SAMSUNG

User Manual

VM55B-R VH55B-E VM46B-U VM55B-U VM55B-E

The colour and the appearance may differ depending on the product, and the content in the manual is subject to change without prior notice to improve the performance.

An administration fee may be charged in the following situations:

(a) An engineer is called out at your request, but it is found that the product has no defect (i.e., where the user manual has not been read).

(b) You bring the unit to a repair centre, but it is found that the product has no defect (i.e., where the user manual has not been read).

You will be informed of the administration fee amount before a technician visits.

© Samsung

Samsung owns the copyright for this manual. Use or reproduction of this manual in parts or entirety without the authorization of Samsung is prohibited. Trademarks other than Samsung are property of their respective owners.

Table of contents

Before Using the Product

Safety Precautions 5
Safety symbols 5
Electricity and Safety 6
Installation 7
Operation 9
Precautions when handling the panel 11
Cleaning 12

Storage and Maintenance 12

Preparations

Checking the Components 13
Components 13

Parts 14
Reverse Side 14
Remote Control 15
Connection Using an IR Stereo Cable (sold separately) 17

Before Installing the Product (Installation Guide) 18
Switching between portrait and landscape 18
Ventilation 18

Installing the Wall Mount 19
Preparing before installing Wall-Mount 19
Installing the Wall Mount 19
Wall Mount Kit Specifications (VESA) 20

Connecting and Using a Source Device

Before Connecting 21
Pre-connection Checkpoints 21

Connecting to a PC 21
Connection using a DVI cable (Digital type) 21
Connection Using an HDMI-DVI Cable 22
Connection Using an HDMI Cable 22
Connection Using an DP Cable 23

Connecting to a Video Device 24
Connection Using an HDMI-DVI Cable 24
Connection Using an HDMI Cable 25

Connecting to an Audio System 25

Connecting the LAN Cable 26

Changing the Input source 27
Source 27

Multiple Display Control

Cable Connection 28
RS232C Cable 28
LAN Cable 29
Connection 31
Control Codes 32

Using MDC 39
MDC Programme Installation/Uninstallation 39

Home feature

Video Wall 40
Video Wall 40
Horizontal x Vertical 40
Screen Position 41
Format 41

On/Off Timer 42
On Timer 42
Off Timer 42
Holiday Management 43

Table of contents

Network Settings 44

ID Settings 45
Device ID 45
Device ID Auto Set 45
PC Connection Cable 45

More settings 46

Screen Adjustment

Backlight / Brightness / Contrast / Sharpness / Picture Enhancer / Color / Tint (G/R) 47

Color Temperature 47

White Balance Settings 48

Uniformity 48

Gamma 48

Black Equalizer 48

Picture Options 49
Color Tone 49
HDMI Black Level 49
Input Signal Plus 49

Apply Picture Settings 49

Picture Size 49
Picture Size 49

Picture Off 50

Reset Picture 50

OnScreen Display

Display Orientation 51
Onscreen Menu Orientation 51
Source Content Orientation 51
Aspect Ratio 51

Screen Protection 52
Pixel Shift 52
Timer 52
Immediate Display 52
Side Gray 52

Message Display 53
Source Info 53
No Signal Message 53
MDC Message 53

Menu Language 53

Reset OnScreen Display 53

System

Setup 54

Time 55
Clock Set 55
DST 55
Sleep Timer 55
Power On Delay 55

Auto Source Switching 56
Auto Source Switching 56
Primary Source Recovery 56
Primary Source 56
Secondary Source 56

Power Control 56
Auto Power On 56
Standby Control 57
Remote Configuration 57
Power Button 57

Eco Solution 57
Energy Saving 57
Screen Lamp Schedule 57
No Signal Power Off 58
Auto Power Off 58

