

SAMSUNG

User Manual

RM49H

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

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

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

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Chapter 01

Before Using the Product

Copyright

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

© 2017 Samsung Electronics

Samsung Electronics owns the copyright for this manual.

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Microsoft, Windows are registered trademarks of Microsoft Corporation.

VESA, DPM and DDC are registered trademarks of the Video Electronics Standards Association.

Ownership of all other trademarks is attributed to their due owner.

- An administration fee may be charged if either
 - (a) an engineer is called out at your request and there is no defect in the product (i.e. where you have failed to read this user manual).
 - (b) you bring the unit to a repair centre and there is no defect in the product (i.e. where you have failed to read this user manual).
- The amount of such administration charge will be advised to you before any work or home visit is carried out.

Safety Precautions

Caution

RISK OF ELECTRIC SHOCK DO NOT OPEN

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

THERE ARE NO USER SERVICEABLE PARTS INSIDE.

REFER ALL SERVICING TO QUALIFIED PERSONNEL.



This symbol indicates that high voltage is present inside.

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



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

Symbols

Warning

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

Caution

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



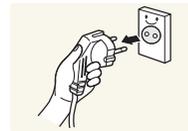
Activities marked by this symbol are prohibited.



Instructions marked by this symbol must be followed.

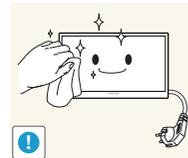
Cleaning

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



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

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



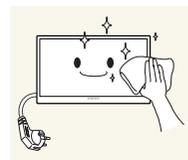
- 3 Wipe the product with a clean, soft and dry cloth.



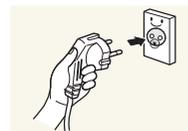
- Do not use detergents that contain alcohol, solvent or surface-active agents.



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



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



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

Storage

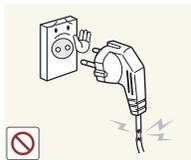
Due to the characteristics of high-glossy products, using a UV humidifier nearby may create white-coloured stains on the product.

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

Electricity and Safety

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

Warning



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

- An electric shock or fire may result.

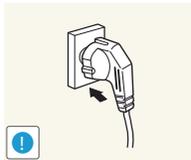


Do not use multiple products with a single power socket.

- Overheated power sockets may cause a fire.

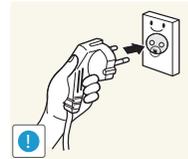


Do not touch the power plug with wet hands. Otherwise, an electric shock may result.



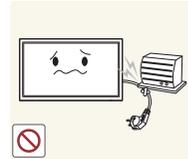
Insert the power plug all the way in so it is not loose.

- An unsecure connection may cause a fire.



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

- An electric shock or injury may result.



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

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



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

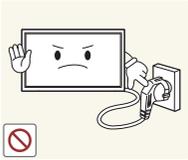
- A fire or electric shock may result.



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

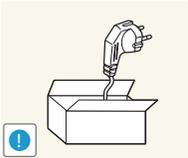
- A fire may result.

Caution



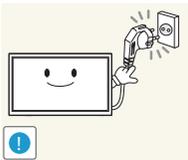
Do not disconnect the power cord while the product is being used.

- The product may become damaged by an electric shock.



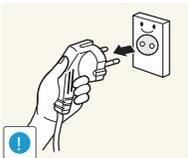
Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.

- A fire or electric shock may result.



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

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



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

- An electric shock or fire may result.

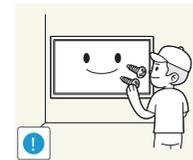
Installation

Warning



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

- A fire may result.



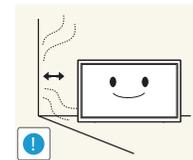
Have a technician install the wall-mount hanger.

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



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

- An increased internal temperature may cause a fire.



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

- An increased internal temperature may cause a fire.



Keep the plastic packaging out of the reach of children.

- Children may suffocate.



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

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



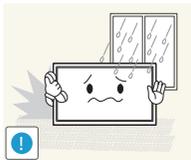
When using an outdoor antenna, be sure to install the antenna away from nearby power lines to prevent the antenna from collapsing onto them in strong winds.

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



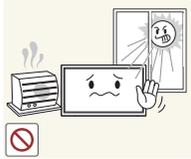
Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)

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



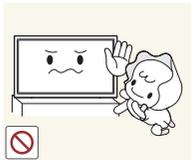
Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.

- A fire or electric shock may result.



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

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



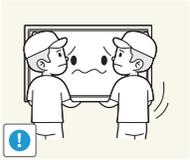
Do not install the product within the reach of young children.

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



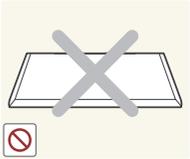
Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Caution



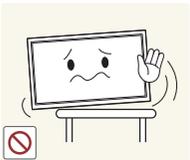
Do not drop the product while moving.

- Product failure or personal injury may result.



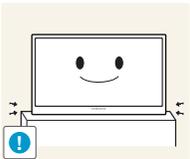
Do not set down the product on its front.

- The screen may become damaged.



When installing the product on a cabinet or shelf, make sure that the bottom edge of the front of the product is not protruding.

- The product may fall and become damaged and/or cause an injury.
- Install the product only on cabinets or shelves of the right size.



Set down the product gently.

- Product failure or personal injury may result.



Installing the product in an unusual place (a place exposed to a lot of fine dust, chemical substances, extreme temperatures or a significant presence of moisture, or a place where the product will operate continuously for an extended period of time) may seriously affect its performance.

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

Operation

Warning



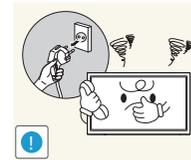
There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.

- A fire or electric shock may result.
- Contact Samsung Customer Service Centre 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 Centre.

- An electric shock or fire may result.



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

- Children may become injured or seriously harmed.



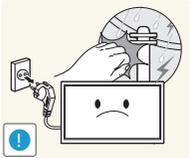
If the product is dropped or the outer case is damaged, turn off the power switch and disconnect the power cord. Then contact Samsung Customer Service Centre.

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



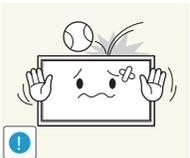
Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

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



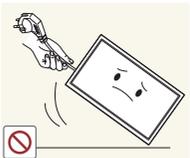
During a lightning or thunderstorm, remove the power cable and do not touch the antenna cable.

- A fire or electric shock may result.



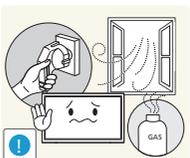
Do not drop objects on the product or apply impact.

- A fire or electric shock may result.



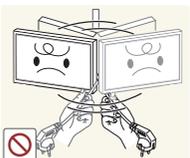
Do not move the product by pulling the power cord or any cable.

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



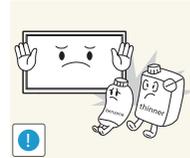
If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.



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

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



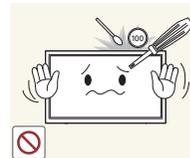
Do not use or keep combustible spray or an inflammable substance near the product.

- An explosion or fire may result.



Ensure the vents are not blocked by tablecloths or curtains.

- An increased internal temperature may cause a fire.



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

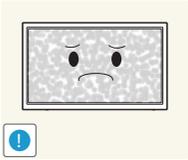
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Centre.
- Product failure, an electric shock or fire may result.



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

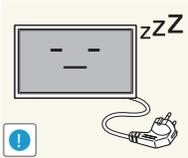
- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Centre.
- Product failure, an electric shock or fire may result.

Caution



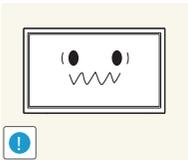
Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.

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



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

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



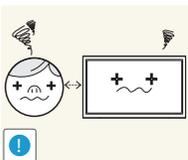
Use the product at the recommended resolution and frequency.

- Your eyesight may deteriorate.



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

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

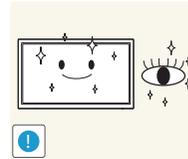


Looking at the screen too close for an extended period of time can deteriorate your eyesight.



Do not use humidifiers or stoves around the product.

- A fire or electric shock may result.

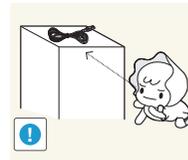


Rest your eyes for more than 5 minutes for every 1 hour of product use.

- Eye fatigue will be relieved.



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



Store small accessories out of the reach of children.



Exercise caution when adjusting the product angle or stand height.

- Your hand or finger may get stuck and injured.
- Tilting the product at an excessive angle may cause the product to fall and an injury may result.



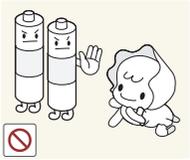
Do not place heavy objects on the product.

- Product failure or personal injury may result.



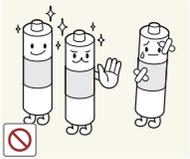
When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



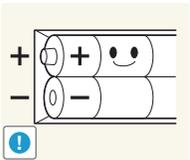
Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

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



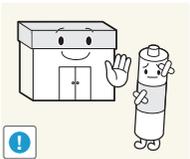
When replacing the battery, insert it with the right polarity (+, -).

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



Use only the specified standardised 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 centre or to a store selling the same type of the battery or rechargeable battery.

Chapter 02

Preparations

Checking the Components

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

Components



Quick Setup Guide



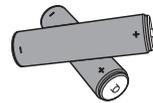
Warranty card
(Not available in some locations)



Regulatory guide



Power cord



Batteries
(Not available in some locations)



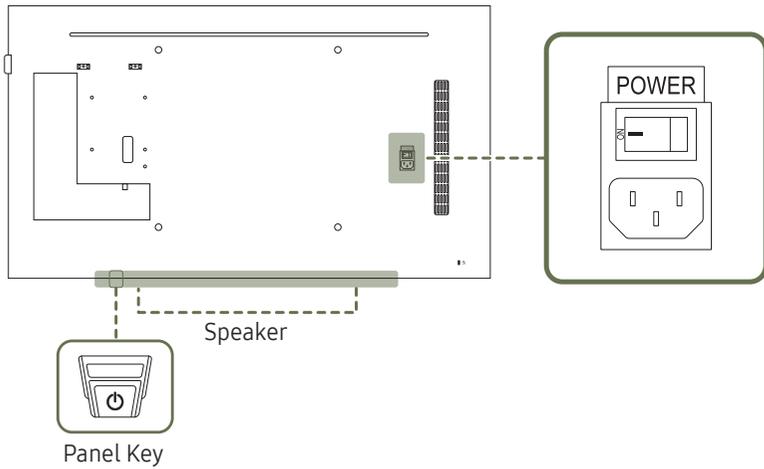
Remote Control



RS232C(IN) adapter

Parts

Panel key

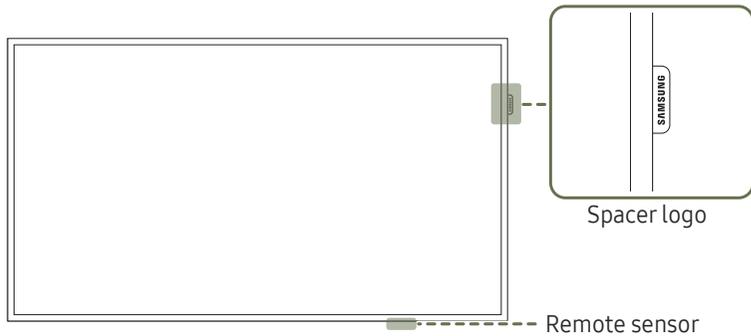


— The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

Power on	Press and hold for three seconds.
Power off	Press the panel key. A popup menu appears. Make sure Power off is selected and then, press and hold the panel key until the display turns off.
Select source	Press the panel key. A popup menu appears. Press the panel key again to select Source . Then, press and hold the panel key to cycle through the desired source.

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

Remote sensor and spacer logo (optional)



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

Remote sensor

Press a button on the remote control pointing at the remote sensor on the product to perform the corresponding function.

- Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.

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

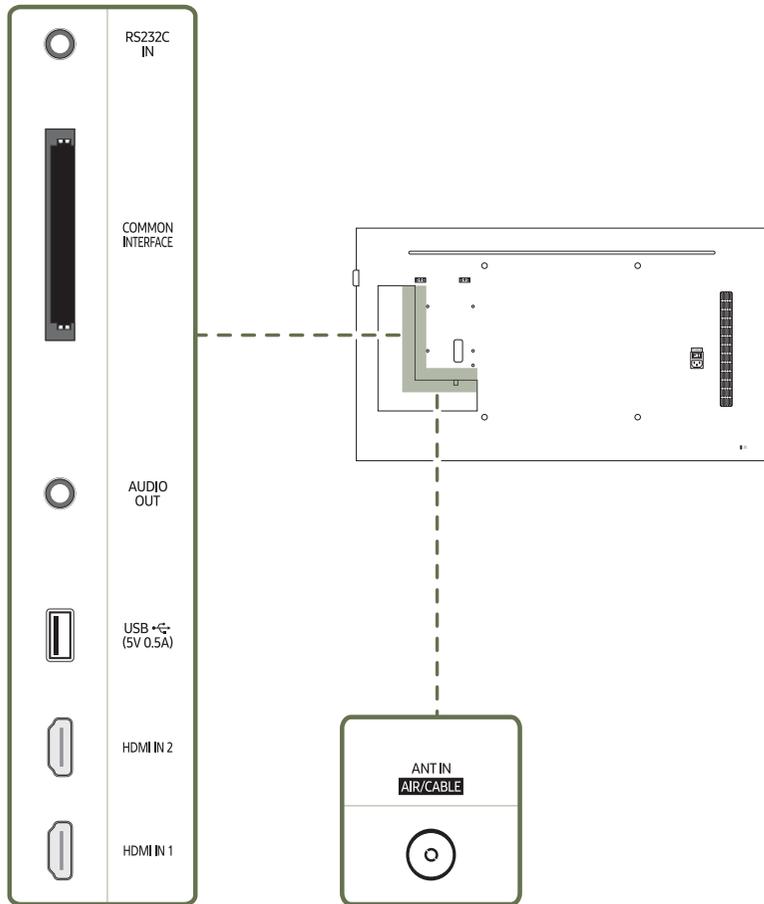
- Store used batteries out of reach of children and recycle.
- Do not use a new and used battery together. Replace both batteries at the same time.
- Remove batteries when the remote control is not to be used for an extended period of time.

Spacer logo (optional)

Do not pull on the spacer logo using force. The logo may tear or break off.

Reverse Side

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



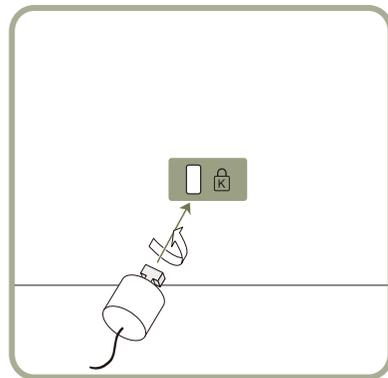
Port	Description
RS232C IN	Connects to MDC using an RS232C adapter.
COMMON INTERFACE	Connect to a CI card.
AUDIO OUT	Connects to the audio of a source device.
USB +G- (5V 0.5A)	Connect to a USB memory device.
HDMI IN 1, HDMI IN 2	Connects to a source device using an HDMI cable.
ANT IN AIR/CABLE	Connect to an antenna cable.

