Seamless mode is not supported under the following conditions: ― Incompatible codec (MVC, VP3, MJPEG) ↔ Incompatible codec ― Incompatible codec ↔ Compatible codec ― The resolution is different from that of the monitor ― The frequency is different from that of the monitor		

Flash

- Flash player 11.0 and older and Flash Air 3.0 and older versions are supported.
- Flash Animation
  - Compatible file format : SWF
- Recommended resolution : 960 x 540
  - Caution
    Performance comparable to Flash Player on a Windows operating system cannot be guaranteed
    Optimization is needed during content creation
- Flash Video
  - Compatible file format : FLV
  - Video
    Codec : H.264 BP
    Resolution : 1920 x 1080
  - Audio
    Codec : H.264 BP
  - Caution
    F4V file format is not supported
    Screen Video is not supported

Power Point

- Compatible document file formats
  - Extension : ppt, pptx
  - Version : Office 97 ~ Office 2007
- Functions not supported
  - Animation effect
  - 3D shapes (which will be displayed in 2D)
  - Header and footer (some subitems are not supported)
  - Word Art
  - Align
    A group alignment error may occur
  - Office 2007
    SmartArt is not fully supported. 97 out of 115 subitems are supported.
  - Object insertion
  - Half-width characters
  - Letter spacing
  - Charts
  - Vertical text
    some subitems are not supported
  - Slide notes and handout

PDF

- Compatible document file formats
  - Extension : pdf
- Functions not supported
  - Content less than 1 pixel not supported because of performance degradation issue.
  - Masked Image, Tiled Image content not supported.
  - Content with Rotated Text, not supported.
  - 3D Shadow Effects not supported.
  - Some characters not supported
    (Special characters may be corrupted)

WORD	Template files	LFD
• Compatible document file formats 　– Extension : .doc, .docx 　– Version : Office 97 ~ Office 2007 • Functions not supported 　– Page background effect 　– Some paragraph styles 　– Word Art 　– Align 　　A group alignment error may occur 　– 3D shapes (which will be displayed in 2D) 　– Office 2007 　　SmartArt is not fully supported. 97 out of 115 subitems are supported. 　– Charts 　– Half-width characters 　– Letter spacing 　– Vertical text 　　some subitems are not supported 　– Slide notes and handout	• Creation/editing/playback are only available in **Template**.	• Supported in **Network Channel** and **Local Channel** • Compatible document file formats 　– Extension : .lfd

Schedule

HOME ⌂ → **Schedule** → ENTER ↵
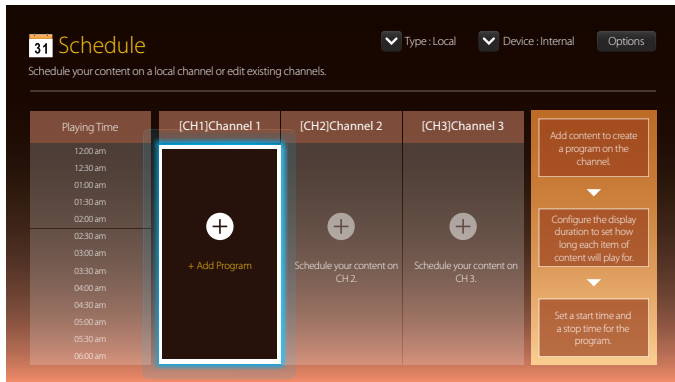
Available features in the Schedule page

The **Schedule** page provides the following features.

- **Type**
  – **Local**: Add or edit schedules.
  – **Network**: View the network schedule configured on the server.

- **Device**
  – Display the name of a connected storage device.

  ― This option only activates if **Type** is set to **Local** in **Device**.

- **Options**

Menu items in the Schedule page

Option Name	Operations
Send	Send configured schedules to another storage device. This is similar to the "copy" feature on PCs.
Delete	Delete schedules.

Configuring channel schedules

Play media content such as videos, photos and music at a desired time.

1   Select a channel to configure.

2   Select video, music and photo content you want to apply to the channel schedule.

3   Set the time to play the schedule. (**Start Time** ~ **Stop Time**)

4   Change the channel schedule name, and then select a destination folder to save to.

5   Press the **Save** button.

―Only applicable when **Type** is set to **Local**.

Editing a channel schedule.

Change settings for a configured channel schedule such as content, the duration and the schedule name.

1   Select a channel to edit.

2   Select video, photo or music content to edit in the channel schedule.

    –   Deleting content: Place the cursor over the desired content and then press the ⏎ button to delete it.
    –   Move to the far right end of the content list. Click the ⊕ button to add content or change the playback order of content items.

3   Set the time to play the schedule. (**Start Time** ~ **Stop Time**)

4   Change the channel schedule name, and then select a destination folder to save to.

5   Press the **Save** button.

―Only applicable when **Type** is set to **Local**.

Template

HOME ⌂ → **Template** → **ENTER** ↵
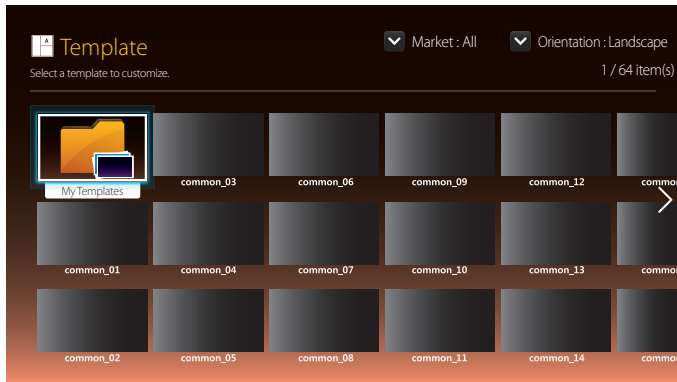
‒ The displayed image may differ depending on the model.

Available features in the Template page

Create unique content using templates. It is easy to create content. Simply change images and text in a template.

Sort the template list using the following criteria.

- **Market**
- **Orientation**
  – **Landscape**: Select this mode when using the product in landscape orientation.
  – **Portrait**: Select this mode when using the product in portrait orientation.