Table of contents

Temperature Control 58

Change PIN 58

General 59
Security 59
HDMI Hot Plug 59

Frame Alignment 59

Reset System 59

Sound Adjustment

HDMI Sound 60

Sound on Video Call 60

Reset Sound 60

Support

Software Update 61
Updating via USB Device 61

Contact Samsung 61

Go to Home 62
Video Wall 62
On/Off Timer 62
Network Settings 62
ID Settings 62
More settings 62

Reset All 62

Troubleshooting Guide

Requirements Before Contacting Samsung Customer Service Centre 63
Testing the Product 63
Checking the Resolution and Frequency 63
Check the followings. 64

Specifications

General 71

Preset Timing Modes 73

Appendix

Responsibility for the Pay Service (Cost to Customers) 74
Not a product defect 74
A Product damage caused by customer's fault 74
Others 74

Prevention of Afterimage Burn-in 75
What is afterimage burn-in? 75
Recommended prevention practices 75

Licence 76

Chapter 01
Before Using the Product

Safety Precautions

The following safety instructions are to ensure your personal safety and prevent property damage. Please read the following to ensure the proper use of the product.

Safety symbols

Symbol	Name	Meaning
	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.
	Prohibition	Do NOT attempt.
	Instruction	Follow directions.

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.		AC voltage: Rated voltage marked with this symbol is AC voltage.
	This symbol indicates that this product has included important literature concerning operation and maintenance.		DC voltage: Rated voltage marked with this symbol is DC voltage.
	Class II product: This symbol indicates that a safety connection to electrical earth (ground) is not required. If this symbol is not present on a product with a mains lead, the product MUST have a reliable connection to protective earth (ground).		Caution. Consult instructions for use: This symbol instructs the user to consult the user manual for further safety related information.

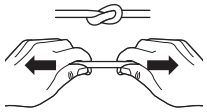
Electricity and Safety

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

Warning

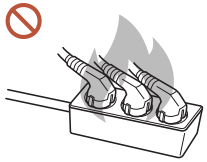
Do not touch the power plug with wet hands.

Otherwise, an electric shock may result.



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

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



Do not connect multiple products to a single power socket.

Overheated power sockets may cause a fire.

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

An unsecure connection may cause a fire.

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

A fire may result.

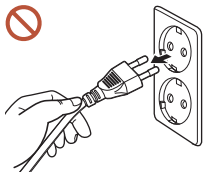
Connect the power plug to a grounded power socket. (Except for devices that do not provide grounding)

An electric shock or injury may result.

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

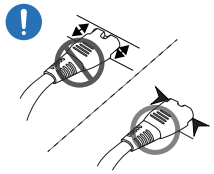
An electric shock or fire may result.

Caution



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

An electric shock or fire may result.



When connecting the power plug to the port, be sure to connect it completely.

If the power plug is not completely connected to the port, the plug may be unexpectedly disconnected, or there is a risk of overheating due to overcurrent, leading to safety accidents.

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

An electric shock or fire may result.

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

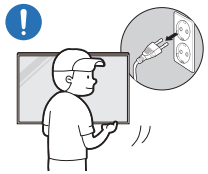
When a problem occurs with the product, the power cord must be unplugged to completely cut off power to the product. Note that the product is not completely powered down by using only the power button on the remote.

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

The product may become damaged by an electric shock.

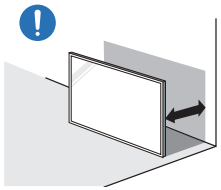
Installation

Warning



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

Damage to the cable may cause a fire or electric shock.



When installing the product, keep it at a distance from the wall so that it is well ventilated.

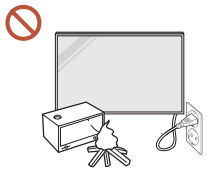
An increased internal temperature may cause a fire.

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

An increased internal temperature may cause a fire.

Keep the plastic packaging out of the reach of children.

Children's misuse of the plastic packaging may cause suffocation.



Do not install the power cable (DC power supply) and the product near heat sources.