Anti-theft Lock

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

To lock an anti-theft locking device:

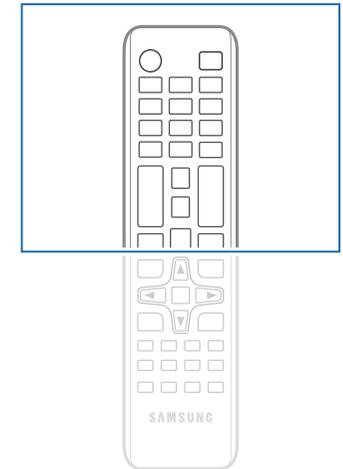
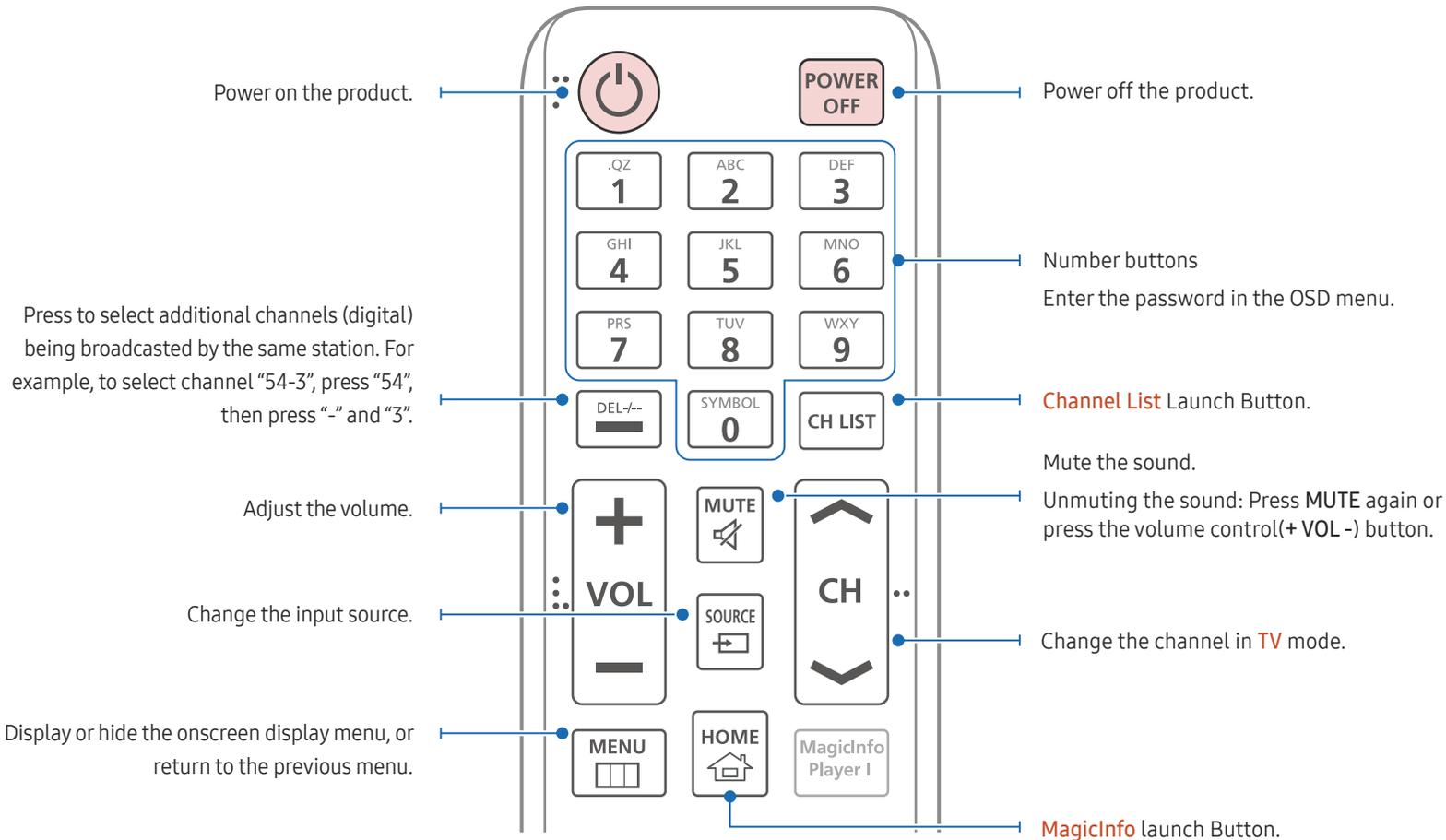
- Stand: Sold separately



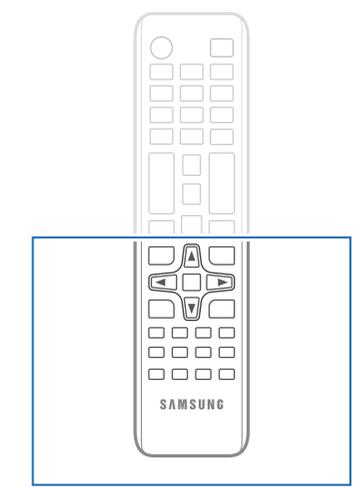
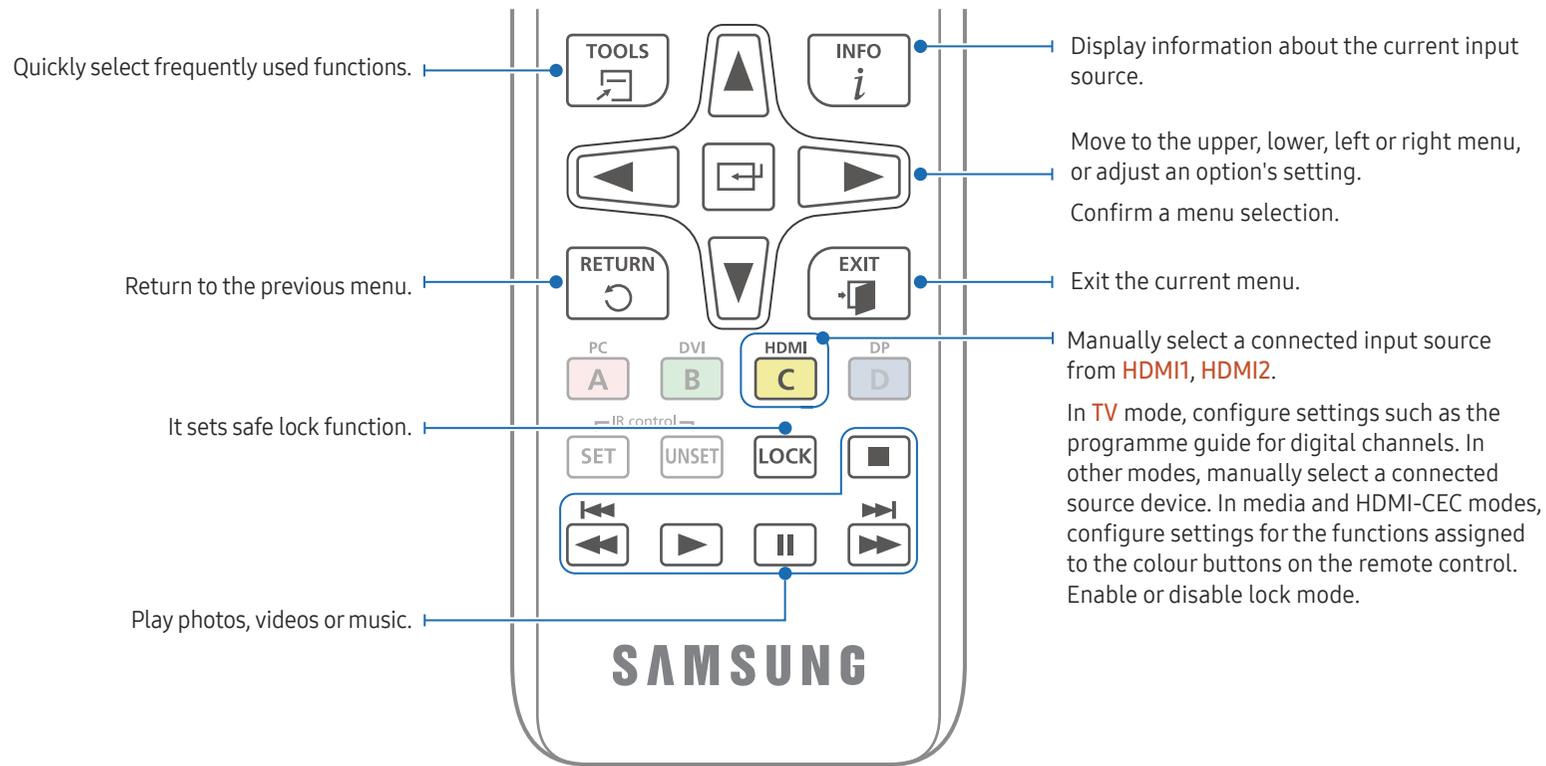
- 1 Fix the cable of your anti-theft locking device to a heavy object such as a desk.
- 2 Put one end of the cable through the loop on the other end.
- 3 Insert the locking device into the anti-theft lock slot at the back of the product.
- 4 Lock the locking device.
 - An anti-theft locking device can be purchased separately.
 - Refer to the user guide provided with your anti-theft locking device for details.
 - Anti-theft locking devices can be purchased at electronics retailers or online.

Remote Control

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

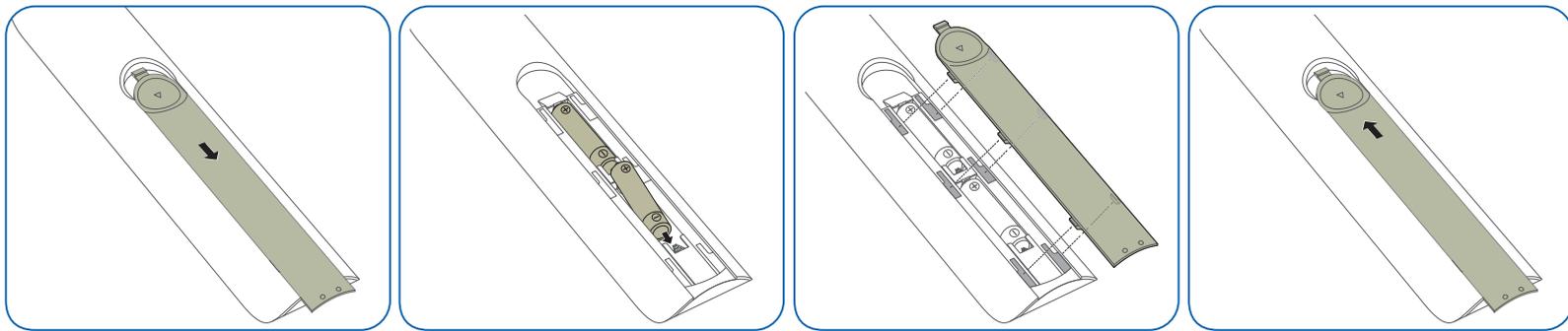


– Remote control button functions may differ for different products.



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

To place batteries in the remote control



Before Installing the Product (Installation Guide)

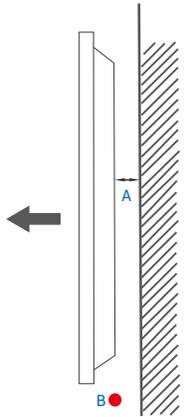


Figure 1.1 Side view

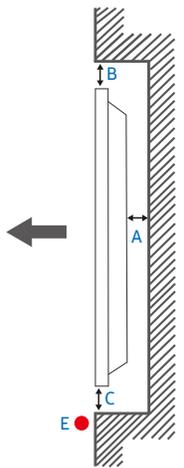
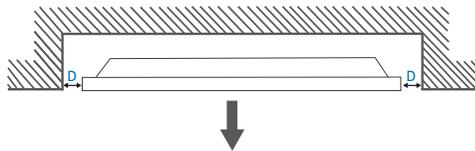


Figure 1.2 Side view

Figure 1.3 Side view



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

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

Ventilation

Installation on a Perpendicular Wall

A Minimum 40 mm

B Ambient temperature: Under 35 °C

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

Installation on an Indented Wall

— Contact Samsung Customer Service Centre for further details.

Plane view

A Minimum 40 mm

B Minimum 70 mm

C Minimum 50 mm

D Minimum 50 mm

E Ambient temperature: Under 35 °C

— When installing the product on an indented wall, allow at least the space specified above between the product and wall for ventilation and ensure that the ambient temperature is kept below 35 °C.

Installing the Wall Mount

Installing the Wall Mount Kit

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

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

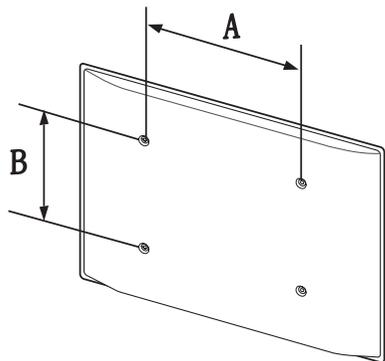
We recommend you contact a technician for assistance when installing the wall mount bracket.

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

Wall Mount Kit Specifications (VESA)

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

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



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

Unit: mm (inches)

Model name	VESA screw hole specs (A * B) in millimeters	Standard Screw	Quantity
RM49H	400.0 x 400.0 (15.8 x 15.8)	M8	4

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

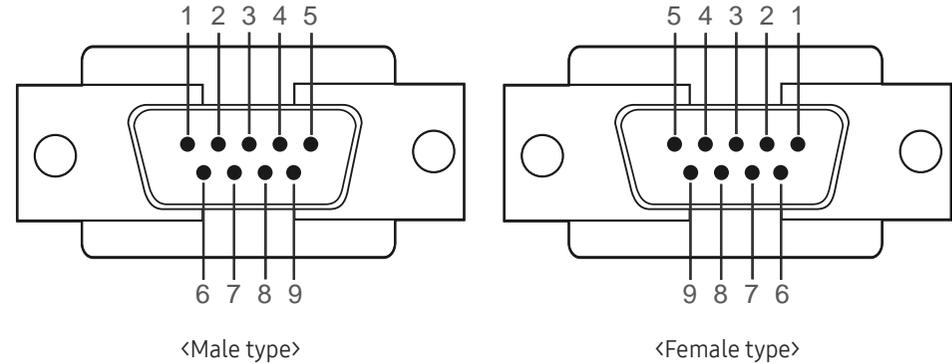
Remote Control (RS232C)

Cable Connection

RS232C Cable

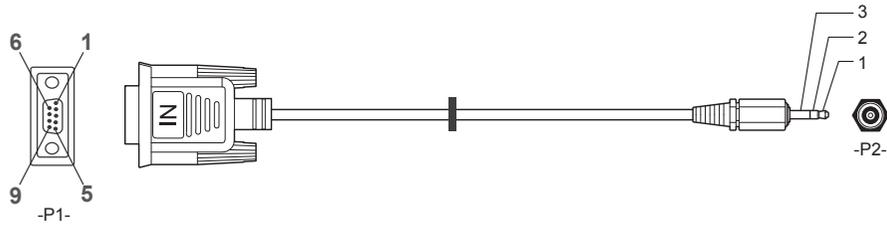
Interface	RS232C (9 pins)
Pin	TxD (No.2), RxD (No.3), GND (No.5)
Bit rate	9600 bps
Data bits	8 bit
Parity	None
Stop bit	1 bit
Flow control	None
Maximum length	15 m (only shielded type)

- Pin assignment



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

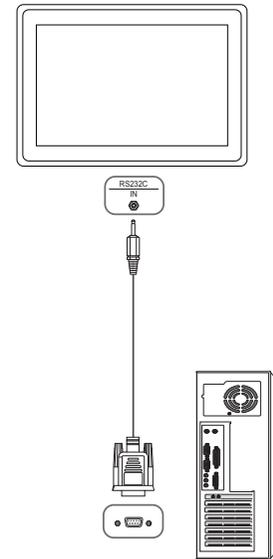
- RS232C cable
Connector: 9-Pin D-Sub to Stereo Cable



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

Connection

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



Control Codes

Viewing control state (Get control command)

Header	Command	ID	Data length	Checksum
0xAA	Command type		0	

Controlling (Set control command)

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

Command

No.	Command type	Command	Value range
1	Power control	0x11	0~1
2	Volume control	0x12	0~100
3	Input source control	0x14	-
4	Screen mode control	0x18	-
5	Screen size control	0x19	0~255
6	PIP on/off control	0x3C	0~1
7	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	Checksum
0xAA	0x11		1	1	12

- 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
0x20	MagicInfo
0x30	RF(TV)
0x40	DTV
0x21	HDMI1(HDMI)
0x22	HDMI1_PC(HDMI_PC)
0x23	HDMI2
0x24	HDMI2_PC

- HDMI1_PC(HDMI_PC) and HDMI2_PC cannot be used with the Set command. They only respond to "Get" commands.
- Available input sources may vary depending on the model.
- **MagicInfo** is only available with models that contain the **MagicInfo** function.
- RF(TV), DTV are only available with models that include a TV.