1 Select a template from the provided sample templates.
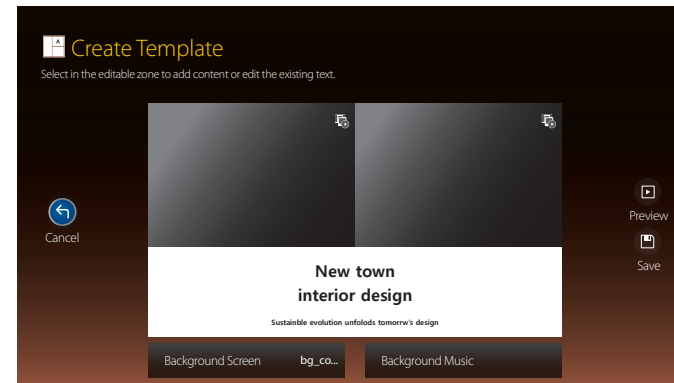
2 Organize a template by inserting text, video, photo, or PDF files as desired.

Entering text
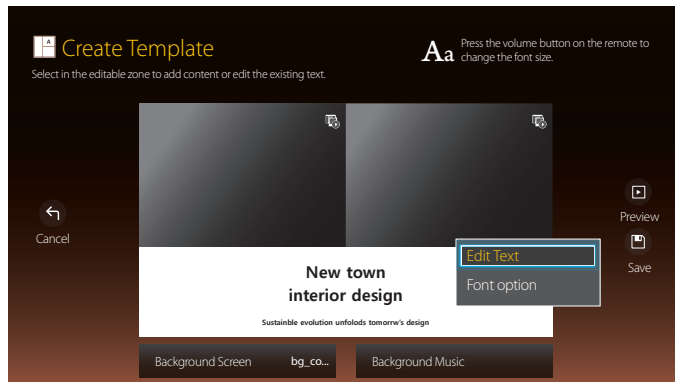
Edit Text

Select the **Edit Text** window to enter text.

Font option

Font Size: Specify the text size for the message.

Font Color: Specify the text color for the message.

Background Color: Specify the background color for the message.

Background Opacity: Specify the background transparency for the message.

Alignment: Select a message alignment mode.

Scroll: Specify the scroll direction/speed for the message.

Hide Element: Display or hide a message.

― Selecting **Hide** does not reset the message settings.

Reset: Reset all settings in **Font option** to default settings.

Inserting content such as videos, photos and PDF files
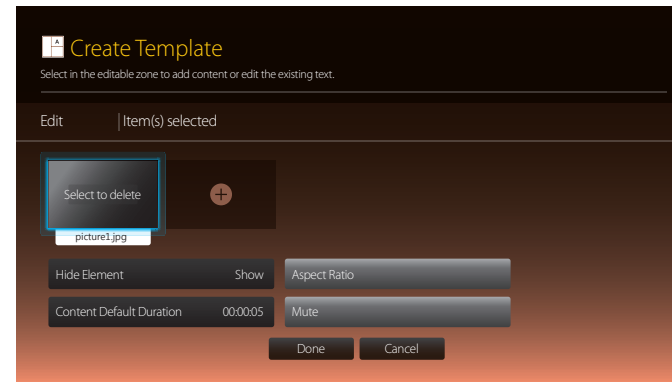
Configuring the background image/background music
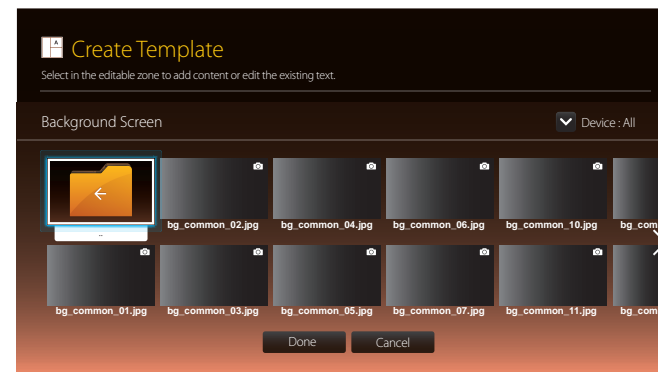
Preview
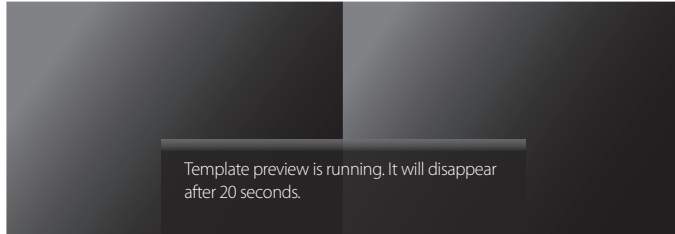
New town
interior design

Sustainble evolution unfolods tomorrw's design

1 Preview the created template using the **Preview** feature.

2 To save the template, press the **Save** button.

3 Configure **Template Name** and **Storage**.

4 Press the **Save** button to finish creating the content.

Clone Product

HOME ⌂ → **Clone Product** → ENTER ↵

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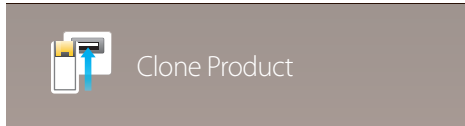
- The displayed image may differ depending on the model.

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

When a duplicate file is not found on the external storage device

1 Connect the external storage device, then run the **Clone Product** function.

2 The **No cloning file found on the external storage device. Export this device's settings to the external storage device?** message appears.

When a duplicate file is found on the external storage device

1 Connect the external storage device, then run the **Clone Product** function.

2 The **Cloning file found. Please select an option.** message appears.

   Run the **Import from External Storage** or **Export to External Storage** function.
   - **Import from External Storage**: Copy settings saved on an external storage device to the product.
   - **Export to External Storage**: Copy settings on the product to an external storage device.
   ― After configuration is complete, the product is rebooted automatically.