(Candles, mosquito repellents, cigarettes, sprays, heating devices, places exposed to direct sunlight, and more)

When installing the product, fix it firmly so that it does not fall.

If the product is not fixed firmly and a child touches the product while playing, the product may fall, causing damage to the product or injury to the child.

Do not install the product in a kitchen or near a kitchen counter.

Edible oil or oil vapor can damage or deform the product.

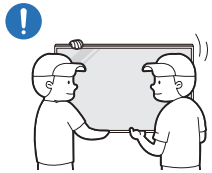
Have a technician install the wall-mount hanger.

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

If the product is installed in an unusual location, the surrounding environment may cause a serious quality problem. Therefore, be sure to contact Samsung Customer Service Centre before installation.

(Places with high levels of fine dust, areas where chemicals are used, locations with extremely high or low temperatures, humid or wet environments, vehicles or other means of transportation, industrial sites such as metal processing plants or stations where metal dust may be present.)

Caution



When lifting and moving the product, do not touch the screen display, and make sure that at least two people work together.

The product may fall, causing personal injury or product damage.

Do not lay down the product on its front.

The screen may become damaged.

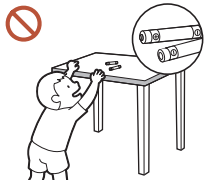
Prolonged exposure to direct sunlight may discolour the surface of the screen display.

Operation

Warning

If the product generates a strange noise, a burning smell, or smoke, unplug the power plug immediately and contact your Samsung Customer Service Centre.

An electric shock or fire may result.

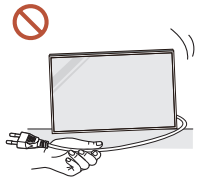


Keep the remote control batteries and the small accessories out of the reach of children. Ensure children do not swallow any of them.

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

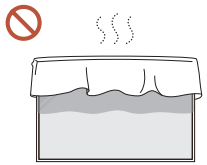
If the product is dropped or its appearance is damaged, turn off the power switch and disconnect the power cord. Then contact Samsung Customer Service Centre.

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



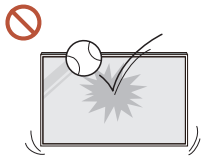
Do not move the product by pulling the power cord or any cable.

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



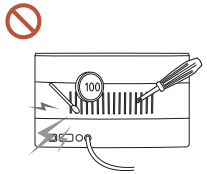
Ensure the vents are not blocked by tablecloths or curtains.

An increased internal temperature may cause a fire.



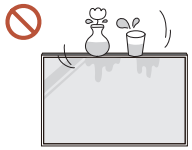
Do not apply an impact to the product.

- The screen display may be damaged.
- An electric shock or fire may result.



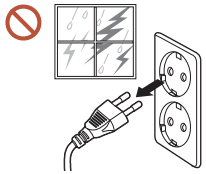
Do not insert metallic objects (chopsticks, coins, hairpins, etc) or objects that burn easily (paper, matches, etc) into the product (via the vent or input/output ports, etc).

- If foreign substances enter the product, be sure to power off the product and disconnect the power cord. Then contact Samsung Customer Service Centre.
- Product failure, an electric shock or fire may result.



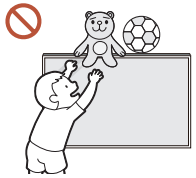
Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.

- If foreign substances such as water enter the product, be sure to disconnect the power cord. Then contact Samsung Customer Service Centre.
- Product failure, an electric shock or fire may result.



During a lightning or thunderstorm, power off the product and disconnect the power cord.

An electric shock or fire may result.

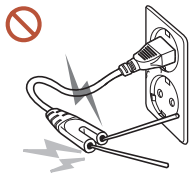


Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

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

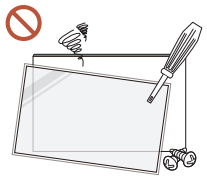
Do not hang on or climb on the product.