- Ack

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

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

- Nak

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

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

Screen mode control

- Function
The screen mode of a product can be changed using a PC.
— This control can only be used on models that include a TV.
- Viewing screen status (Get Screen Mode Status)

Header	Command	ID	Data length	Checksum
0xAA	0x18		0	

- Setting the picture size (Set Picture Size)

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

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

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

- Ack

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

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

- Nak

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

"ERR": A code showing what error has occurred

Screen size control

- Function
The screen size of a product can be changed using a PC.
- Viewing the screen size (Get Screen Size Status)

Header	Command	ID	Data length	Checksum
0xAA	0x19		0	

- Ack

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

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

- Nak

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

"ERR": A code showing what error has occurred

PIP On/Off control

- Function
The PIP mode of a product can be turned on or off using a PC.
 - Only available on models that have the PIP function.
 - 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

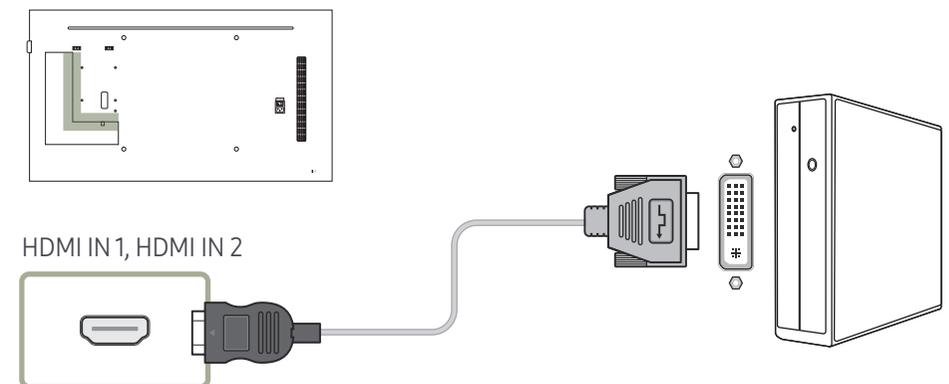
- Before connecting a source device, read the user manual provided with it. The number and locations of ports on source devices may differ from device to device.
- Do not connect the power cable until all connections are completed. Connecting the power cable during connection may damage the product.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

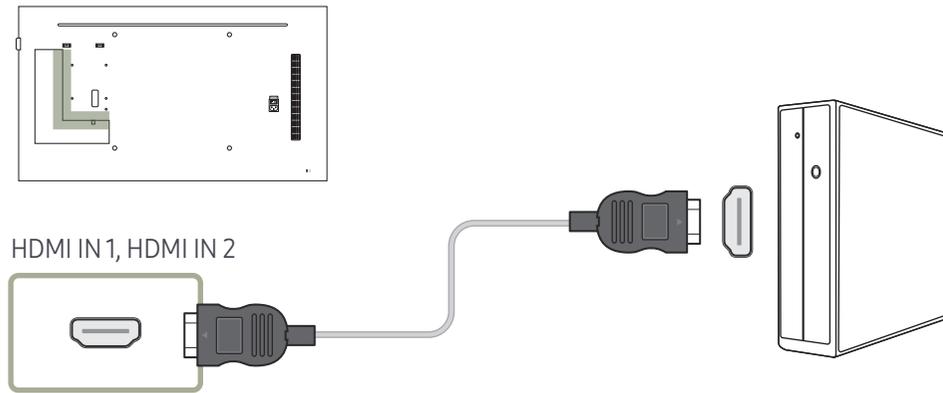
- Do not connect the power cable before connecting all other cables. Ensure you connect a source device first before connecting the power cable.
 - A PC can be connected to the product in a variety of ways. Select a connection method suitable for your PC.
- Connecting parts may differ in different products.

Connection Using an HDMI-DVI Cable

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



Connection Using an HDMI Cable

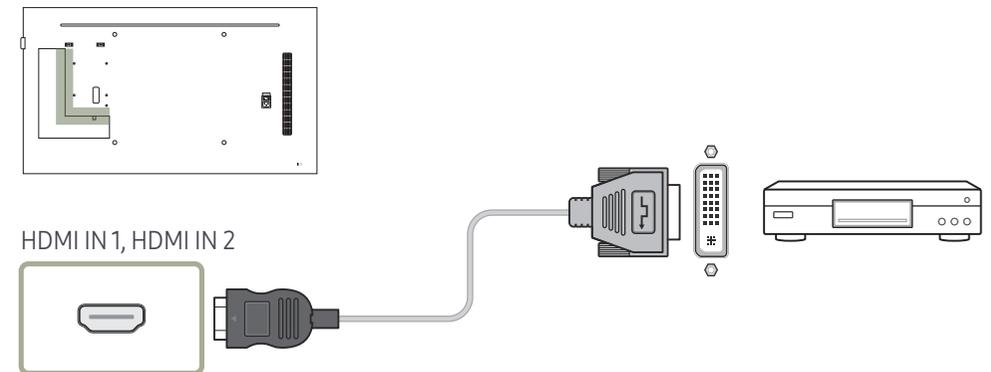


Connecting to a Video Device

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

Connection Using an HDMI-DVI Cable

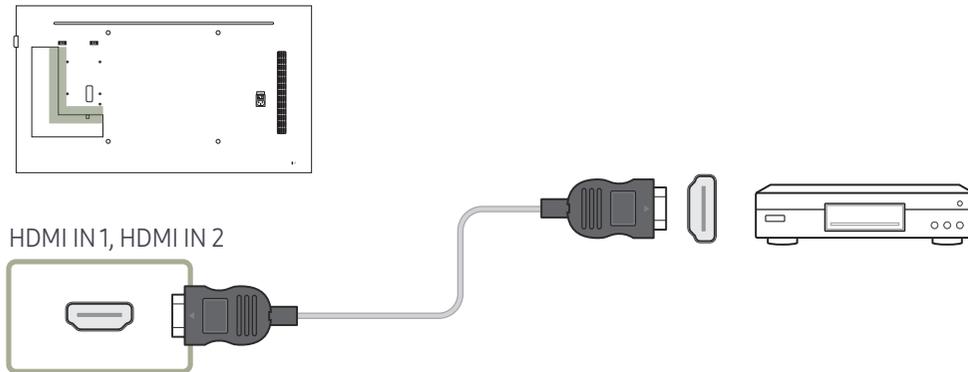
- Audio will not be enabled if the product is connected to a video device using an HDMI-DVI cable. When you connect a video device to the product using an HDMI-DVI cable, set **Edit Name** to **DVI Devices** to access video content stored on the video device.
- Supported resolutions include 1080p (50/60Hz),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



Connection Using an HDMI Cable

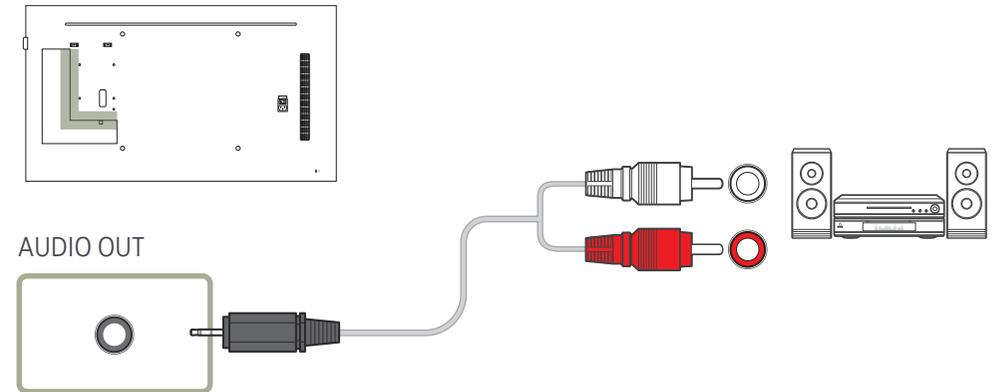
Using an HDMI cable or HDMI to DVI Cable (up to 1080p)

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



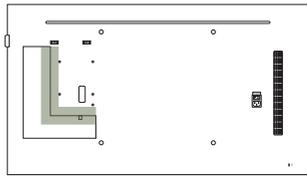
Connecting to an Audio System

— Connecting parts may differ in different products.



Connecting the Antenna

- Connecting parts may differ in different products.
- When the product is powered on for the first time, basic settings are configured automatically. Take extra care to ensure the wires inside the antenna cable are not bent.



ANT IN
AIR/CABLE

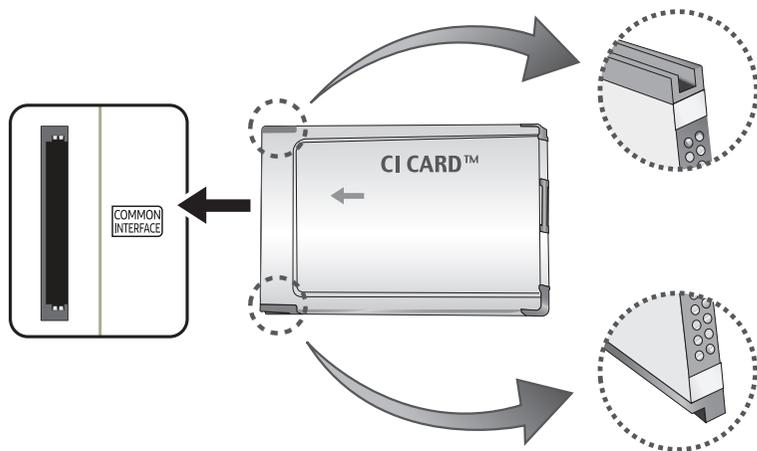


Connecting to a TV Viewing Card slot

To connect the CI CARD, follow these steps:

— CI card slots are available, depending on the model.

Using the “CI or CI+ CARD”



To watch paid channels, the “CI or CI+ CARD” must be inserted.

— Turn the TV off to connect or disconnect a CI card.

- If you don't insert the “CI or CI+ CARD”, some channels will display the message “Scrambled Signal”.
- The pairing information containing a telephone number, the “CI or CI+ CARD” ID the Host ID and other information will be displayed in about 2~3 minutes. If an error message is displayed, please contact your service provider.
- When the configuration of channel information has finished, the message “Updating Completed” is displayed, indicating the channel list is updated.

— You must obtain a “CI or CI+ CARD” from a local cable service provider.

— When removing the “CI or CI+ CARD”, carefully pull it out with your hands since dropping the “CI or CI+ CARD” may cause damage to it.

— Insert the “CI or CI+ CARD” in the direction marked on the card.

— The location of the COMMON INTERFACE slot may be different depending on the model.

— “CI or CI+ CARD” is not supported in some countries and regions; check with your authorised dealer.

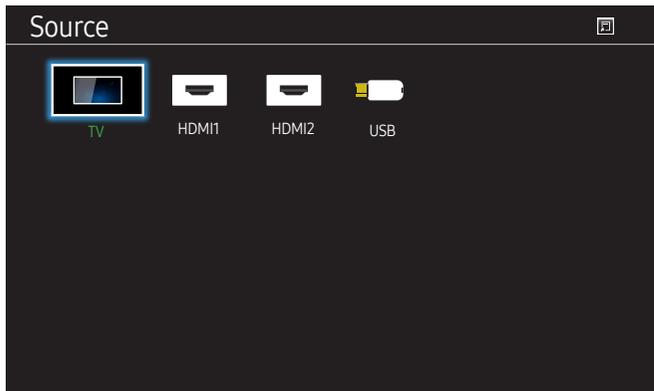
— If you have any problems, please contact a service provider.

— Insert the “CI or CI+ CARD” that supports the current aerial settings. The screen will be distorted or will not be seen.

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.
- If the product is in portrait orientation, it is not possible to change **Source List**.
- Refer to [page 83](#) for details about the **Source List**.

Edit Name

SOURCE → Source → TOOLS → Edit Name → ENTER 

Customise the name of a connected external device.

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

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

Information

SOURCE → Source → TOOLS → Information → ENTER 

You can see detailed information about the selected external device.

Chapter 04

Using MDC

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

MDC Programme Installation/Uninstallation

Installation

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

- 1 Click the **MDC Unified** installation programme.
- 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 programme in and click **"Next"**.

— If the directory path is not specified, the programme 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 programme 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 programme 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**.

Chapter 05

MagicInfo Express

The latest software updates may differ from the originals included at time of purchase.

Download the latest version of the MagicInfo Express software and manual at: <http://displaysolutions.samsung.com/support/download-center>.

Installation requirements

- HDD: At least 500 MB of free space
- Operating system: Windows XP or later
- Resolution: 1024x768 or higher

Using MagicInfo Express

MagicInfo Express is a programme that allows you to conveniently create SMART Signage TV content using a variety of templates. Using **MagicInfo Express**, create and manage schedules to play content on SMART Signage TV at a specific time.

— To use **MagicInfo Express**, download and install **MagicInfo Express** from the **MagicInfo Express** <http://displaysolutions.samsung.com/support/download-center>.

- **Create Content:** Create and manage templates that will be played on Samsung display devices.
- **Schedule Content:** Create and manage schedules to play content at specified times.

Managing templates

Using the templates provided in the programme, organise a variety of content items based on predefined layouts to conveniently create new templates. Import and edit previously created templates.

Managing schedules

Configure and manage schedules to play content on Samsung display devices at specific times. Set the same schedule to play on specified days of the week or set different schedules to play by day of the week.

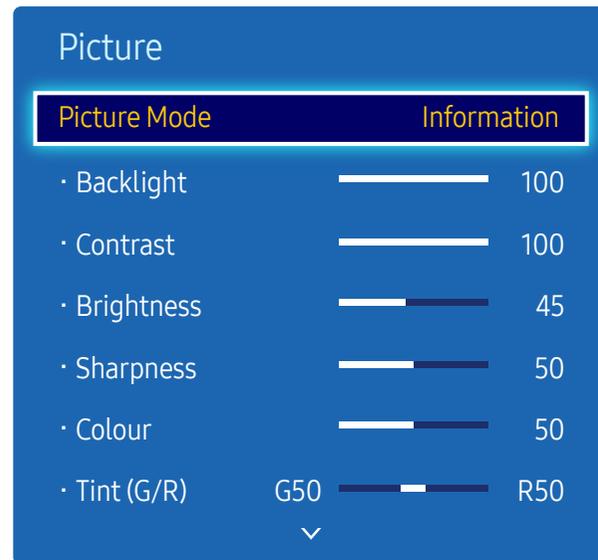
Chapter 06

Screen Adjustment

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

Picture Mode

MENU  → **Picture** → **Picture Mode** → ENTER 



– The displayed image may differ depending on the model.

Select a picture mode (**Picture Mode**) suitable for the environment where the product will be used.
Different **Picture Mode** options are displayed depending on the current input source.

If the input source is HDMI(PC)

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

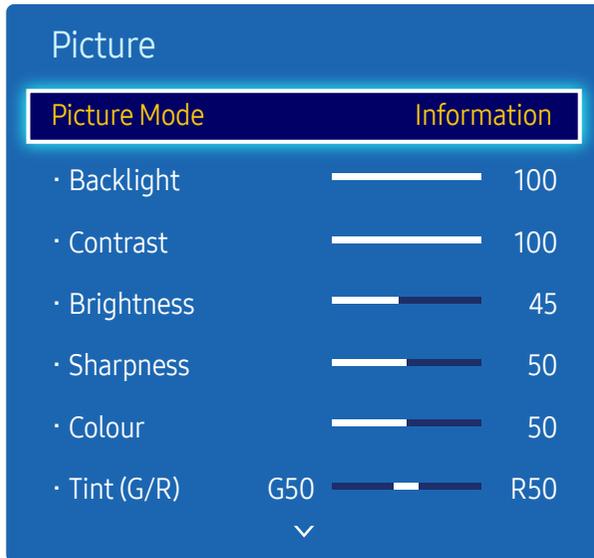
— These options can be selected only when **Edit Name** is set to PC.
(SOURCE → **Source** → TOOLS → **Edit Name** → ENTER )

If the input source is TV, HDMI(AV)

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

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

MENU  → Picture → ENTER 



– The displayed image may differ depending on the model.

Your product has several options for adjusting picture quality.

Input source	Picture Mode	Adjustable options
HDMI1, HDMI2 (when a PC is connected)	Information / Advertisement	Backlight / Contrast / Brightness / Sharpness
HDMI1, HDMI2 (720p, 1080i, 1080p)	Dynamic / Standard / Movie	Backlight / Contrast / Brightness / Sharpness / Colour / Tint (G/R)
TV	Dynamic / Standard / Movie	Backlight / Contrast / Brightness / Sharpness / Colour

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

Picture Size

MENU  → Picture → Picture Size → ENTER 



– The displayed image may differ depending on the model.