ID Settings

HOME ⌂ → **ID Settings** → **ENTER** ↵

ID Settings
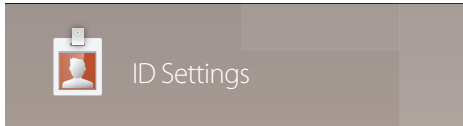
― The displayed image may differ depending on the model.

Assign an ID to a set.

Device ID

Enter the ID number of the product connected to the input cable for input signal reception. (Range: 0~224)

― Press ▲/▼ to select a number, and press ↵.

― Enter the number you want using the number buttons on the remote control.

PC Connection Cable

Select a method to connect to MDC to receive the MDC signal.

- **RS232C cable**

  Communicate with MDC via the RS232C-stereo cable.

- **RJ45(LAN) cable**

  Communicate with MDC via the RJ45 cable.

Device ID Auto Set

― Assign ID number automatically for all connected products.

Network Status

Check the current network and Internet connection.

HOME ⌂ → **Network Status** → **ENTER** ↵

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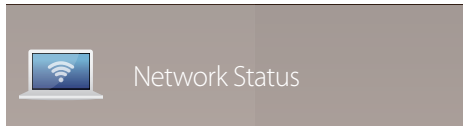
- The displayed image may differ depending on the model.

On/Off Timer

HOME ⌂ → **On/Off Timer** → **ENTER** ↵

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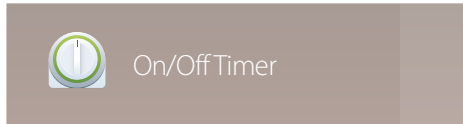
- The displayed image may differ depending on the model.

⎯ You must set **Clock Set** before you can use this feature.

On Timer

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

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

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

(**On Timer 1** ~ **On Timer 7**)

- **Setup**: Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual**.
  If you select **Manual**, you can choose the days you want **On Timer** to turn on your product.
  - 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.

- **Content** (when the **Source** is set to **Internal/USB**): From the USB device or internal memory device, select a folder containing content you want to play when the product turns on. Content can include music, photo or video files.
  ⎯ This function is available only when a USB device is connected.

⎯ If there is no music file on the USB device or you don't select a folder containing a music file, the Timer function does not operate correctly.

⎯ If there is only one photo file in the USB, the **Slide Show** will not play.

⎯ If a folder name is too long, the folder cannot be selected.

⎯ Each USB you use is assigned its own folder. When using more than one of the same type of USB, make sure the folders assigned to each USB have different names.

⎯ We recommend that you use a USB memory stick and a multi card reader when using **On Timer**.

⎯ The **On Timer** function may not work with USB devices with a built-in battery, MP3 players, or PMPs made by some manufacturers because the product can take too long to recognize these devices.

Off Timer

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

- **Setup**: Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual**.
  If you select **Manual**, you can choose the days you want **Off Timer** to turn off your product.
  ‒ The check mark indicates days you've selected.

- **Time**: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.

Holiday Management

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

- **Add Holiday**: Specify the period you want to add as a holiday.
  Select the start and end dates of the holiday you want to add using the ▲/▼ buttons, and click the **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 selected items from the list of holidays.
  ‒ **Edit**: Select a holiday item and then change the date.

- **Set Applied Timer**: Set the **On Timer** and **Off Timer** to not activate on public holidays.
  ‒ Press ↵ to select the **On Timer** and **Off Timer** settings you do not want to activate.
  ‒ The selected **On Timer** and **Off Timer** will not activate.

Ticker

HOME ⌂ → **Ticker** → **ENTER** ↵

| A | Ticker |
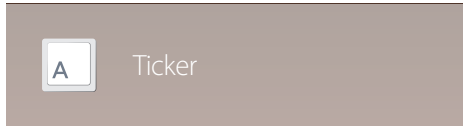
― The displayed image may differ depending on the model.

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

- **Off** / **On**

- **Message**: Enter a message to display on the screen.

- **Time**: Set the **Start Time** and **End Time** to display a **Message**.

- **Font Options**: Specify the text font and color for the message.

- **Position**: Select an orientation to display a **Message**.

- **Scroll**: Specify the scroll **Direction** and **Speed** for the message.

- **Preview**: Preview configured caption settings.

More settings

HOME ⌂ → **More settings** → **ENTER** ↵
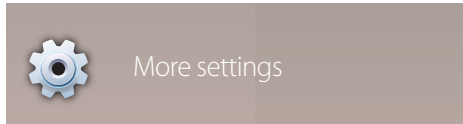
More settings

‒ The displayed image may differ depending on the model.

The picture settings menu appears.

URL Launcher

HOME ⌂ → **URL Launcher** → ENTER

 - The displayed image may differ depending on the model.

For details on how to use the **URL Launcher** feature, contact the dealer the product was purchased from.

― To use the **URL Launcher** feature, set **Play via** to **URL Launcher** in **System**.
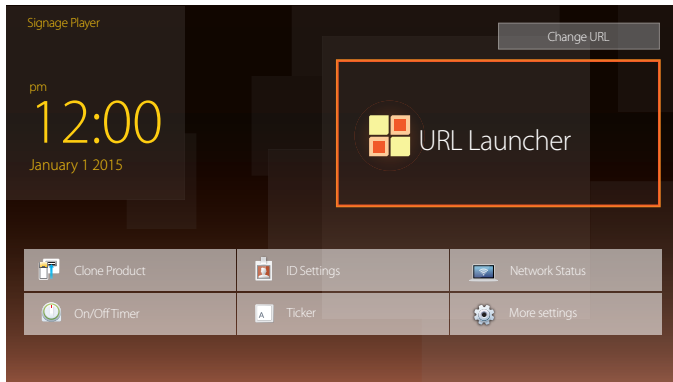
The layout of the **Picture** menu options may vary depending on the product.