- The product may fall, causing personal injury or even death.
- Be especially careful that children do not hang on or climb on the product.



While the power plug is plugged into a power socket, do not insert a chopstick or other conductor into a remaining power socket. Also, after disconnecting the power plug from the power socket, do not touch the pins of the plug immediately.

Otherwise, an electric shock may result.



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

- Contact Samsung Customer Service Centre for repairs.
- An electric shock or fire may result.

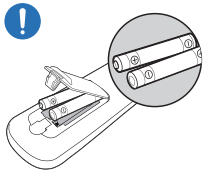
If a gas leakage is found, do not touch the product or the power plug, and ventilate the room immediately.

Sparks can cause an explosion or fire.

Do not use humidifiers or stoves around the product.

An electric shock or fire may result.

Caution



Insert each battery so that its polarity (+, –) is correct.

If the polarity is not correct, the battery may rupture or the internal fluid may leak, causing contamination and damage to the surroundings, fire, or personal injury.

Do not place heavy objects on the product.

Product failure or personal injury may result.

When you do not use the product for a long time due to vacation or other reason, disconnect the power cord from the power socket.

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.

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.

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

Eye fatigue will be relieved.

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

When you do not use the product for a long time, activate power-saving mode or set the screen saver to moving-picture mode.

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

An explosion or fire may result.

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.

Do not watch the product screen too closely and continuously for a long time.

Your eyesight may deteriorate.

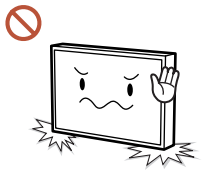
Do not lift or move the product when it is in operation.

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

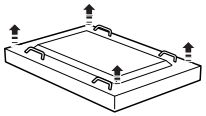
When using headphones or earphones, do not turn the volume too high or use them for a long time.

Damage to your hearing may result.

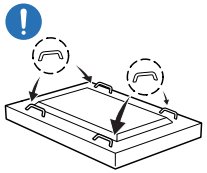
Precautions when handling the panel



Do not stand the product as shown in the image. The panel is fragile and can get damaged.



Lay the product down to handle it as shown in the image. (the packaging can be used).



Ensure you use the handles on the back when moving the product.

Do not hold or grasp any area of the product within 15 mm from the front.

Cleaning

Warning

Do not spray water or cleaner directly on the product.

- The product's surface may be damaged, or the markings may be erased.
- An electric shock or fire may result.

Caution

When cleaning, be sure to disconnect the power plug and wipe gently with a soft and dry cloth such as superfine fibers or cotton flannels to prevent scratches.

The product's surface may be damaged, or the markings may be erased.

Be sure to use a soft and dry cloth such as superfine fibers or cotton flannels because the surface of the product and the screen display are vulnerable to scratches.

The product's surface or the screen display can be easily scratched with foreign substances.

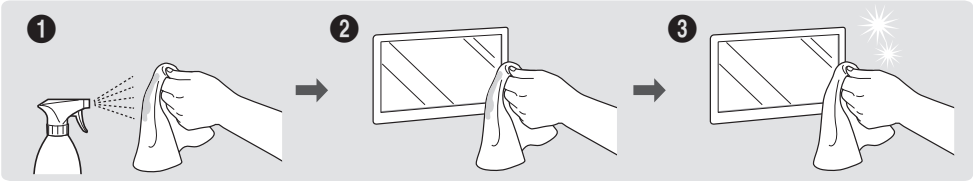
Do not apply chemicals containing alcohol, solvent, or surfactant such as wax, benzene, thinner, pesticide, air freshener, lubricant, or cleaner to the product.

The product's exterior may be discoloured or cracked, the surface of the panel may be peeled off, or the markings may be erased.