Picture Size

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

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

- **Auto Wide:** Automatically adjusts the picture size to the 16:9 aspect ratios.
- **16:9:** Sets the picture to 16:9 wide mode.
- **Wide Zoom:** Magnifies the picture size more than 4:3. A magnified picture can be moved up and down.
- **Zoom:** Magnifies the 16:9 wide pictures vertically to fit the screen size. A magnified picture can be moved up and down.
- **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) signals are inputted.
- **Smart View 1:** Reduces the 16:9 picture by 50%.
- **Smart View 2:** Reduces the 16:9 picture by 25%.
- **Custom:** Changes the resolution to suit the user's preferences.
- **Original ratio:** If the input source is **HDMI1**, **HDMI2** (PC connection) the video will display in the original aspect ratio.

– Available ports may differ depending on the model.

– You can adjust and store settings for each external device you have connected to an input on the product.

Position



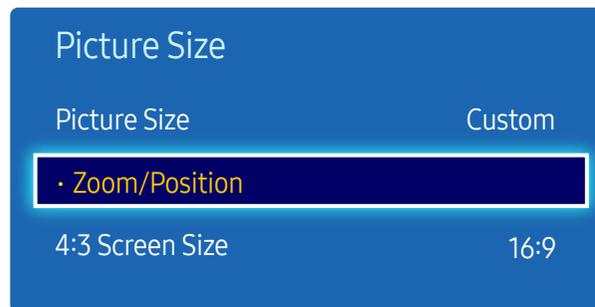
– The displayed image may differ depending on the model.

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

– To use the **Position** function after selecting **Wide Zoom** or **Screen Fit** follow these steps.

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

Zoom/Position



– The displayed image may differ depending on the model.

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

- 1 Press the ▼ button to select **Zoom/Position**. Press the  button.
- 2 Select the **Zoom** or **Position**. Press the  button.
- 3 Press the ▲/▼/◀/▶ button to move the picture.
- 4 Press the  button.

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

4:3 Screen Size



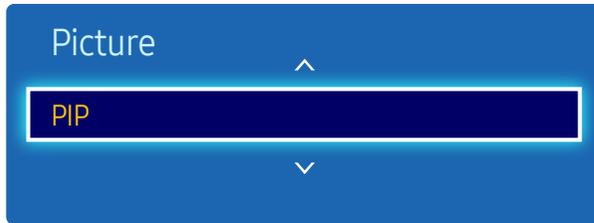
Available only when picture size is set to **Auto Wide**. You can determine the desired picture size at the 4:3 WSS (Wide Screen Service) size or the original size. Each European country requires different picture size.

- 16:9 / **Wide Zoom** / **Zoom** / 4:3

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

PIP

MENU  → Picture → PIP → ENTER 



- The displayed image may differ depending on the model.
- For **PIP** sound, refer to the **Sound Select** instructions.
- You may notice that the picture in the PIP screen becomes slightly unnatural when you use the main screen to view a game or karaoke.

PIP Settings

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

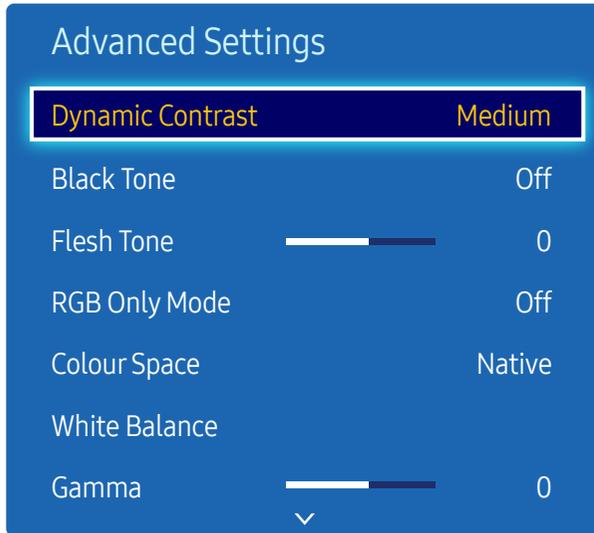
Main picture	Sub picture
TV	HDMI1, HDMI2
HDMI1, HDMI2	TV

— Available input sources may vary depending on the model.

- **PIP (Off / On)**: Activate or deactivate the PIP function.
- **Source**: You can select a source of the sub picture.
 - **Aerial (Terrestrial / Cable)**: Select either **Terrestrial** or **Cable** as the input source for the sub-screen.
 - This option is enabled if the secondary display is set to **TV**.
 - **Channel**: Select the channel for the sub-screen.
 - This option is enabled if the secondary display is set to **TV**.
 - **Size** (, , , , , ): Select a size for the subpicture.
 - **Position** (, , , ): Select a position for the sub-picture.
 - In (, , ) mode, you cannot select **Position**.
- **Sound Select (Main / Sub)**: You can choose to listen to the sound from the **Main** picture or the **Sub** picture.

Advanced Settings

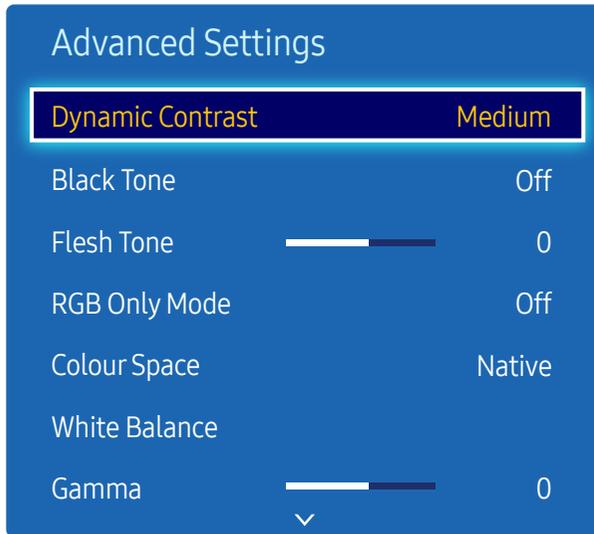
MENU  → Picture → Advanced Settings → ENTER 



– The displayed image may differ depending on the model.

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

- Available input sources may vary depending on the model.
- If **Picture Mode** is set to **Dynamic**, **Advanced Settings** is disabled.



– The displayed image may differ depending on the model.

Dynamic Contrast

Adjust the screen contrast.

- Off / Low / Medium / High

Black Tone

Select the black level to adjust the screen depth.

- Off / Dark / Darker / Darkest

Flesh Tone

Emphasise pink **Flesh Tone**.

RGB Only Mode

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

- Off / Red / Green / Blue

Colour Space

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

- Auto / Native

White Balance

Adjust the colour temperature for a more natural picture.

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

Gamma

Adjust the primary colour intensity.

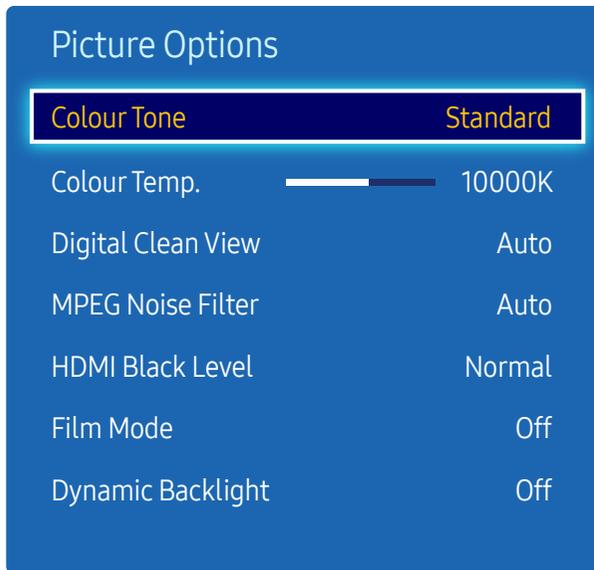
Motion Lighting

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

- **Off / On**

Picture Options

MENU  → Picture → Picture Options → ENTER 



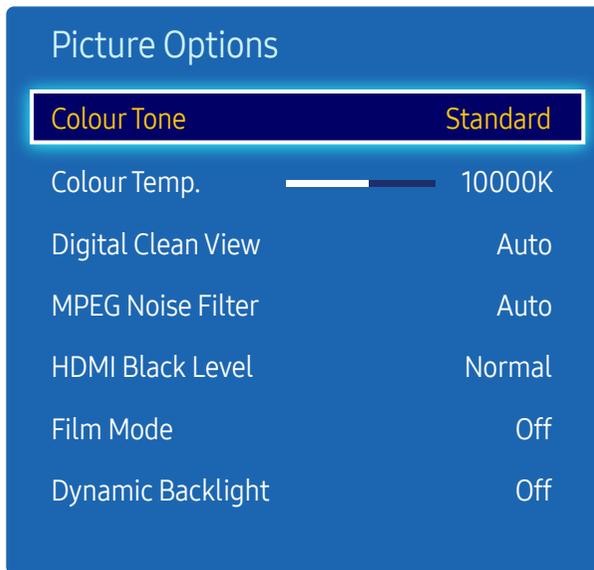
– The displayed image may differ depending on the model.

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

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

Input source	Picture Mode	Picture Options
HDMI1, HDMI2 (when a PC is connected)	Information / Advertisement	Colour Tone / Colour Temp. / HDMI Black Level / Dynamic Backlight
TV	Dynamic / Standard / Movie	Colour Tone / Colour Temp. / Digital Clean View / MPEG Noise Filter / Film Mode / Dynamic Backlight
HDMI1, HDMI2	Dynamic / Standard / Movie	Colour Tone / Colour Temp. / Digital Clean View / MPEG Noise Filter / Dynamic Backlight

— Available input sources may vary depending on the model.



– The displayed image may differ depending on the model.

Colour Tone

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

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

If the input source is **HDMI1**, **HDMI2** or **TV**.

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

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

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

– Available input sources may vary depending on the model.

Colour Temp.

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

– This option is available when **Colour Tone** is set to **Off**.

Digital Clean View

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

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

– **Auto Visualisation**: When changing analogue channels, displays signal strength.

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

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

MPEG Noise Filter

Reduces MPEG noise to provide improved picture quality.

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

HDMI Black Level

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

- **Low / Normal**

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

Film Mode

This mode is suitable to view movies.

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

- **Off / Auto1 / Auto2**

Dynamic Backlight

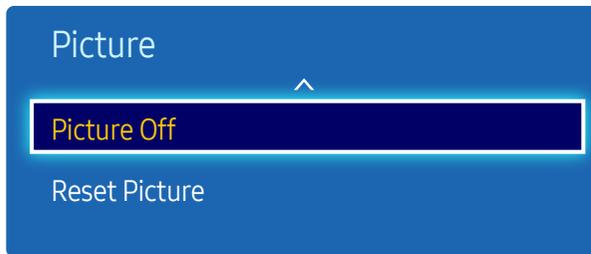
Automatically adjust the backlight to provide the best possible screen contrast under the current conditions.

- **Off / On**

Picture Off

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

MENU  → Picture → Picture Off → ENTER 



– The displayed image may differ depending on the model.

Reset Picture

Resets your current picture mode to its default settings.

MENU  → Picture → Reset Picture → ENTER 



– The displayed image may differ depending on the model.

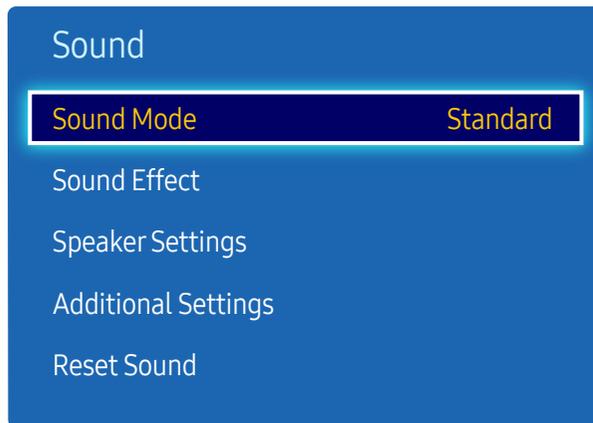
Chapter 07

Sound Adjustment

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

Sound Mode

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



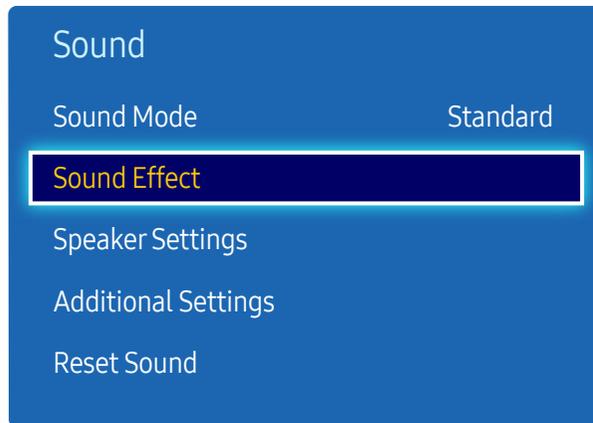
– The displayed image may differ depending on the model.

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

- **Standard**: Selects the normal sound mode.
 - **Music**: Emphasises music over voices.
 - **Movie**: Provides the best sound for movies.
 - **Clear Voice**: Emphasises voices over other sounds.
 - **Amplify**: Increase the intensity of high-frequency sound to allow a better listening experience for the hearing impaired.
- If **Speaker Select** is set to **External**, **Sound Mode** is disabled.

Sound Effect

MENU  → Sound → Sound Effect → ENTER 



– The displayed image may differ depending on the model.

Configure your preferred sound effect for output sound.

- If **Speaker Select** is set to **External**, **Sound Effect** is disabled.
- Available only when **Sound Mode** is set to **Standard**.

DTS TruSurround HD

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

- **Off / On**

DTS TruDialog

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

- **Off / On**

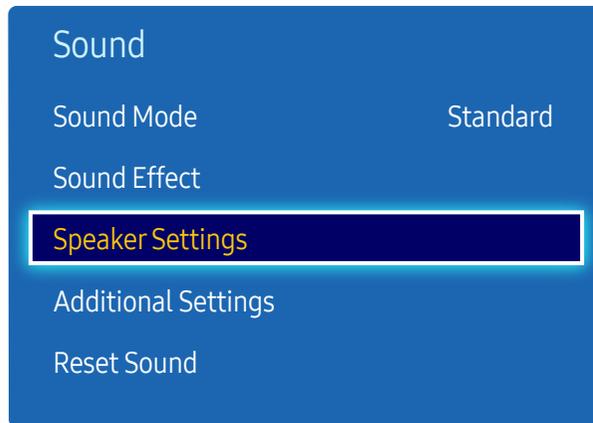
Equaliser

Use **Equaliser** to customise sound setting for each speaker.

- **Balance L/R**: Adjusts the balance between the right and left speaker.
- **100Hz / 300Hz / 1kHz / 3kHz / 10kHz** (Bandwidth Adjustment): Adjusts the level of specific bandwidth frequencies.
- **Reset**: Resets the equalizer to its default settings.

Speaker Settings

MENU  → Sound → Speaker Settings → ENTER 



– The displayed image may differ depending on the model.

Speaker Select

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

- **External / Internal**

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

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

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

Auto Volume

The volume can vary depending on the channel.

Automatically equalize the volume level when switching to another channel.

- **Off / Normal / Night**

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

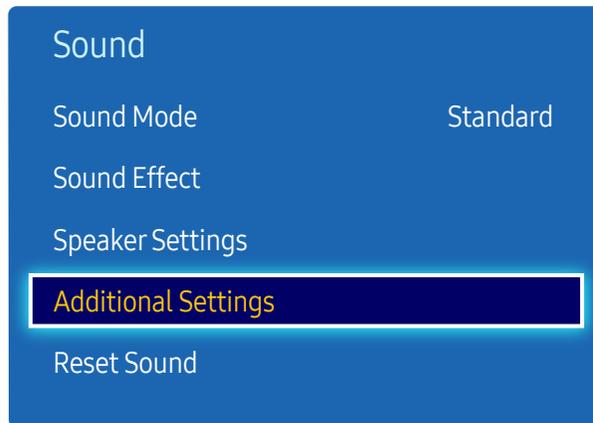
Night equalizes and decrease the volume level on each channel, so each channel is quieter. **Night** is useful at night, when you may want to keep the volume low.