	Picture
Picture	Picture Size
OnScreen Display	HDMI Black Level Normal
Network	Reset Picture
System	
Support	
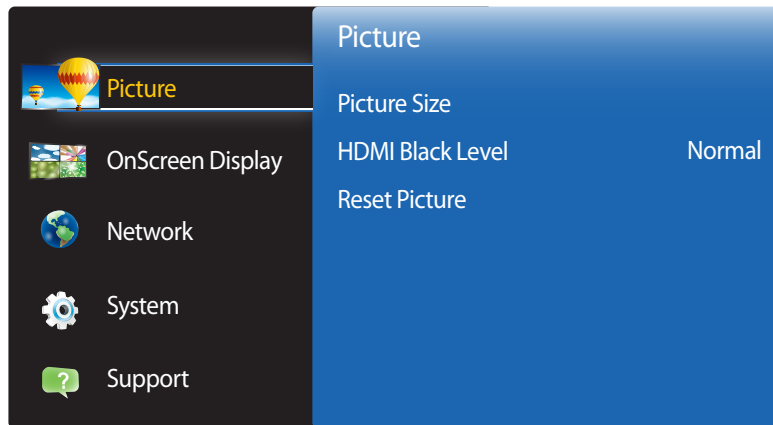
‒ The displayed image may differ depending on the model.

Picture Size

MENU ⊞ → **Picture** → **Picture Size** → **ENTER** ⏎

⎯ 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.

- **Smart View 1**: Reduces the **16:9** picture by 50%.

- **Smart View 2**: Reduces the **16:9** picture by 25%.

- **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.

- **Custom**: Changes the resolution to suit the user's preferences.

- **Original Ratio**: If the input source is **HDMI1**, **HDMI2** (PC connection), the video will display in the original aspect ratio.

Position

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

― To use the **Position** function after selecting **Zoom1**, **Zoom2**, **Screen Fit** or **Custom**, 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

Adjusts the picture zoom and position. This option is available when the input source is set to **HDMI1**, **HDMI2** (1080i/1080p), **Component** (1080i/1080p), **AV**. **Picture Size** must be set to **Custom** for the option to be available.

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.

HDMI Black Level

MENU Ⅲ → **Picture** → **HDMI Black Level** → **ENTER** ⏎

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

• **Auto** / **Low** / **Normal**

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

Reset Picture

MENU Ⅲ → **Picture** → **Reset Picture** → **ENTER** ⏎

Restore all picture settings to default.

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	OnScreen Display	
Picture		
OnScreen Display	PIP	
	Display Orientation	
	Message Display	
Network	Menu Language	English
	Reset OnScreen Display	
System		
Support		
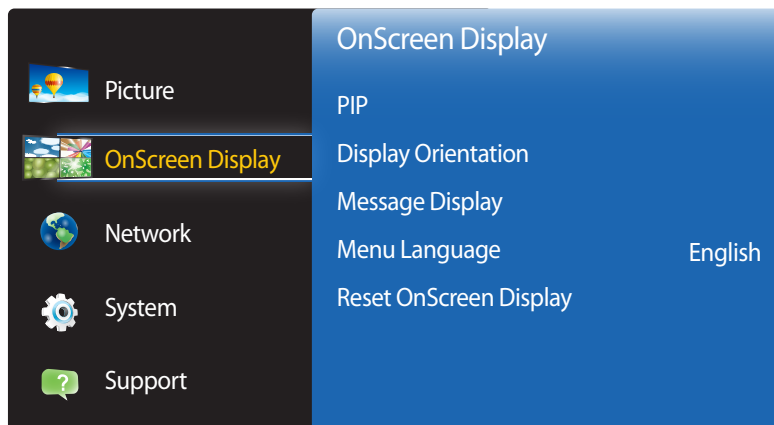
― The displayed image may differ depending on the model.

PIP

MENU ▥ → **OnScreen Display** → **PIP** → **ENTER** ⏎

- For **PIP** sound, refer to the **Sound Select** instructions.

- If you turn the product off while watching in the **PIP** mode, **PIP** mode will remain after power Off/On.

- You may notice that the picture in the PIP screen becomes slightly unnatural when you use the main screen to view a game or karaoke.

PIP Settings

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

Main picture	Sub picture
AV / **Component**	**HDMI1** / **HDMI2**
HDMI1 / **HDMI2**	**AV** / **Component**

― If **Source Content Orientation** is set to **Portrait**, **PIP** is disabled.

- **PIP** (**Off** / **On**): Activate or deactivate the PIP function.
- **Source**: You can select a source of the sub picture.
- **Size** (▬, ▬, ▬, ▮▮, ▮▮, ▮▬, ◣): Select a size for the subpicture.
- **Position** (▭, ▭, ▭, ▭, ▭): Select a position for the sub-picture.
  ⎯ In double (▮▮, ▮▮, ▮▬, ◣) 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.

Display Orientation

MENU Ⅲ → **OnScreen Display** → **Display Orientation** → **ENTER**

Onscreen Menu Orientation

Set the menu screen orientation.

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

Source Content Orientation

Set the orientation of content from external devices connected to the product.

- **Landscape**: Display the screen in landscape mode (default).
- **Portrait**: Display the screen in portrait mode.

⎯ If **PIP** is set to **On**, **Source Content Orientation** is disabled.

Aspect Ratio

Set the rotated screen to be either full screen or original.

- **Full Screen**: Display the rotated screen in full screen.
- **Original**: Display the rotated screen in the original aspect ratio.

⎯ Available only when **Source Content Orientation** is set to **Portrait**.

⎯ If **PIP** is set to **On**, **Aspect Ratio** is disabled.

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Message Display

MENU ▥ → **OnScreen Display** → **Message Display** → **ENTER** ↵

Source Info

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

- **Off** / **On**

No Signal Message

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

- **Off** / **On**

MDC Message

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

- **Off** / **On**

Download Status Message

Select to display the status when downloading content from a server or other device.

- **Off** / **On**

Menu Language

MENU ▥ → **OnScreen Display** → **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.