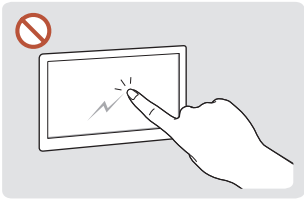
Storage and Maintenance

Cleaning the exterior and display

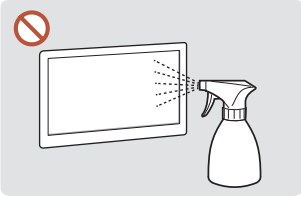
Wipe the surface with a slightly wet, soft cloth, and then wipe with a dry cloth.



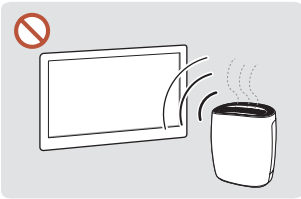
Precautions



Do not scratch the screen with nails or sharp objects. Scratches may leave marks or damage the product.



Do not spray water directly on any part of the product. Product failure, an electric shock or fire may result from water that enters the product.



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

- Removing a sticker attached on the screen may leave residues. Clean the residues before watching the screen.
- Do not strongly press and rub the product. Damage to the product may result.
- Do not wipe the screen with chemicals. Product failure may result.
- Contact Samsung Customer Service Centre if the inside of the product needs cleaning (service fee will be charged).

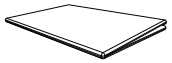
Chapter 02
Preparations

Checking the Components

- Contact the vendor where you purchased the product if any components are missing.
- The appearance of the components may differ from the images shown.
- 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

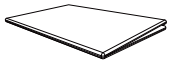
― Components may differ in different locations.



Quick Setup Guide

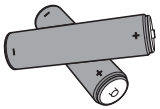
Warranty card

(Not available in some locations)



Regulatory guide

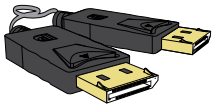
Power cord



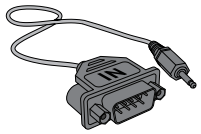
Batteries (AAA x 2)

(Not available in some locations)