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

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

Additional Settings

MENU  → Sound → Additional Settings → ENTER 



– The displayed image may differ depending on the model.

DTV Audio Level

(Digital channels only)

The TV cannot freely control the volume of the digital audio that it sends to the AV receiver. Use this to set the digital audio volume at a comfortable level.

- According to the type of broadcast signal, MPEG / HE-AAC can be adjusted between -10dB and 0dB.
- To increase or decrease the volume, adjust between the range 0 and -10 respectively.

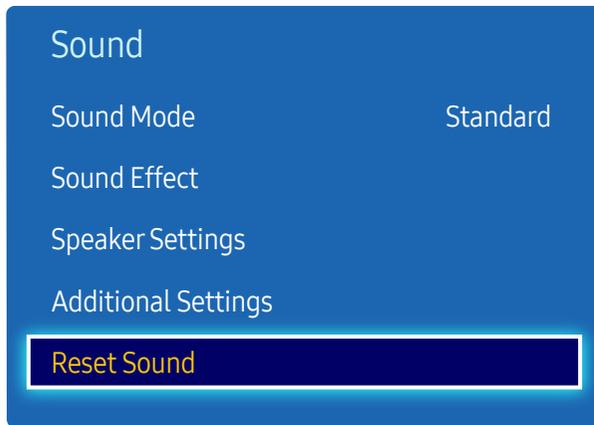
Dolby Digital Comp

Some digital TV programmes provide 5.1-channel Dolby audio. This TV converts Dolby audio to stereo audio so that it can play the sound through the TV's speakers. There are two methods to choose from. **RF** is for better sound at lower volumes, and **Line** is for higher volumes.

Reset Sound

Reset all sound settings to the factory defaults.

MENU  → Sound → Reset Sound → ENTER 



– The displayed image may differ depending on the model.

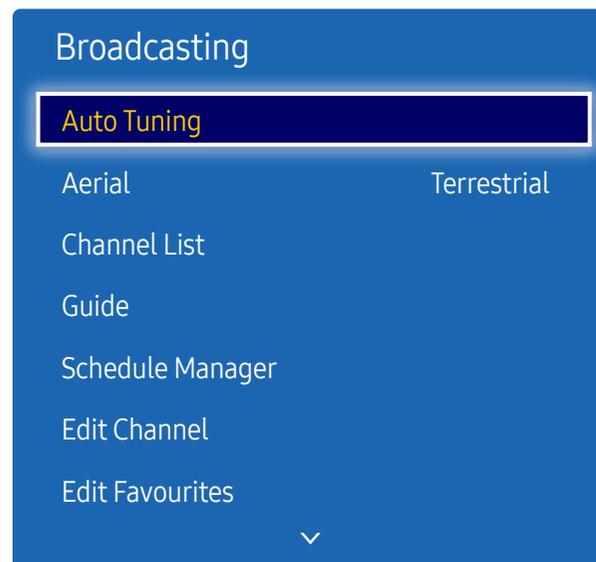
Chapter 08

Broadcasting

Configure the **Broadcasting** settings for the product.

Auto Tuning

MENU  → **Broadcasting** → **Auto Tuning** → ENTER 



– The displayed image may differ depending on the model.

– Available in **TV** mode only.

The **Auto Tuning** function memorises all channels that are available over the aerial or through your cable system and adds them to the **Channel List**.

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

Auto Tuning

To start **Auto Tuning**, follow these steps:

- 1 Push MENU  → **Broadcasting** → **Auto Tuning** → **Auto Tuning** → ENTER  on your remote. The **Auto Tuning** screen appears.
- 2 On the **Auto Tuning** screen, select the source of your product signal.
 - **Aerial**: If your product is connected to an antenna choose **Terrestrial**, and then press ENTER . The product will automatically start memorising channels.
 - **Cable**: If your product is connected to a cable outlet, choose **Cable**, and then press ENTER . Go to Step 3.
 - Select **Digital & Analogue**, **Digital** or **Analogue** to scan for channels.
- 3 Sets Search Mode using ▲/▼ buttons. When done, select **Scan**, and then press ENTER . The product will start memorising channels.

Cancelling Auto Tuning

- 1 Press the **Stop** button.
- 2 A **Stop Auto Tuning?** message appears.
- 3 Press the **Yes** button.

Cable Search Option

(when the aerial was set to **Cable**)

Sets additional search options such as the frequency and symbol rate for a cable network search.

— Availability depends on the specific model and area.

- **Start Frequency / Stop Frequency / Symbol Rate / Modulation**

Aerial

MENU  → Broadcasting → Aerial → ENTER 



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

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

- **Terrestrial / Cable**

Channel List

MENU  → Broadcasting → Channel List → ENTER 



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

Register or delete channels. Add favourite channels or rename analogue channels.

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

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

Icons found in the channel list page

- : Analogue channel
- : A channel set in the favourite list

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

Mode

Aerial

Select either **Terrestrial** or **Cable** as digital channel mode.

Edit Favourites

Edit favourite channel lists from **Edit Favourites**.

Favourites 1 ~ Favourites 5

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

— The TV displays favourite groups only if you have added favorites using **Favourites 1** - to - **Favourites 5**.

All

Shows all channels.

Analogue

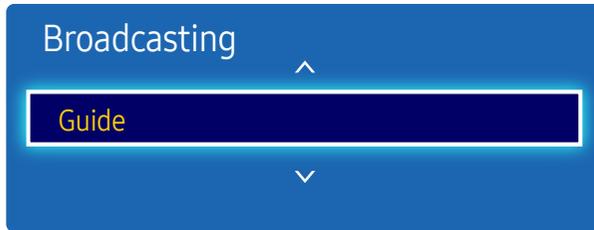
Shows analogue channels.

Digital

Shows digital channels.

Guide

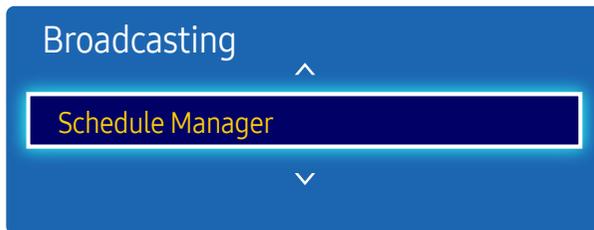
MENU  → Broadcasting → Guide → ENTER 



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

Schedule Manager

MENU  → Broadcasting → Schedule Manager → ENTER 



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

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

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

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

Schedule Manager

Access the **Schedule Manager** function.

You can view information on the **Schedule Manager**.

Watch a desired channel at a scheduled time.

- **Channel:** Select the desired channel.
- **Repeat:** **Once** / **Manual** / **Sat~Sun** / **Mon~Fri** / **Everyday**
 - Select **Manual** if you want to configure settings by day of the week.
- **Date:** Select the desired date.
- **Start Time:** Set the time to watch the desired channel.

Edit Channel

MENU  → Broadcasting → Edit Channel → ENTER 



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

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

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

Icons found in the edit channel page

- : Analogue channel
- : A channel set in the favourite list

Deleting/registering channels

Deleting channels

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

- 1 Select channels to delete from the screen. To cancel, select again.
- 2 After selecting channels, select **Delete** from the screen to delete the channels.

Re-registering deleted channels

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

- 1 Press **TOOLS** on the screen to display the **Tools** page. Select **Category** from the sub-menu items and then select **All**.
- 2 From the list of all channels, select deleted channels you want to register again.
- 3 After selecting channels, select **Add** from the screen to re-register the channels.

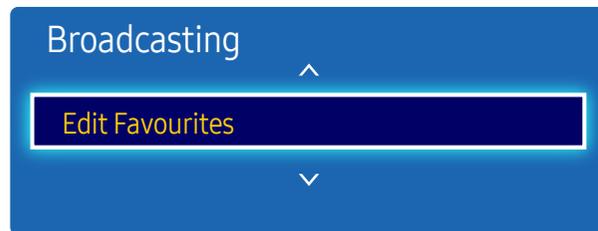
Editing registered channels

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

Option Name	Operations
Aerial	Select either Terrestrial or Cable as digital channel mode.
Category	Channels saved on your TV are classified under the All , Analogue , Recently Viewed and Most Viewed categories. Select a desired category.
Edit Favourites	Set frequently viewed channels as favourite channels.
Rename channel	Change the names of analogue channels to suit your preferences. A channel name can be up to five characters long.
Channel Info	Check the information of the channel.
Information	View information about the current broadcast programme on the aerial.

Edit Favourites

MENU  → Broadcasting → Edit Favourites → ENTER 



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

Creating a favourite channel list

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

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

Adding the current channel to a favourite channel list

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

- 1 When watching TV, press **TOOLS** to display the **Tools** page. Select **Edit Favourites** from the sub-menu items.
- 2 From the displayed prompt box, select a favourite channel list to save the current channel to. Select **OK**.
- 3 The current channel is added in the selected favourite channel list. Select **OK**.

Adding multiple channels to a favourite channel list

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

- 1 Select **Category** from the screen to change the channel list in the centre of the screen to the channel list that contains the channels to add. Each time **Category** is selected, the category switches in the order **All**, **Analogue**, **Recently Viewed**, and **Most Viewed**.
 - **Recently Viewed** and **Most Viewed** are only enabled if they contain saved channels.
- 2 Select desired channels from the channel list in the centre of the screen.
- 3 Select **Change Fav.** from the screen to change the favourite channel list on the right to another desired favourite channel list.
- 4 Select **Add** from the screen. The selected channels will create a favourite channel list.

Viewing channels saved under a favourite channel list

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

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

- 1 Select **Channel List** from the **Broadcasting** menu. The channel list is displayed.
- 2 Pressing the right cursor (▶) button on the remote control displays the **Mode** page.
- 3 Select a favourite channel list among **Favourites 1 – Favourites 5**.
- 4 Select channels from the selected favourite channel list.

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

Editing favourite channel lists

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

Option Name Operations

Copy to favourites	Copy channels from a favourite channel list to another favourite channel list. — This option is only available when channels under a favourite channel list are selected.
Rename Favourites	Change the name of a favourite channel list. — This option is only available when channels under a favourite channel list are selected.
Aerial	Select either the Terrestrial or Cable signal.
Edit Channel	Manage saved channels.
Information	View information about the current broadcast programme on the aerial.

Deleting channels from a favourite channel list

Delete channels from a favourite channel list, if required.

- 1 Select **Change Fav.** from the screen to change the favourite channel list on the right to another desired favourite channel list.
- 2 Select channels to delete from the selected favourite channel list.
- 3 Select **Delete** from the screen. The selected channels are deleted from the favourite channel list.

Changing the order of channels in a favourite channel list

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

- 1 Select **Change Fav.** from the screen to change the favourite channel list on the right to another desired favourite channel list.
- 2 Select channels to rearrange from the selected favourite channel list.
- 3 Select **Change order** from the screen, and then change the order of the selected channels. To apply the new order of the channels, press the  button.

Copying channels between favourite channel lists

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

- 1 Select **Change Fav.** from the screen to change the favourite channel list on the right to another desired favourite channel list.
- 2 Select channels to copy from the favourite channel list on the right.
- 3 Press TOOLS on the screen. Sub-menu items are displayed.
- 4 Select **Copy to favourites** from the sub-menu items. A prompt box appears.
- 5 Select favourite channel lists to copy the channels to using the prompt box. The channels are saved to the selected favourite channel lists.

— To use **Copy to favourites**, make sure channels are saved in a favourite channel list.

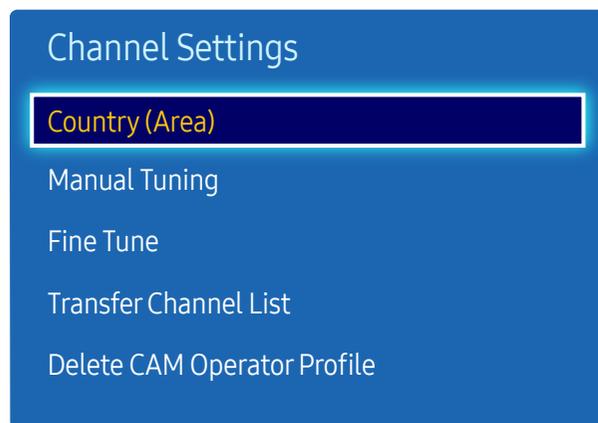
Renaming a favourite channel list

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

- 1 Select **Change Fav.** from the screen to change the favourite channel list on the right to another desired favourite channel list.
- 2 Press TOOLS on the screen. Sub-menu items are displayed.
- 3 Select **Rename Favourites** from the sub-menu items. A prompt box appears.
- 4 Change the favourite channel list using the prompt box. The name for a favourite channel list can be up to 20 characters long.

Channel Settings

MENU  → Broadcasting → Channel Settings → ENTER 



– The displayed image may differ depending on the model.

– Available in TV mode only.

Country (Area)

Select your country so that the TV can correctly auto-tune the broadcasting channels. This depends on the country or region.

When the PIN input screen appears, enter your 4 digit PIN number.

- **Digital Channel:** Change the country for digital channels.
- **Analogue Channel:** Change the country for analogue channels.

Manual Tuning

Scans for a channel manually and stores in the TV.

If a channel is locked using the Channel Lock function, the PIN input window appears.

This function depends on the country and region.

When Aerial Source is set to Terrestrial or Cable

- **Digital Channel Tuning:** Scans for a digital channel.

1 Select the **New**.

– When selecting **Aerial** → **Terrestrial: Channel, Frequency, Bandwidth**

– When selecting **Aerial** → **Cable: Frequency, Modulation, Symbol Rate**

2 Select the **Search**. When scanning has finished, a channel is updated in the channel list.

- **Analogue Channel Tuning:** Scans for an analogue channel.

1 Select the **New**.

2 Set the **Programme, Colour System, Sound System, Channel** and **Search**.

– **Channel**

C (aerial channel mode) / **S** (cable channel mode): These two modes allow you to select a channel by entering the assigned number for each aerial broadcasting station or cable channel.

3 Select the **Store**. When scanning has finished, a channel is updated in the channel list.

Fine Tune

(analogue channels only)

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

- Settings are applied to the channel you're currently watching.
- Fine tuned channels that have been saved are marked with an asterisk "*" on the right-hand side of the channel number in the channel banner.
- To reset the fine-tuning, select **Reset**.

Transfer Channel List

Imports or exports the channel map. When the PIN input screen appears, enter the PIN.

You should connect a USB storage device to use this function.

- **Import from USB**: Import channel list from USB.
- **Export to USB**: Export channel list to USB. This function is available when USB is connected.

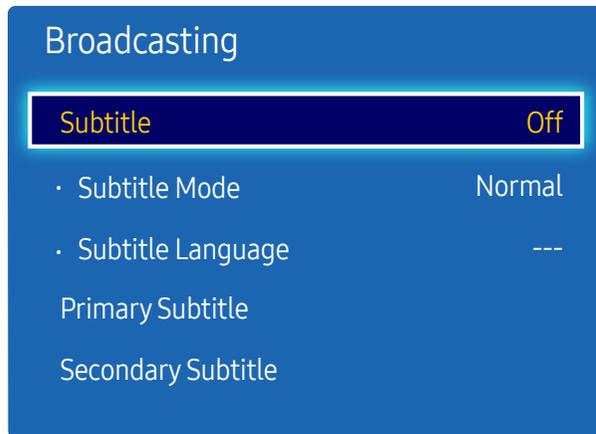
Delete CAM Operator Profile

Select the CAM operator to delete.

- Availability depends on the specific model and area.

Subtitle

MENU  → Broadcasting → Subtitle → ENTER 



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

Configures the subtitle options.

Subtitle

Show subtitles.

- Off / On
- **Subtitle Mode** and **Subtitle Language** are enabled only when **Subtitle** is set to **On**.

Subtitle Mode

Set the subtitle mode.

- Normal / Hearing Impaired

Subtitle Language

Set the subtitle language.