Reset OnScreen Display

MENU ▥ → **OnScreen Display** → **Reset OnScreen Display** → **ENTER** ↵

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

Network

Picture

OnScreen Display

Network

System

Support

Network
Network Status
Network Settings
Server Network Settings
Device Name
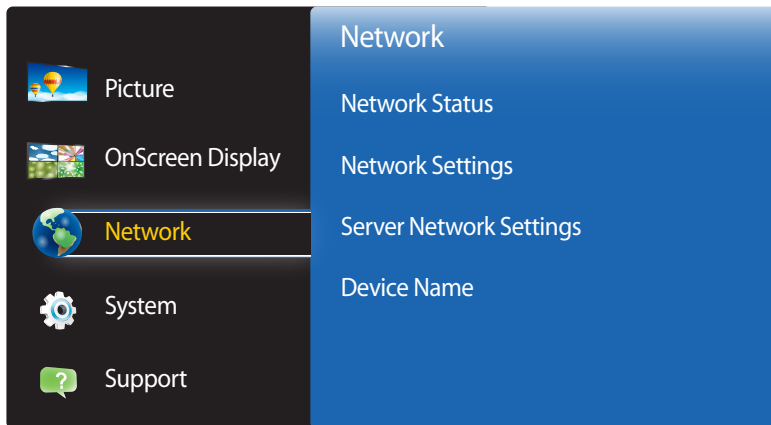
― The displayed image may differ depending on the model.

Network Status

MENU ▥ → **Network** → **Network Status** → **ENTER** ↵

You can check the current network and Internet status.

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.
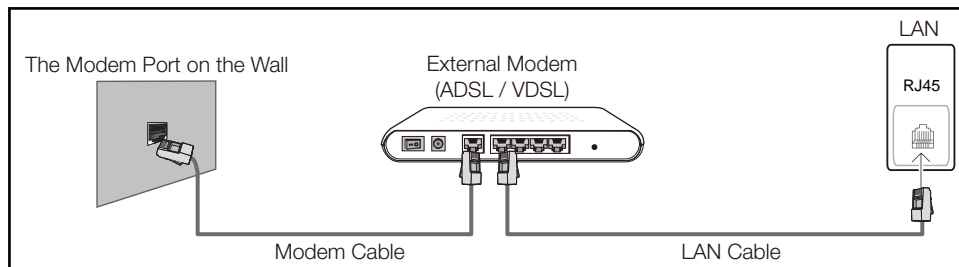
- You can attach your product to your LAN by connecting the LAN port on the back of your product to an IP Sharer which is connected to an external modem. Use LAN cable for the connection. See the diagram below.
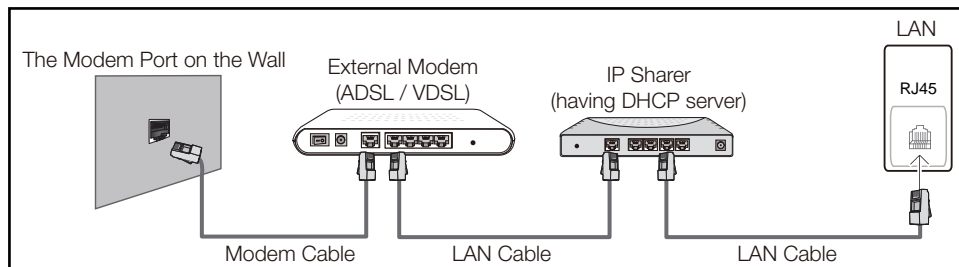
- Depending on how your network is configured, you may be able to attach your product to your LAN by connecting the LAN port on the back of your product directly to a network wall outlet using a LAN cable.

  See the diagram below. Note that the wall outlet is attached to a modem or router elsewhere in your house.
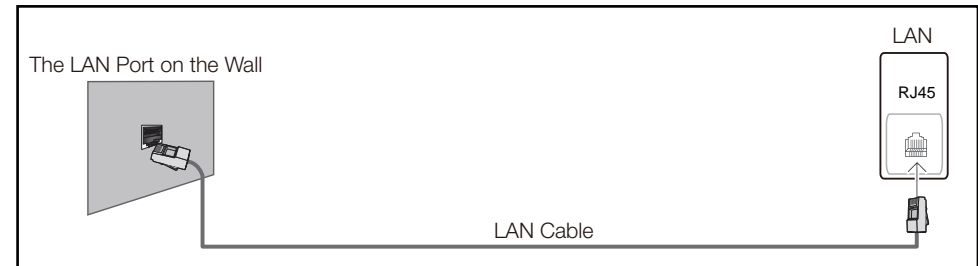
If you have a Dynamic Network, you should use an ADSL modem or router that supports the Dynamic Host Configuration Protocol (DHCP). Modems and routers that support DHCP automatically provide the IP address, subnet mask, gateway, and DNS values your product needs to access the Internet so you do not have 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.

Server Network Settings

Connect to Server

To run **Player** connect to a network.

- **Server Address** / **SSL** / **Port**

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

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

MagicInfo Mode

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

- **Lite** / **Premium**

Server Access

Select a method to connect the server network.

- **Allow** / **Deny**

FTP Mode

Specify the FTP operating mode.

- **Active** / **Passive**

Device Name

Select or enter a device name.

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

- **[VideoWall]Player1~6** / **User Input**

System
Accessibility
Setup
Time
Auto Source Switching
Power Control
Eco Solution
Device Manager

Picture

OnScreen Display

Network

System

Support
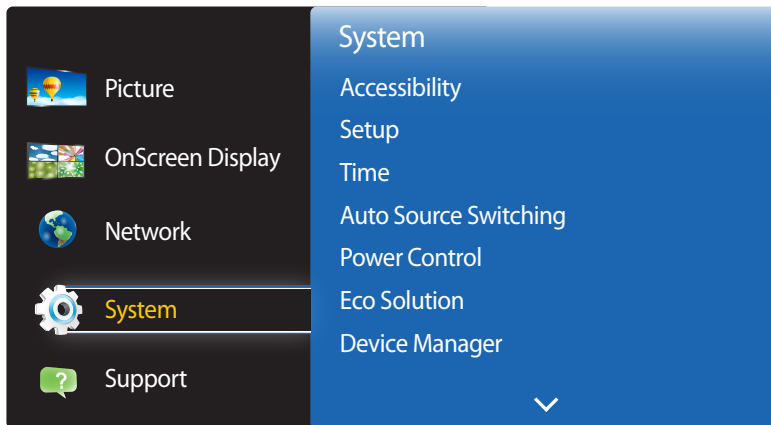
‒ The displayed image may differ depending on the model.