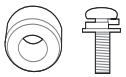
Remote Control



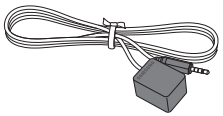
DP cable



RS232C adapter



Wall Mount Adapter x 4 / Screw x 4



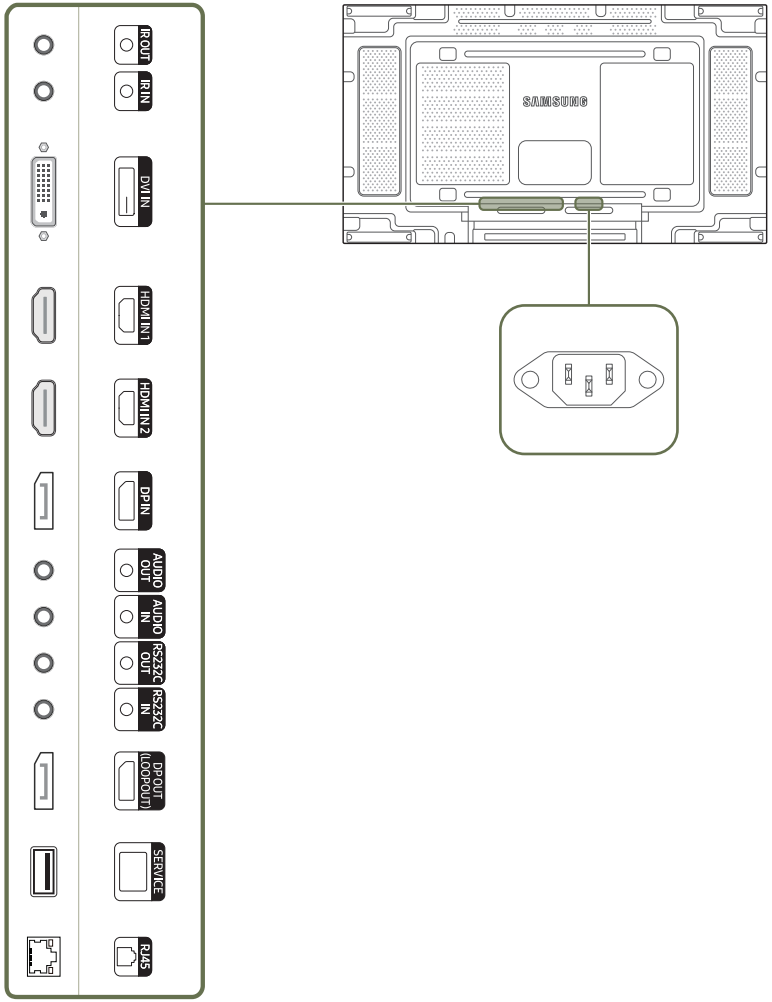
External IR cable

(Not available in some locations)