- Preferred

Primary Subtitle

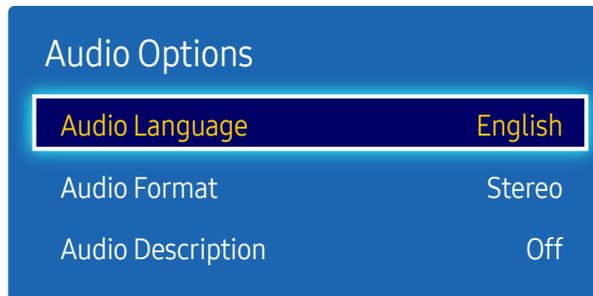
Set the primary subtitle language.

Secondary Subtitle

Set the secondary subtitle language.

Audio Options

MENU  → Broadcasting → Audio Options → ENTER 



– The displayed image may differ depending on the model.

– Available in **TV** mode only.

Audio Language

(for digital broadcasts)

Change the default value for audio languages.

- **Primary Audio:** Set the primary audio language.
- **Secondary Audio:** Set the secondary audio language.

– The available language may differ depending on the broadcast.

Audio Format

(for digital broadcasts)

Change a desired audio format. The supported audio format may vary depending on the broadcast programme.

Audio Description

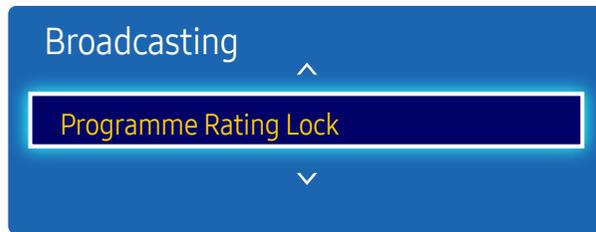
(Not available in all locations) (for digital broadcasts)

This function handles the Audio Stream for the AD (**Audio Description**) which is sent along with the Main audio from the broadcaster.

- **Audio Description:** Turn the audio description function on or off.
- **Volume:** Adjust the audio description volume.

Programme Rating Lock

MENU  → Broadcasting → Programme Rating Lock → ENTER 



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

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

- **Allow All / 3~18**
 - This option is available when the input source is **TV**.
 - The default PIN number for a new product set is "0-0-0-0".

Digital Text

MENU  → Broadcasting → Digital Text → ENTER 



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

Digital Text

Enable or disable the MHEG function.

— The MHEG function is enabled only in countries where it is supported.

- **Disable / Enable**

Teletext Language

MENU  → **Broadcasting** → **Teletext Language** → ENTER 



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

Teletext Language

Use this to set the teletext language.

— Availability depends on the specific model and area.

Primary Teletext

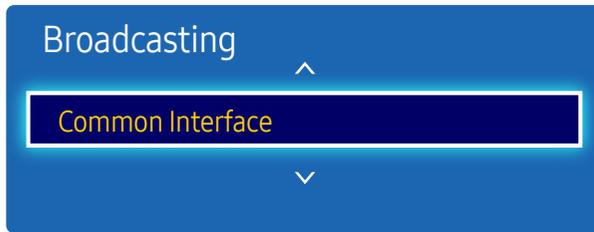
Set the primary teletext language.

Secondary Teletext

Set the secondary teletext language.

Common Interface

MENU  → Broadcasting → Common Interface → ENTER 



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

CI Menu

Enables the user to select from the CAM-provided menu. Select the **CI Menu** based on the menu PC Card.

CAM video transcoding

You can configure the setting to transcode the video codec from the CAM automatically. Turn it Off if you do not want to use it.

Application Info

View information about the CAM inserted into the CI slot and about the “CI or CI+ CARD” inserted into the CAM. You can install the CAM any time, with or without the TV turned on.

- 1 Purchase a CI CAM module at your nearest dealer or by phone.
- 2 Firmly insert the “CI or CI+ CARD” into the CAM in the direction of the arrow.
- 3 Insert the CAM with the “CI or CI+ CARD” into the common interface slot, in the direction of the arrow so that it aligns parallel with the slot.
- 4 Check if you can see a picture on a scrambled signal channel.

Channel Lock

MENU  → Broadcasting → Channel Lock → ENTER 



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

Prevent your children from accessing harmful content by locking channels.

- **On / Off**
 - This option is available when the input source is **TV**.
 - The default PIN number for a new product set is "0-0-0-0".
 - Availability depends on the specific model and area.

Chapter 09

Network

Network Status

MENU  → Network → Network Status → ENTER 

You can check the current network and Internet status.

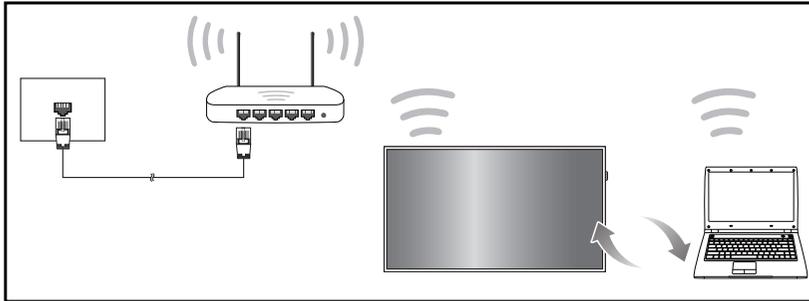
Network Settings

MENU  → Network → Network Settings → ENTER 

Connect to a wireless network and use the product as a TV+signage using MagicInfo Express on your PC.

Network Setting (Wireless)

Connecting to a Wireless Network



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

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

Automatic Network Setup (Wireless)

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

How to set up automatically

- 1 Go to MENU  → **Network** → **Network Settings**.
- 2 The **Network** function searches for available wireless networks. When done, it displays a list of the available networks.
- 3 In the list of networks, press the ▲ or ▼ button to select a network, and then press the  button twice.
 - If the desired wireless router does not appear, select **Refresh** to search again.
 - If the router cannot be found after retrying, select the **Stop** button. The **Add Network** button appears.
- 4 If the **Enter security key** screen appears, go to step 5. If you select a wireless router that does not have security, go to step 7.
- 5 If the router has security, enter the **Enter security key**. (Security key or PIN).

6 When done, use the right arrow button to move the cursor to **Done**, and then press . The network connection screen appears and the verification process starts.

— A connection with the router is established, but the Internet cannot be accessed.

7 When the connection has been verified, the “**Your wireless network is set up and ready to use.**” message appears.

Manual Network Setup (Wireless)

Offices may use static IP addresses.

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

Getting the Network Connection Values

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

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

How to set up manually

- 1 Go to MENU  → **Network** → **Network Settings**.
- 2 The **Network** function searches for available wireless networks. When done, it displays a list of the available networks.
- 3 In the list of networks, press the ▲ or ▼ button to select a network, and then press the  button twice.
 - If the desired wireless router does not appear, select **Refresh** to search again.
 - If the router cannot be found after retrying, select the **Stop** button. The **Add Network** button appears.
- 4 If the **Enter security key.** screen appears, go to step 5. If you select a wireless router that does not have security, go to step 7.
- 5 If the router has security, enter the **Enter security key.** (Security key or PIN).
- 6 When done, use the right arrow button to move the cursor to **Done**, and then press . The network connection screen appears and the verification process starts.
- 7 Select **Stop** while network connections are being attempted. This will stop the connection.
- 8 Select **IP Settings** on network connection screen. The **IP Settings** screen appears.
- 9 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**.

-
- 10 When done, select **OK** at the bottom of the page, and then press . The network test screen appears and the verification process starts.
 - 11 When the connection has been verified, the “**Your wireless network is set up and ready to use.**” message appears.

WPS(PBC)

How to set up using WPS(PBC)

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

- 1 Go to MENU  → **Network** → **Network Settings**.
- 2 Select **WPS(PBC)**, press , and then press  again.
- 3 Press the **WPS(PBC)** button on your router within 2 minutes. Your product automatically acquires all the network setting values it needs and connects to your network.
- 4 The network connection screen appears, and network setup is done.

Wi-Fi Direct

MENU  → Network → Wi-Fi Direct → ENTER 

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

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

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

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

Soft AP (Wi-Fi Hotspot)

MENU  → Network → Soft AP (Wi-Fi Hotspot) → ENTER 

Using this function, you can connect the product on your mobile devices if your mobile devices do not support **Wi-Fi Direct**.

Set the options for connection of Wi-Fi device.

- **Soft AP (Wi-Fi Hotspot)**
Turns on or off the **Soft AP (Wi-Fi Hotspot)**. When **Soft AP (Wi-Fi Hotspot)** is set to **On**, your mobile devices can find the product name in Wi-Fi connection list.
- **Connection Information**
Shows the security key.
- **Reset password**
Powering on the display creates a new security key and disconnect any existing **Soft AP (Wi-Fi Hotspot)** connection.
 - **Off / On**
- **Advanced Settings**
Change detailed Wi-Fi settings.
 - **Channel (Auto / CH.1 ~ CH.11)**
Change Wi-Fi channel settings.
 - **Signal Level (Level 1 ~ Level 5)**
Change Wi-Fi signal level settings.

AllShare Settings

MENU  → Network → AllShare Settings → ENTER 

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

Content Sharing

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

Device Name

MENU  → Network → Device Name → ENTER 

Select or enter a device name.

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

- **[Signage]Display1 ~ 6 / User Input**

Chapter 10

Applications

Source List

MENU  → Applications → Source List → ENTER 



– 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

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

Customise the name of a connected external device.

- The list can include the following source devices. **Source** devices on the list differ depending on the selected source.
VCR / DVD / Cable STB / Satellite STB / PVR STB / AV Receiver / Game / Camcorder / PC / DVI PC / DVI Devices / TV / IPTV / Blu-ray / HD DVD / DMA

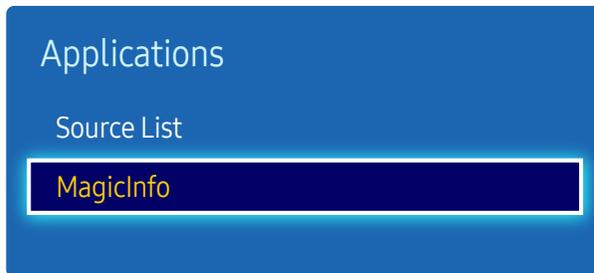
Information

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

You can see detailed information about the selected external device.

MagicInfo

MENU  → Applications → MagicInfo → ENTER 



– The displayed image may differ depending on the model.

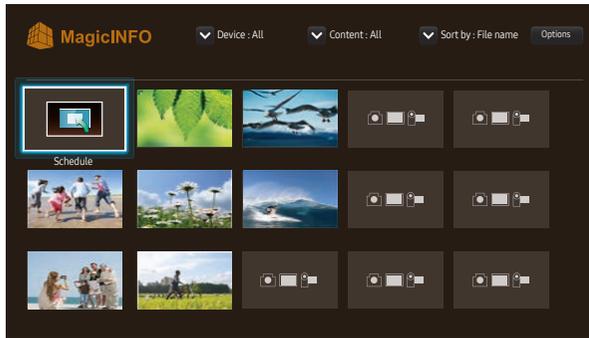
MagicInfo is a business solution that allows the product to be used as a signage (advertising media). Using the solution, play image and video files from the internal memory or a connected USB storage device. You can also play schedules created using the **MagicInfo Express** on your computer.

Playing content from the internal memory or USB

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

Playing PC or mobile content

Send content via the **MagicInfo Express** or a mobile app to the product for playback. If the internal memory is insufficient, connect a USB device and go to **Options** → **Settings** → **Default Storage** at the top right of the **MagicInfo** browser. Change the option to **USB**.



Available features in the MagicInfo page

The **MagicInfo** list page provides the following features.

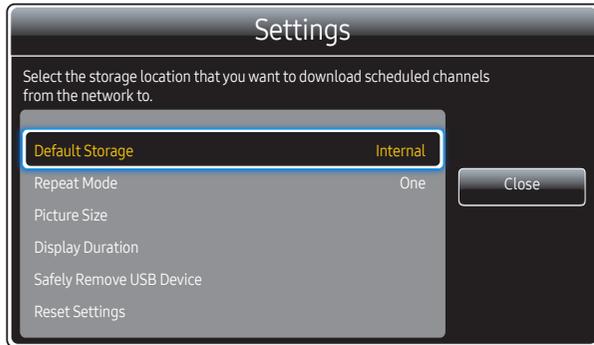
- **Device**
 - Select either **Internal** or **USB** to search for a desired device list.
All / Internal / USB
- **Content**
 - Select a content type as criterion to search for a desired content list.
All / My Templates / Video / Image
- **Sort by**
 - Specify the content sort criterion.
File name /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

Options menu items in the MagicInfo screen

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

- The displayed image may differ depending on the model.
- Press HOME or MagicInfo Player I on the remote control to access the application more quickly.

Settings



– The displayed image may differ depending on the model.

Default Storage

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

- **Internal / USB**

Repeat Mode

Set repeat mode whether to repeat playing contents or not.

- **One / All**

Picture Size

Set **Picture Size** to either **Fit to Screen** or **Original Size**.

- **Fit to Screen / Original Size**
- Available only for **Video** and **Image** content.

Display Duration

Set the duration for each page in a slideshow.

- Available only for **Template** and **Image** content.

Safely Remove USB Device

Safely removes USB memory

Reset Settings

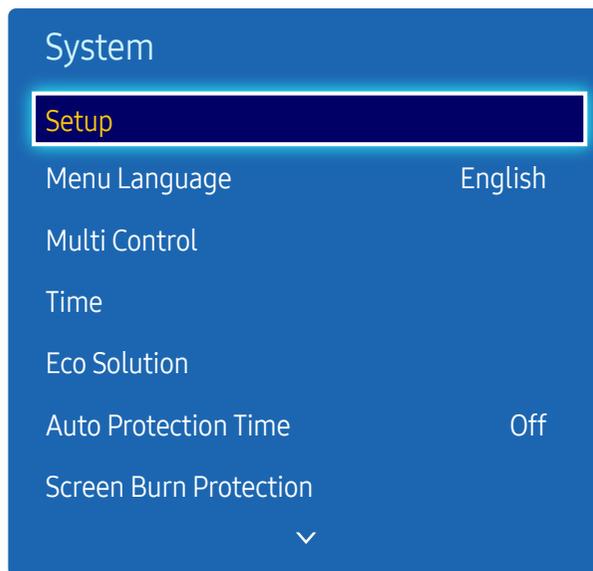
Restore all the values under **Settings** to the default when the product was purchased.

Chapter 11

System

Setup

MENU  → System → Setup → ENTER 



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

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

— The displayed image may differ depending on the model.

Menu Language

MENU  → System → Menu Language → ENTER 

Set the menu language.

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

Multi Control

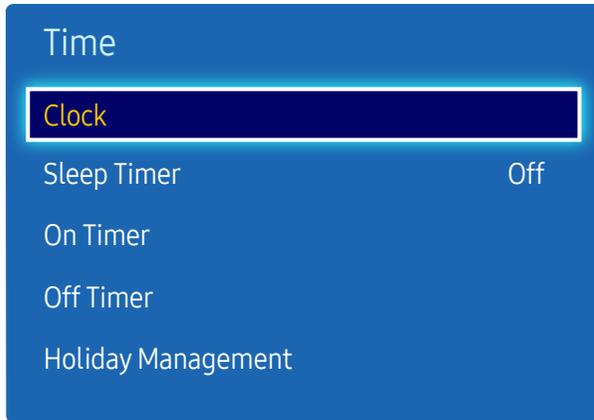
MENU  → System → Multi Control → ENTER 

Configuring settings for Multi Control

- **ID Setup**
Assign an ID to a set. (Range: 0~99)
Press ▲ or ▼ to select a number, and press .
- **ID Input**
Enter the ID number of the product connected to the input cable for input signal reception.
Enter the number you want using the number buttons on the remote control.
- **PC Connection**
Select a method to connect to MDC to receive the MDC signal.
 - **RS232C cable**
Communicates with the MDC via a RS232C cable.
 - **Wi-Fi Network**
Communicate with MDC over Wi-Fi.

Time

MENU  → System → Time → ENTER 



– The displayed image may differ depending on the model.

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

Clock

Set the current year, date and time.

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

Clock Mode

Set the current time manually or automatically.

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

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

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

Manual: Set the current time manually.

Clock Set

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

Use the number buttons to enter numbers or press the up and down arrow buttons. Use the left and right arrow buttons to move from one entry field to the next. Press  when done.

– Available only when **Clock Mode** is set to **Manual**.