Accessibility

MENU Ⅲ → **System** → **Accessibility** → ENTER E

Voice Guide

Voice Guide

Switch **Voice Guide** on or off. The language used for **Voice Guide** will be the same as the current menu language.

• **Off** / **On**

⎯ **Volume**, **Speed**, **Pitch** and **Description Level** are enabled only when **Voice Guide** is set to **On**.

Volume

Set the volume level for the **Voice Guide**.

• **Loud** / **Medium** / **Soft**

Speed

Set the speed of the **Voice Guide**.

• **Fast** / **Normal** / **Slow**

Pitch

Tune the pitch of the **Voice Guide**.

• **High** / **Medium** / **Low**

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Menu Transparency

Adjust transparency of menu box.

- **High** / **Medium** / **Low**

High Contrast

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

- **Off** / **On**

Enlarge

Set whether to enlarge highlighted item in Menu.

- **Off** / **On**

Setup

MENU Ⅲ → **System** → **Setup** → ENTER 🖃

Initial settings (Setup)

After powering on the product for the first time, configure basic settings such as the language, channel and time.

Press the ⏻ button.

― 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.

Time

MENU Ⅲ → **System** → **Time** → ENTER 🖃

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

Clock Set

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

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

Off / **Auto** / **Manual**

- **Start Date**: Set the start date of Daylight Saving Time.

- **End Date**: Set the end date of Daylight Saving Time.

- **Time Offset**: Select the correct time offset your timezone.

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

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**.

Auto Source Switching

MENU ▥ → **System** → **Auto Source Switching** → **ENTER** ↵

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

Auto Source Switching

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

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

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

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

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

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

Power Control

MENU ▥ → **System** → **Power Control** → **ENTER** ↵

Auto Power On

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

- **Off** / **On**

Max. Power Saving

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 **HDMI** mode.

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 Cable Connected** will appear if no source device is connected.

- **Off**
  The message **No Cable Connected** will appear if no input signals are detected.

  ― The **Standby Control** option is only enabled when **Source** is set to **HDMI1**, **HDMI2**.

  ― If **No Cable Connected** is displayed although a source device is connected, check the cable connection.

  ― If **No Signal Message** is set to **Off**, the **No Cable Connected** message does not appear. If this is the case, set **No Signal Message** to **On**.

- **On**
  Power-saving mode will activate if no input signals are detected.

Network Standby

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

- **Off** / **On**

Eco Solution

MENU ▥ → **System** → **Eco Solution** → ENTER ↵

No Signal Power Off

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

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

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

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

Auto Power Off

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

- **Off** / **4 hours** / **6 hours** / **8 hours**

Device Manager

MENU ▥ → **System** → **Device Manager** → ENTER ↵

Configure options for external input devices connected to the product.

Keyboard Settings

Connecting a keyboard to the product displays the **Keyboard Settings** menu.

Select Keyboard

Select a keyboard you want to use from the available connected keyboards.

― It is possible to use only one connected keyboard.

Keyboard Options

― Depending on the country.

Keyboard Language

Specify the keyboard input language.

Keyboard Type

Specify the keyboard type.

Switch Input Language

Configure the key combination used to change the input language.

Mouse Settings

Connecting a mouse to the product displays the **Mouse Settings** menu.

Select Mouse

Configure mouse connection settings or options for connected mouse devices.

― Among connected mouse devices, only one mouse can be used.

Mouse Options

▬Depending on the country.

Primary Button

Select a button on the mouse that will perform basic functions (click and enter).

• **Left** (default) / **Right**

Pointer Speed

Set the mouse pointer speed.

• **Slow** / **Standard** / **Fast**

Pointer Settings

Specify the pointer size, speed and shape.

Pointer Size

Specify the pointer size.

• **Small** / **Medium** / **Large** / **Extra large**

Pointer Speed

Specify the pointer speed. A higher speed increases the pointer sensitivity.

• **Slow** / **Standard** / **Fast**

Pointer Image

Specify the pointer shape.

• **Image 1** ~ **Image 10**

Play via

MENU ▥ → **System** → **Play via** → **ENTER** ⏎

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

The home screen may be different depending on the setting.

• **MagicInfo** / **URL Launcher**

Change PIN

MENU ▥ → **System** → **Change PIN** → **ENTER** ⏎

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.

▬Default password: 0 - 0 - 0 - 0

Security

MENU Ⅲ → **System** → **Security** → ENTER ⏎

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).

Power On Button

Enable or disable the power button on the remote control when **Safety Lock** is **On**.

- **Off** / **On**

USB Auto Play Lock

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

- **Off**

   Play **MagicInfo** content saved on the USB device automatically.

- **On**

   Do not play **MagicInfo** content saved on the USB device automatically.

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

HDMI Sound

MENU Ⅲ → **System** → **HDMI Sound** → ENTER ⏎

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

- **AV(HDMI)** / **PC(DVI)**

General

MENU Ⅲ → **System** → **General** → ENTER ⏎

Smart Security

Security provided to protect your TV and connected storage devices against viruses includes.

Smart Security

Use this option to turn **Smart Security** protection On/Off.

- **Off** / **On**

Scan

Inspect the TV and connected storage devices to check for viruses.

Isolated List

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

Allowed List

This is the list of items that have been Allowed as not containing viruses.

Set the **Smart Security** options.

Auto Scan

Scan automatically when the TV is turned on.

- **Off** / **On**

Move to Isolated List automatically

Moves viruses to the Isolated List automatically.

- **Off** / **On**

HDMI Hot Plug

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

- **Off** / **On**

DivX® Video On Demand

Shows the registration code authorized for the product.

If you connect to the DivX® web site and register using that code, you can download the VOD registration file.

For more information about DivX® VOD, visit "http://vod.divx.com".

Reset System

MENU ▥ → **System** → **Reset System** → **ENTER** ↵

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

Chapter 10
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.

Auto Update

This feature automatically updates the product when not in use.

- **Off** / **On**

Contact Samsung

MENU ▥ → **Support** → **Contact Samsung** → ENTER ↵

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

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

⎯ **Contact Samsung** and find the product **Model Code** and **Software Version**.

Go to Home

Accessible using the **HOME** ⌂ button on the remote control.

MENU Ⅲ → **Support** → **Go to Home** → **ENTER** ↵

▔ Refer to the "Home feature" chapter for details on sub-menu items.

Go to Home to play a variety of content from a memory device or a connected network.

Reset All

MENU Ⅲ → **Support** → **Reset All** → **ENTER** ↵

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

Chapter 11

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

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 **Player** 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

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. The **Options** menu is displayed.

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

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

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

Playing media content from a PC/mobile device

Approving a PC/mobile device connection

Play photos, videos or music saved on a PC or mobile device.

To play media content from a PC or mobile device on the product, the connection with the PC or mobile device must be approved.

― The media playback feature is available on any devices that support DLNA DMC. The DLNA DMC feature allows you to search media content and control content playback from a product after connecting a PC or mobile device to the product.

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

   SOURCE → **Source**

2 Select **Network** from **Source**. The **Network Device** menu appears.

3 Select **Options** from the screen, and then select **Multimedia Device Settings**. A list of devices connected to the product will appear.

4 Select a device and approve the device connection. Playback is only available on devices that are permitted to connect.

   ― Sending a media content playback request from a PC or mobile device displays a prompt asking if connection with the product is permitted. Conveniently connect the devices using the prompt.

― For details on how to configure a network, refer to the section **Network Settings**.

― Ensure the product and PC are connected to the same network subnet.
   All IP addresses are made up of four parts separated by dots.

   (E.g. IP address 111.222.333.444) The product should have the same IP address as the PC, except for the fourth part of the address, if they are connected to the same subnet. (E.g. 111.222.333.***)

When connected to a home network (DLNA)

Play content saved on a device connected to a home network.

―Playing media content using a non-Samsung DLNA server may result in a compatibility issue.

―Playback of some media content shared with a PC or mobile device may not be possible depending on the content encoding type or the content file format. Some functions may not be available.

―Media content may not play properly if there is network congestion. If this is the case, use a USB device.

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

    SOURCE → Source

2 Select **Network** from **Source**. The **Network Device** menu appears.

3 Select a device connected via the home network (DLNA). A list of files and folders shared with the selected device will appear.

4 Select media content to play from the list. Play the selected media content.

Features provided in the media content list page

SOURCE → Source → USB

The media content list page on a storage device provides the following features.

- **Sort by**

  Rearrange the media content list under the selected file format in a desired view mode.
    - This menu item is not available if **Filter** is set to **All**.

- **Filter**

  Among **Photos**, **Videos** and **Music** content saved on a storage device, view content files under a desired file format only.

- **Options**
    - This menu item is not available if **Filter** is set to **All**.

Menu items in the media content list page

Option Name	Operations	Photos	Videos	Music
Slide Show	Start a slideshow. ― This menu item is not available if **Sort by** is set to **Folder**.	✓		
Encoding	Select an encoding language if the title of media content appears corrupted.			✓
Rename Playlist	Rename a playlist.			✓
Delete Playlist	Delete a playlist.			✓
Add to Playlist	Add files to a playlist or create a new playlist.			✓
Play Selected	Select and play desired content from the media content list.	✓	✓	✓
Send	Send media content to another storage device. This is similar to the "copy" feature on PCs.	✓	✓	✓
Index	Select an index to conveniently locate media content if a storage device contains a lot of media content. ― Provided indices include dates and alphanumeric characters. ― This menu item is not available if **Sort by** is set to **Folder**.	✓	✓	✓

Available buttons and features during photo playback

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

- **Pause** / **Play**
  Start or stop a slideshow. Using a slideshow, it is possible to play all photos in a folder.

- **Previous** / **Next**
  View the previous or next photo.

- **Settings**

Option Name	Operations
Slideshow Settings	**Speed**: Change the slideshow speed.
	Effects: Apply transition effects between photos.
Rotate	Rotate photos.
Zoom	Zoom in on photos up to 4x.
Background Music	Play background music while viewing photos.
	― Make sure a music file is saved on the same device.
	― The mini player is displayed while background music (**Background Music**) is playing. Using the mini player, pause the music currently playing or change to another music.
Send	Send open photos to another storage device. This is similar to the "copy" feature on PCs.
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 ►►I.

- **Settings**

Option Name	Operations
Select Scene	**Thumbnails**: Select a scene and play the video from the scene.
	― **Thumbnails** is not available if 1) the thumbnail of the video is not extracted yet, 2) the video contains audio only or 3) the video play time is shorter than 60 seconds.
	Chapter Titles: Select and play another video in the same folder.
	Time Bar: You can use the ◄ and ▶ buttons to scan through the file in 10-second intervals or enter a specific time value to jump to that point in the video.
Subtitle	**Language** / **Sync** / **Reset Sync** / **Size** / **Encoding**
	― If the subtitle is displayed incorrectly, change **Encoding** options.
Repeat	Configure **Repeat**.
	Off
	Repeat One: Play the current video repeatedly.
	Repeat All: Play all videos in a folder repeatedly.
Rotate	Rotate an image.
Picture Size	Change the screen size (**Picture Size**). Supported screen sizes vary depending on the image.
Information	View information about a file.

Available buttons and features during music playback

- **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. **Repeat One** plays the current music file repeatedly. **Repeat All** plays all files in a folder repeatedly.

- **Shuffle**
  Enable or disable shuffle playback mode.

- **Select Speakers**
  Not Available.

- **Sound Mode**
  Not Available.