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

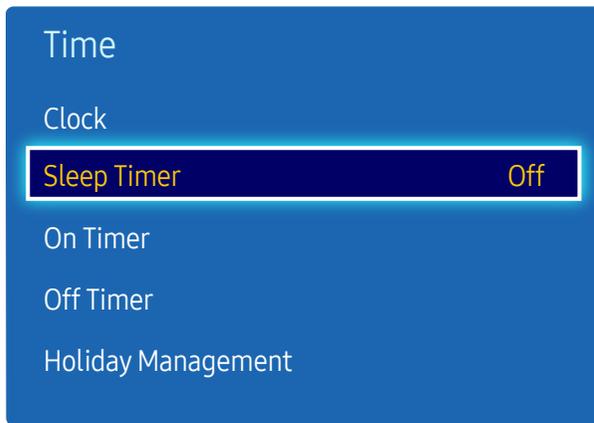
Time Zone

Select your time zone.

- **DST / GMT**

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

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



– The displayed image may differ depending on the model.

Sleep Timer

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

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

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

On Timer

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

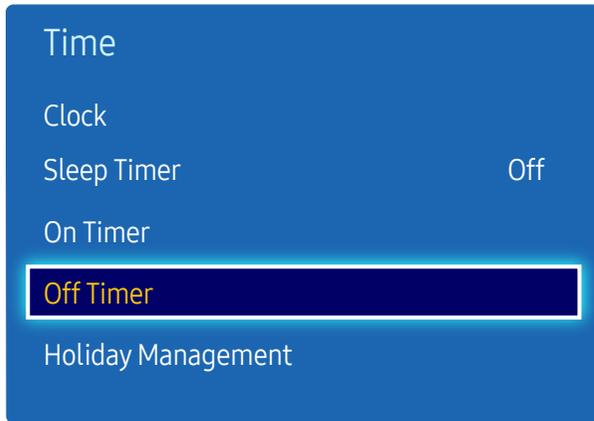
The power is turned on with the specified volume or input source.

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

(On Timer1 ~ On Timer7)

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

- **Setup**: Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual**. If you select **Manual**, you can choose the days you want **On Timer** to turn on your product.
 - The check mark indicates days you've selected.
- **Time**: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.
- **Volume**: Set the desired volume level. Use the left and right arrow buttons to change the volume level.
- **Source**: Select the input source of your choice.
- **Aerial** (when the **Source** is set to **TV**): Select **ATV** or **DTV**.
- **Channel** (when the **Source** is set to **TV**): Select the desired channel.
- **Music / Photo** (when the **Source** is set to **USB**): Select a folder in the USB device containing music or photo files you want played when the product turns on automatically.
 - This function is available only when a USB device is connected.



– The displayed image may differ depending on the model.

Off Timer

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

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

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

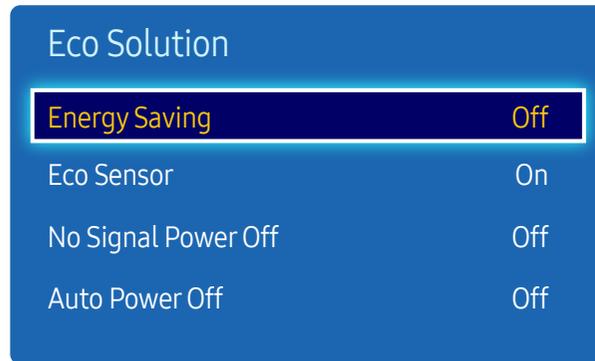
Holiday Management

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

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

Eco Solution

MENU  → System → Eco Solution → ENTER 



– The displayed image may differ depending on the model.

Energy Saving

Reduce the power consumption by adjusting the screen brightness.

- Off / Low / Medium / High

Eco Sensor

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

- Off / On
- Adjusting the **Backlight** setting under **Picture** while **Eco Sensor** is on will disable the **Off**.
- If the screen contrast is not sufficient, set the **Eco Sensor** to **Off**.
If the **Eco Sensor** is **Off**, it may not comply with energy standards.

Min. Backlight

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

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

No Signal Power Off

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

- Off / 15 min / 30 min / 60 min
- Disabled when an attached PC is in power saving mode.
- The product will automatically power off at a specified time. The time can be changed as required.

Auto Power Off

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

- Off / On

Auto Protection Time

MENU  → System → Auto Protection Time → ENTER 



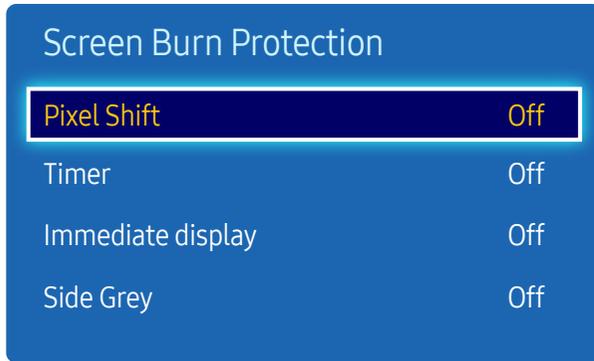
– The displayed image may differ depending on the model.

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

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

Screen Burn Protection

MENU  → System → Screen Burn Protection → ENTER 



– The displayed image may differ depending on the model.

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

The **Pixel Shift Time** setting allows you to programme the time between movements of the picture in minutes.

Pixel Shift

Minimize image retention by finely moving pixels horizontally or vertically.

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

Available Pixel Shift Settings and Optimum Settings.

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

- The **Pixel Shift** value may differ depending on the product size (inches) and mode.
- Displaying a still image or a **4:3** output for an extended period of time may cause image retention. This is not a defect in the product.
- If **Picture Size** is set to **Screen Fit**, **Pixel Shift** is disabled.

Screen Burn Protection

Pixel Shift	Off
Timer	Off
Immediate display	Off
Side Grey	Off

– The displayed image may differ depending on the model.

Timer

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

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

Timer

- **Off**
- **Repeat**: Display the image retention-preventive pattern set in **Mode** at specified time intervals(**Period**).
- **Interval**: Display the image retention-preventive pattern set in **Mode** for a specified period of time (from **Start Time** to **End Time**).
 - The option is enabled only when **Clock Set** is configured.
 - **Mode**, **Period**, **Time**, **Start Time** and **End Time** are enabled only when **Timer** is set to **Repeat** or **Interval**.
- **Mode**: Select a screen protective pattern to display.
 - **Pixel**: Pixels on the screen alternate black continuously.
 - **Rolling bar**: A vertical bar moves left to right.
 - **Fading screen**: The entire screen becomes brighter, then darker.
 - The **Rolling bar** and **Fading screen** patterns appear only once regardless of the specified repeat period or time.
- **Period**: Specify the time interval to activate the **Screen Burn Protection** function.
 - **1 hour ~ 10 hour**
 - The option is enabled when **Repeat** is selected for **Timer**.
- **Time**: Specify the duration to keep the **Screen Burn Protection** function on.
 - **10 Sec ~ 50 Sec**
 - Enabled when **Timer** is set to **Repeat** and **Mode** is set to **Pixel**.
- **Start Time**: Set the start time to activate the screen protection function.
 - The option is enabled when **Interval** is selected for **Timer**.
- **End Time**: Set the end time to deactivate the screen protection function.
 - The option is enabled when **Interval** is selected for **Timer**.

Screen Burn Protection

Pixel Shift Off

Timer Off

Immediate display Off

Side Grey Off

Immediate display

Select the screen saver you want to display immediately.

- Off / Pixel / Rolling bar / Fading screen

Side Grey

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

- Off / Light / Dark

– The displayed image may differ depending on the model.

Ticker

MENU  → System → Ticker → ENTER 

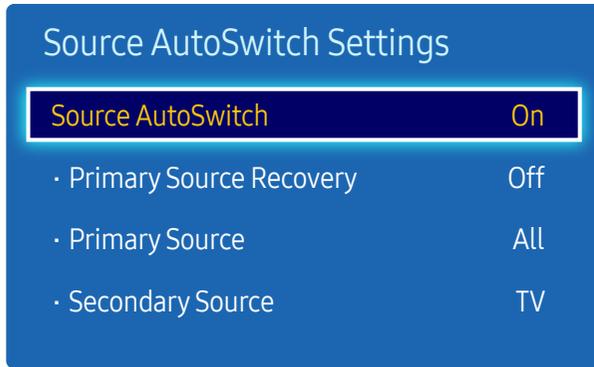
– The Ticker function is only available when Menu Language is set to English.

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

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

Source AutoSwitch Settings

MENU  → System → Source AutoSwitch Settings → ENTER 



- The displayed image may differ depending on the model.
- The **Source AutoSwitch Settings** option is only enabled when PIP is set to **Off**.

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

Source AutoSwitch

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

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

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

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

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

Primary Source Recovery

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

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

Primary Source

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

Secondary Source

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

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

Primary Source

Secondary Source

TV

HDMI1, HDMI2

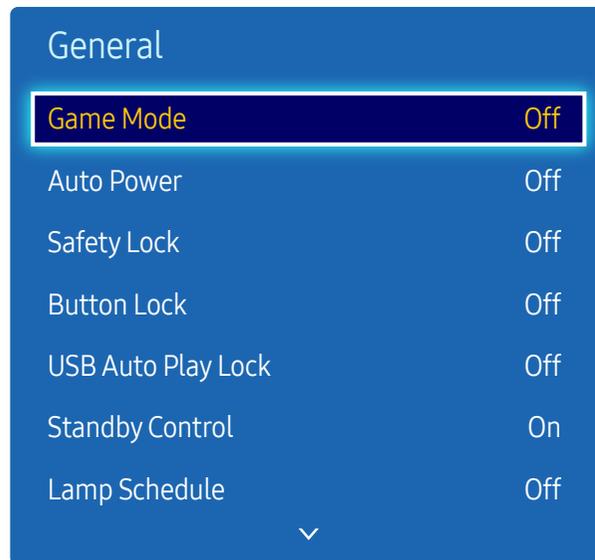
HDMI1, HDMI2

TV

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

General

MENU  → System → General → ENTER 



– The displayed image may differ depending on the model.

Game Mode

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

- Off / On
- Precautions and limitations for **Game Mode**
 - To disconnect the game console and connect another external device, set **Game Mode** to **Off** in the setup menu.
- If **Game Mode** is **On**, **Picture Mode** is set to **Standard** and **Sound Mode** is set to **Movie**.

Auto Power

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

- Off / On

Safety Lock

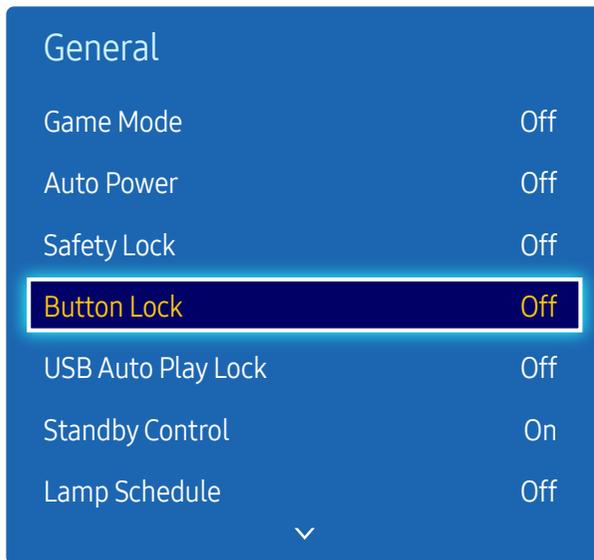
- Enter your 4 digit PIN number. The default PIN number is "0-0-0-0".
 - If you want to change the PIN number, use the **Change PIN** function.

It sets safe lock function.

- Off / On

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

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



– The displayed image may differ depending on the model.

Button Lock

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

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

- **Off / On**

USB Auto Play Lock

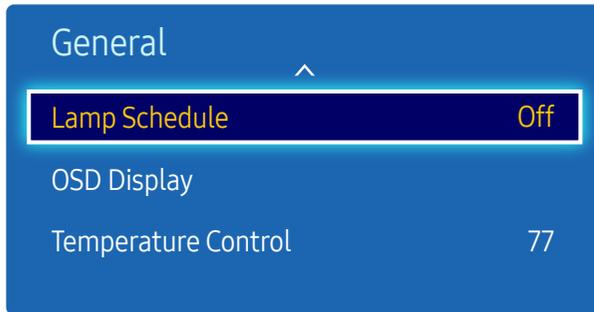
Select whether to automatically play **MagicInfo** content saved on a connected USB device.

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

Standby Control

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

- **Auto**
Power-saving mode will activate if no input signals are detected even though a source device is connected to the display.
The message **No Signal** will appear if no source device is connected.
- **On**
Power-saving mode will activate if no input signals are detected.
- **Off**
The message **No Signal** will appear if no input signals are detected.
 - The **Standby Control** option is only enabled when **Source** is set to **HDMI1, HDMI2**.
 - If **No Signal** is displayed although a source device is connected, check the cable connection.



– The displayed image may differ depending on the model.

Lamp Schedule

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

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

Lamp Schedule

Enable or disable the lamp schedule.

- **Off / On**

Schedule 1, Schedule 2

Time

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

Lamp

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

- **0 ~ 100**

OSD Display

Displays or hides a menu item on the screen.

Source OSD

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

- Off / On

No Signal OSD

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

- Off / On

MDC OSD

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

- Off / On

Temperature Control

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

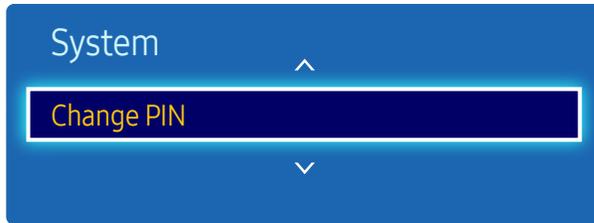
The default temperature is set to 77 °C.

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

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

Change PIN

MENU  → System → Change PIN → ENTER 



– The displayed image may differ depending on the model.

The **Change PIN** screen will appear.

Choose any 4 digits for your PIN and enter it in **Enter New PIN**. Reenter the same 4 digits in **Confirm New PIN**.

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

Clone Product

MENU  → System → Clone Product → ENTER 



– The displayed image may differ depending on the model.

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

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

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

Reset System

MENU  → System → Reset System → ENTER 

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

Reset All

MENU  → System → Reset All → ENTER 

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

DivX® Video On Demand

MENU  → System → DivX® Video On Demand → ENTER 

Shows the registration code authorised 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>".

Chapter 12

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.

Use Mode

MENU  → Support → Use Mode → ENTER 

Select the appropriate mode according to where the product is used.

If you choose **Demo Mode**, the demo content will be played automatically and the picture settings will be reset in 5 minutes after change.

- **Standard Use / Demo Mode**

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 centres and how to download products and software.

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

Chapter 13

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 recognised or files saved on the device may not be able to be read.
- If the product does not recognise 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 recognised. 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 recognised 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.

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

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

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 **USB device connected.** page automatically appears as soon as a USB device connects to the product.
 - If only one USB device is connected, files saved on the USB device are displayed automatically.
 - To view content saved on a USB device, connect the USB device to a USB port on the product.

Removing a USB device

Removing a USB device from Source

- 1 Press **SOURCE** on the remote control. Alternatively, go to **Source** using the OSD menu.
SOURCE → **Source**
- 2 Select **USB** from **Source**, and then press the **TOOLS** button on the remote control. Optional menu items are displayed.
- 3 Select **Disconnect USB Device** and wait until the USB device is disconnected. The USB device is disconnected.