Supported Subtitle and Media play file formats

Subtitle

External	Internal
External	**Internal**

External

- 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)

Internal

- Xsub
  Container: AVI
- SubStation Alpha
  Container: MKV
- Advanced SubStation Alpha
  Container: MKV
- SubRip
  Container: MKV
- MPEG-4 timed text
  Container: MP4

Supported image resolutions

File Extension	Type	Resolution
*.jpg, *.jpeg	JPEG	15360 x 8640
*.png	PNG	1920 x 1080
*.bmp	BMP	1920 x 1080
*.mpo	MPO	15360 x 8640

Supported music file formats

File Extension	Type	Codec	Comments
*.mp3	MPEG	MPEG1 Audio Layer 3	
*.m4a, *.mpa, *.aac, *.3ga	MPEG4	AAC	
*.flac	FLAC	FLAC	The Seek (jump) function is not supported. Supports up to 2 channel

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	Audio Decoder
Supports up to H.264, Level 4.1	Supports up to WMA 10 Pro 5.1 channel.
H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported.	WMA lossless audio is not supported.
For all Video codecs except MVC, VP8, VP6:	QCELP, AMR NB/WB are not supported.
• Below 1280 x 720: 60 frame max	If Vorbis is only in Webm container, supports up to 2 channel.
• Above 1280 x 720: 30 frame max	
GMC 2 over is not supported.	
Supports only BD MVC Spec.	

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
*.avi *.mkv *.asf *.wmv *.mp4 *.mov *.3gp *.vro *.mpg *.mpeg *.ts *.tp *.trp *.mov *.flv *.vob *.svi *.m2ts *.mts *.divx	AVI MKV ASF MP4 3GP VRO VOB PS TS	DivX 3.11 / 4.x / 5.x / 6.x	1920 x 1080	6~30	30	AC3 LPCM ADMPCM (IMA, MS) AAC HE-AAC WMA DD+ MPEG(MP3) DTS Core G.711(ALaw,μ-Law)
		MPEG4 SP / ASP				
		H.264 BP / MP / HP				
		Motion JPEG				
		Window Media Video v9				
		MPEG2				
		MPEG1				
		VP6	640 x 480		4	
		MVC	1920 x 1080	24 / 25 / 30	40	
*.webm	WebM	VP8		6 ~ 30	8	Vorbis

Chapter 12

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.

3   Power on the product.

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

4   If **No Cable Connected** is displayed, the product is operating normally.

Checking the Resolution and Frequency

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

Check the followings.

Installation issue (PC mode)

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

Screen issue

The power LED is off. The screen will not switch on.	Make sure that the power cord is connected.
No Cable Connected 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.
The screen is not clear. The screen is blurry.	Remove any accessories (video extension cable, etc) and try again.
	Set the resolution and frequency to the recommended level.

Screen issue

The screen appears unstable and shaky. **There are shadows or ghost images left on the screen.**	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 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.
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 **System** and adjust the **Eco Solution** 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.

Screen 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.
	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.

Sound issue

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.
There is audible sound when the volume is muted.	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).

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

The product smells like plastic.	The plastic smell is normal and disappears over time.
The monitor appears tilted.	Remove and then attach the stand again to the product.
Audio or video cuts out intermittently.	Check the cable connection and connect it again if required.
	Using a very hard or thick cable may corrupt audio and video files.
	Make sure cables are flexible enough to ensure durability. When mounting the product onto a wall, it is recommended to use right-angle cables.
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

Other issue

The IR sensor is not functioning.	Make sure the sensor light turns on when a button is pressed on the remote control.
	• If the sensor light does not turn on, turn the power switch off and then on again on the back of the product. (The power LED lights up red when the screen is switched off.) If the sensor light still does not turn on after the power switch is turned off and then on again, an internal jack may be disconnected. Contact your nearest service center to have the product serviced.
	• If the sensor light that is on does not flash red when a button is pressed on the remote control, the IR sensor may be defective. Contact your nearest service center to have the product serviced.
	• This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.

Q & A

Question	Answer
How can I change the frequency?	Set the frequency on your graphics card. • Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**. • Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
How can I change the resolution?	• Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** and adjust the resolution. • Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** and adjust the resolution. • Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** and adjust the resolution. • Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution. • Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.

Question	Answer
How do I set powersaving mode?	• Windows XP: Set power-saving mode in **Control Panel → Appearance and Themes → Display → Screen Saver Settings** or BIOS SETUP on the PC.
	• Windows ME/2000: Set power-saving mode in **Control Panel → Display → Screen Saver Settings** or BIOS SETUP on the PC.
	• Windows Vista: Set power-saving mode in **Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings** or BIOS SETUP on the PC.
	• Windows 7: Set power-saving mode in **Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings** or BIOS SETUP on the PC.
	• Windows 8: Set power-saving mode in **Settings → Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings** or BIOS SETUP on the PC.

Chapter 13
Specifications

General

Model Name		**SBB-SS08E**
Dimensions (W x H x D)	**With Holder**	321.6 x 203.4 x 35.1 mm / 12.7 x 8.0 x 1.4 inches
	Without Holder	312.4 x 194.2 x 32.4 mm / 12.3 x 7.6 x 1.3 inches
Weight		1.3 kg / 2.9 lbs
Power Supply		AC 100 to 240 VAC (+/- 10%), 60 / 50 Hz ± 3 Hz
		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)
		Humidity : 10% - 80%, non-condensing
	Storage	Temperature : -4 ˚F - 113 ˚F (-20 ˚C - 45 ˚C)
		Humidity : 5% - 95%, non-condensing
Supported models		UDE-A, UDE-B, UDE-C

― 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.

― This device is a Class A digital apparatus.

(USA only)

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PowerSaver

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

PowerSaver	Normal Operation			Power saving mode (SOG Signal : Not Support the DPM Mode)	Power off (Power Button)
	Rating	Typical	Max		
Power Indicator	Green LED On			Green LED Blinking	Red LED On
Power Consumption	17 W	13 W	19 W	Less than 0.5 W	Less than 0.5 W

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

― SOG (Sync On Green) is not supported.

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

Preset Timing Modes

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

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

Synchronization	Horizontal Frequency	30 – 90 kHz
	Vertical Frequency	24 – 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	-/-

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
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	+/+

― 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.

Chapter 14
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-authorised 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.

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For information on the Open Source License 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 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).

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

HDMI (High Definition Multimedia Interface)_____ It is an interface that can be connected to a digital audio source as well as a high-definition video source by using a single cable without compression.

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