Menu items in the media content list page

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

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

Available buttons and features during photo playback

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

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

Option Name	Operations
-------------	------------

Picture Mode	Change the Picture Mode .
---------------------	----------------------------------

Sound Mode	Change the Sound Mode . <ul style="list-style-type: none">– This menu item is only available when Background Music is playing.
-------------------	--

Information	View information about a file.
--------------------	--------------------------------

Available buttons and features during video playback

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

- **Pause / Play**
Pause or play a video.
The following features are available in pause mode. Note that sound cannot be heard in pause mode.
- **Rewind / Fast forward**
Rewind or fast forward a video. Speed up playback up to 3x, if required. To change the playback speed to the original speed, select .
- **Previous / Next**
To play the previous video, select  twice. Selecting  once will play the current video from the beginning.
To play the next video, select .
- **Search**
Select and play another video in the same folder. (**Search Titles / Search Time Bar**)
- **Repeat Mode**
Configure **Repeat Mode**. (**Off, Repeat One, Repeat All**)
- **Picture Size**
Change the screen size (**Picture Size**). Supported screen sizes vary depending on the image. (**Original / Mode1 / Mode2 / Smart View1 / Smart View2**)
- **Settings**

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

Available buttons and features during music playback

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

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

Supported Subtitle and Media play file formats

Subtitle

External

- MPEG-4 timed text (.txt)
- 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
-

Compatible image file format

Type

JPEG

4096 x 4096

PNG

BMP

Supported music file formats

File Extension

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

Supported Video Formats

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

Video Decoder

Supports up to H.264, Level 4.1

H.264 FMO / ASO / RS, VC1 SP / 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 over is not supported.

Supports only BD MVC Spec.

Audio Decoder

Supports up to WMA10 Pro 5.1 channel.

WMA lossless audio is not supported.

QCELP, AMR NB/WB are not supported.

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

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

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

Chapter 14

Troubleshooting Guide

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

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

Requirements Before Contacting Samsung Customer Service Centre

Testing the Product

Check if your product is operating normally by using the product test function.

If the screen remains blank while the power LED blinks even when the product is correctly connected to a PC, perform product testing.

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

Checking the Resolution and Frequency

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

Check the followings.

Installation issue (PC mode)

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

Screen issue

The power LED is off. The screen will not switch on.	Make sure that the power cord is connected.
No Signal is displayed on the screen.	Check that the product is connected correctly with a cable.
	Check that the device connected to the product is powered on.
Not Optimum Mode is displayed.	This message is displayed when a signal from the graphics card exceeds the product's maximum resolution and frequency.
	Refer to the Standard Signal Mode Table and set the maximum resolution and frequency according to the product specifications.
The images on the screen look distorted.	Check the cable connection to the product.
The screen is not clear. The screen is blurry.	Set the resolution and frequency to the recommended level.

Screen issue

The screen appears unstable and shaky.	Check that the resolution and frequency of the PC and graphics card are set within a range compatible with the product. Then, change the screen settings if required by referring to the Additional Information on the product menu and the Standard Signal Mode Table.
There are shadows or ghost images left on the screen.	
The screen is too bright. The screen is too dark.	Adjust Brightness and Contrast .
Screen colour is inconsistent.	Go to Picture and adjust the Colour Space settings.
White does not really look white.	Go to Picture and adjust the White Balance settings.
There is no image on the screen and the power LED blinks every 0.5 to 1 second.	The product is in power-saving mode. Press any key on the keyboard or move the mouse to return to the previous screen.
The product will turn off automatically.	Go to System and make sure Sleep Timer is set to Off . If a PC is connected to the product, check the power status of the PC. Make sure the power cable is connected properly to the product and power outlet. If the signal from a connected device is not detected, the product automatically turns off after 10 to 15 minutes.
Picture quality of the product is different from the dealer shop where it was purchased.	Use an HDMI cable to obtain high-definition (HD) picture quality.
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 analogue and digital products.

Screen issue

The brightness and colour do not look normal.

Go to **Picture** and adjust the screen settings such as **Picture Mode, Colour, Brightness** and **Sharpness**.

Go to **System** and adjust the **Energy Saving** settings.

Reset the screen settings to the default settings.

Broken lines are displayed on the edges of the screen.

If **Picture Size** is set to **Screen Fit**, change the setting to **16:9**.

Lines (red, green or blue) are displayed on the screen.

These lines are displayed when there is a defect in DATA SOURCE DRIVER IC on the monitor. Contact a Samsung Service Centre to resolve the issue.

The display looks unstable and then freezes.

The screen may freeze when a resolution other than the recommended resolution is used or if the signal is not stable. To resolve the issue, change the PC resolution to the recommended resolution.

The screen cannot be displayed in full screen.

A scaled SD (4:3) content file can cause black bars on both sides of an HD channel screen.

A video with an aspect ratio different from the product can cause black bars at the top and bottom of the screen.

Change the screen size setting to full screen on the product or source device.

Sound issue

There is no sound.

Check the volume.

Check if the sound is muted.

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 programme.

Video is available but there is no sound.

If you connect a PC or an external device to the monitor using a DVI-HDMI cable, no audio output is produced.

Go to **Sound** and change **Speaker Select** to **Internal**.

If a source device is used

- Make sure the audio cable is properly connected to the audio input port on the product.
- Check the audio output settings for the source device.
(For example, if an HDMI cable is connected to the monitor, the audio setting for the cable box may need to be changed to HDMI.)

If a DVI-HDMI cable is used, a separate audio cable is required.

If the product has a headphone port, make sure nothing is connected to it.

Reconnect the power cable to the device and then reboot the device.

There is static coming from the speakers.

Check the cable connection. Make sure a video cable is not connected to an audio input port.

Check the signal strength after connecting a cable.

Low signal level can cause corrupted sound.

Sound issue

There is audible sound when the volume is muted.

When **Speaker Select** is set to **External**, the volume button and mute function are disabled. Adjust the volume for the external speakers.

Audio settings for main speakers are separate from the internal speakers on the product. Changing or muting the volume on the product does not affect an external amplifier(decoder).

Sound from the monitor does not change after **Sound Mode** is changed.

Audio settings for main speakers are separate from the internal speakers on the product. Audio settings on a source device do not affect the internal speaker settings on the product.

There is an echo sound coming from the speakers.

When the built-in speakers are turned on, the built-in and external speakers make sound simultaneously. This may cause an echo effect due to different decoding rates between these two types of speakers. If this is the case, set **Speaker Select** to **External**.

Remote control issue

The remote control does not work.

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

Check if the batteries are flat.

Check for power failure.

Make sure that the power cord is connected.

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

Source device issue

A beeping sound is heard when my PC is booting.

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

Other issue

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 supported." appears.	The message "The defined resolution is not 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 colours 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 such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade. Some PC graphics cards may not automatically recognise HDMI signals that do not include sound. In this case, manually select a sound input.

Q & A

Question

Answer

How can I change the frequency?

Set the frequency on your graphics card.

- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings** → **Display adapter properties** → **Monitor**, and adjust **Screen refresh rate** under **Monitor settings**.

How can I change the resolution?

- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
- Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
- Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings**, and adjust the resolution.

How do I set powersaving mode?

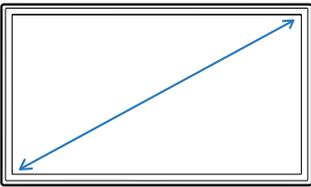
- Windows 7: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or **BIOS SETUP** on the PC.
- Windows 8: Set power-saving mode in **Settings** → **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** or **BIOS SETUP** on the PC.
- Windows 10: Set power-saving mode in **Settings** → **Personalization** → **Lock screen** → **Screen timeout settings** → **Power & sleep** or **BIOS SETUP** on the PC.

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

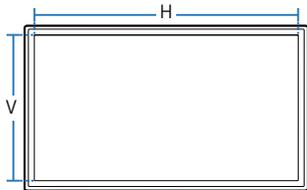
Chapter 15

Specifications

- Size



- Display area



General

Model Name

RM49H

Panel	Size	49 CLASS (48.5 inches / 123.2 cm)
	Display area	1073.779 mm (H) x 604.00 mm (V) 42.3 inches (H) x 23.8 inches (V)
Audio Output		10 W + 10 W
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.
Environmental considerations	Operating	Temperature : 0 °C - 40 °C (32 °F - 104 °F) * For installing the housing, keep the internal temperature at 40 °C or below. Humidity : 10% - 80%, non-condensing
	Storage	Temperature : -20 °C - 45 °C (-4 °F - 113 °F) Humidity : 5% - 95%, non-condensing

- Plug-and-Play

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

- Panel Dots (Pixels)

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

- This device is a Class B digital apparatus.

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

Preset Timing Modes

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

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

Synchronization	Horizontal Frequency	30 – 81 kHz
	Vertical Frequency	48 – 75 Hz
Resolution	Optimum resolution	1920 x 1080 @ 60 Hz
	Maximum resolution	1920 x 1080 @ 60 Hz

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

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

– Horizontal Frequency

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

– Vertical Frequency

The product displays a single image multiple times per second (like a fluorescent light) to display what the viewer sees. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 x 720	45.000	60.000	74.250	+/+
VESA, 1280 x 800	49.702	59.810	83.500	-/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1366 x 768	47.712	59.790	85.500	+/+
VESA, 1440 x 900	55.935	59.887	106.500	-/+
VESA, 1600 x 900 RB	60.000	60.000	108.000	+/+
VESA, 1680 x 1050	65.290	59.954	146.250	-/+
VESA, 1920 x 1080	67.500	60.000	148.500	+/+

Chapter 16

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 programme.
- If customer requests software installation and setup for the product.
- If a service technician removes/cleans dusts or foreign materials inside of the product.
- If customer requests an installation additionally after purchasing a product through home-shopping or online.

A Product damage caused by customer's fault

Product damage caused by customer's mishandling or wrong repair

If a product damage is caused by;

- External impact or drop.
- Use of supplies or separately sold product unspecified by Samsung.
- Repair from a person besides an engineer of outsourcing service company or partner of Samsung Electronics Co., Ltd.
- Remodeling or repairing the product by customer.
- Using it with incorrect voltage or non-authorized electrical connections.
- Not following the "cautions" in User Manual.

Others

- If product fails by natural disaster. (lightning, fire, earthquake, flood damage, etc)
 - If consumable components are all used up. (Battery, Toner, Fluorescent lights, Head, Vibrator, Lamp, Filter, Ribbon, etc.)
- If customer requests a service in case the product has no defect, service fee may be charged. So please read User Manual first.

Optimum Picture Quality and Afterimage Burn-in Prevention

Optimum Picture Quality

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

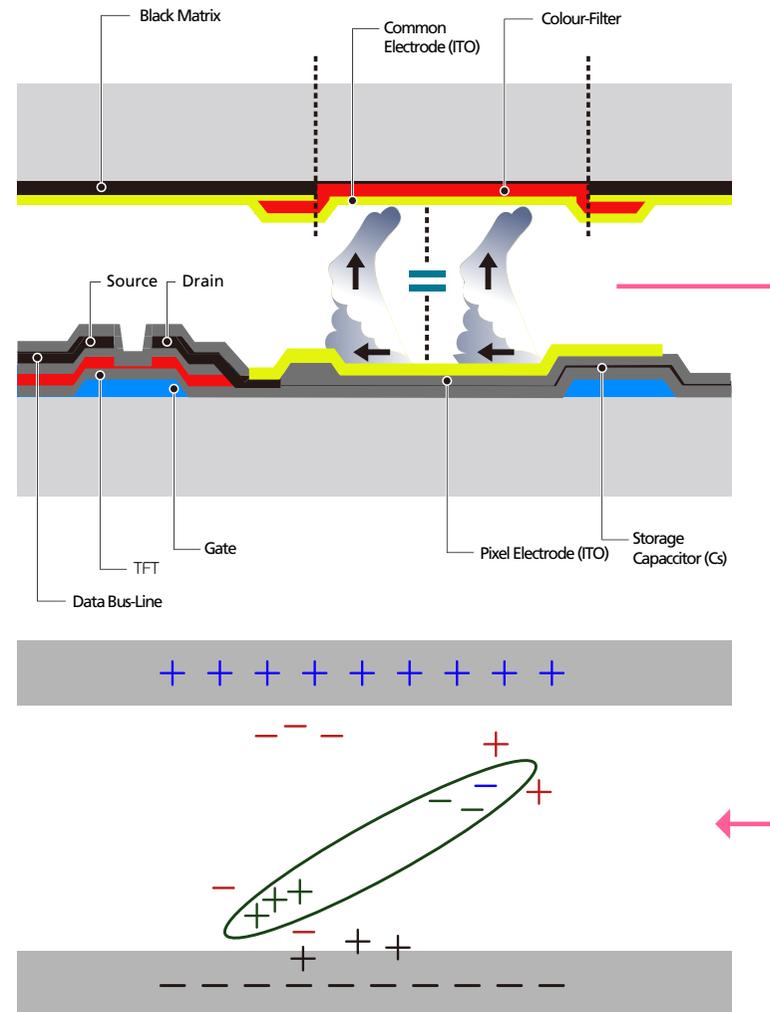
Prevention of Afterimage Burn-in

What is afterimage burn-in?

Afterimage burn-in should not occur when the LCD panel is operating normally. Normal operation refers to a continuously changing video pattern. If the LCD panel displays a fixed pattern for an extended period of time (more than 12 hours), a slight voltage difference may occur between the electrodes in pixels that control the liquid crystals.

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

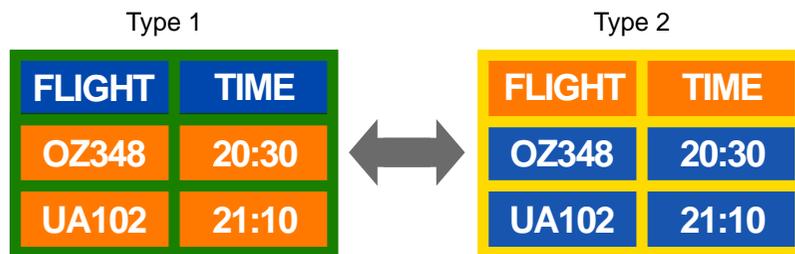
Afterimage burn-in should not occur when an LCD panel is operating in proper conditions.



Preventing afterimage burn-in

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

- Powering Off, Screen Saver and Power Saving Mode
 - Power off the product for 2 hours after using it for 12 hours.
 - Go to Display Properties > Power Supply on your PC and set the product to power off as required.
 - Using a screen saver is recommended.
It is best to use a single-colour or moving-image screen saver.
- Regular colour Change
 - Use 2 colours
 - Switch between 2 colours every 30 minutes as shown above.



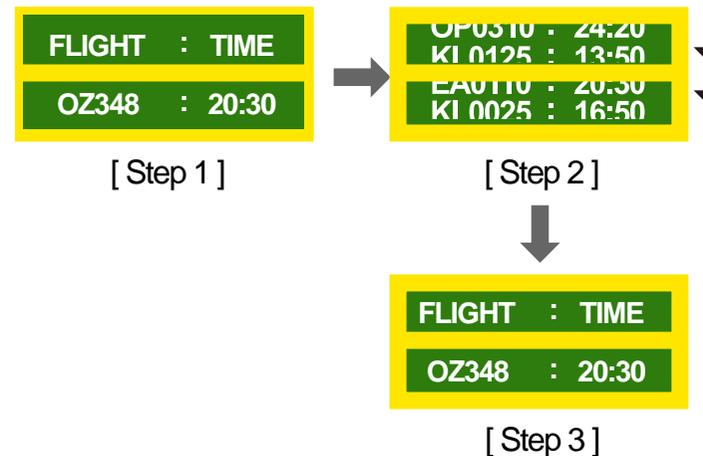
- Avoid combinations of a text colour and background colour of contrasting brightness. (Brightness: refers to the lightness or darkness of a colour which varies depending on the amount of light emitted.)
- Avoid using grey as it may contribute to afterimage burn-in.
- Avoid using colours of contrasting brightness (black and white; grey).



- Regular Text colour Change
 - Use bright colours of similar brightness.
 - Interval: Change text colour and background colour every 30 minutes



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



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

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

Terminology

480i / 480p / 720p / 1080i / 1080p_____ Each of the scanning rates above refers to the number of effective scanning lines that decides the screen resolution. The scanning rate may be indicated in i (interlaced) or p (progressive), depending on the scanning method.

- Scanning

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

- Progressive

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

- Interlaced

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

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

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

Vertical Frequency_____ The product displays a single image many times per second (like a fluorescent light that flickers) to display an image for a viewer to see. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz. E.g. 60Hz refers to a single image being displayed 60 times in one second.

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

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

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

Resolution_____ Resolution is the number of horizontal dots (pixels) and vertical dots (pixels) that form a screen. It represents the level of display detail. A higher resolution enables more data to be displayed on the screen and is useful to perform multiple tasks simultaneously. E.g. A resolution of 1920 X 1080 consists of 1,920 horizontal pixels (horizontal resolution) and 1,080 vertical pixels (vertical resolution).

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

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