Parts

Reverse Side

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

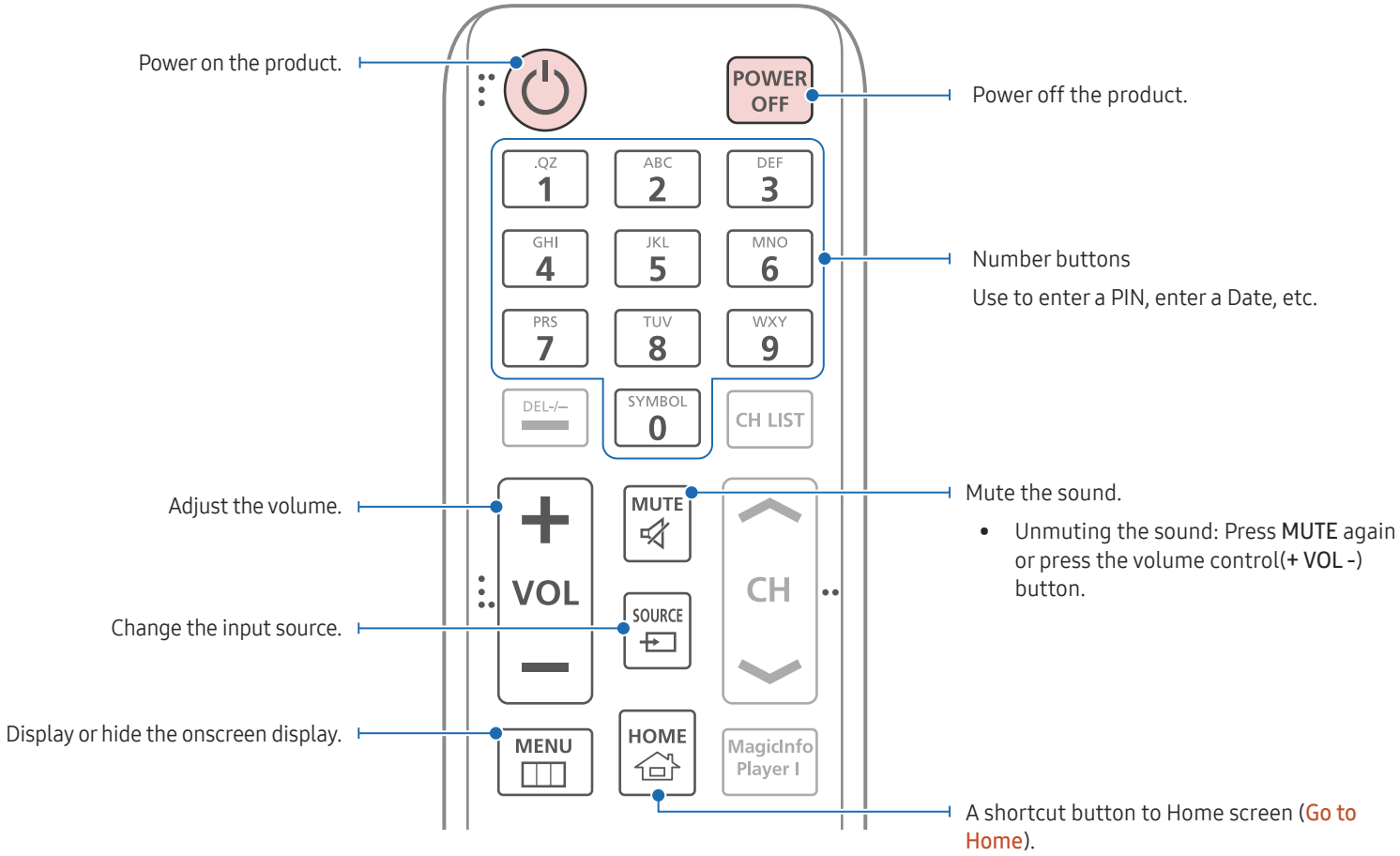


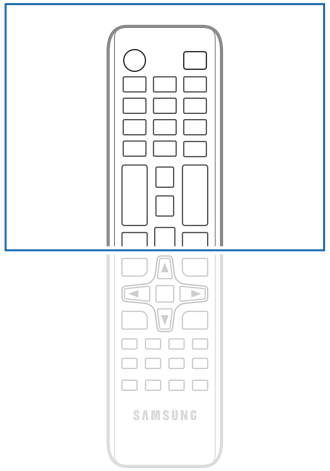
Port	Description
IR OUT	Receives the remote control signal via the external sensor board and outputs the signal via LOOP OUT.
IR IN	Supplies power to the external sensor board or receives the light sensor signal.
DVI IN	Connects to a source device using a DVI cable or HDMI-DVI cable.
HDMI IN 1, HDMI IN 2	Connects to a source device using an HDMI cable.
DP IN	Connects to a PC using a DP cable.
AUDIO OUT	Outputs sound to an audio device via an audio cable.
AUDIO IN	Receives sound from a source device via an audio cable.
RS232C OUT	Connects to multiple products using a serial cable. ― The serial cable is not provided with the product. Contact your vendor for purchase.
RS232C IN	Connects to MDC using an RS232C adapter.
DP OUT (LOOPOUT)	Connects to another product using a DP cable. ― When connecting monitors through DP Loopout, using the DP cable that came with the package is recommended. ― This port uses an algorithm that is specific to UHD resolution input and output. The port is not compatible with monitors that have FHD content-specific DP Loopout ports. Connecting Loopout ports between monitors of the same model is recommended.
SERVICE	Dedicated to service technicians.
RJ45	Connects to MDC using a LAN cable. (10/100 Mbps)

Remote Control

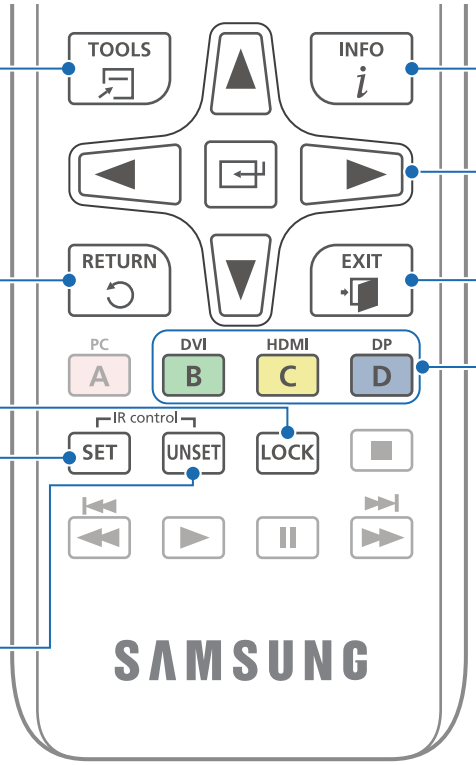
― Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.

― A button without a description in the image below is not supported on the product.





– Remote control button functions may differ for different products.



Quickly select frequently used functions.

Display information about the current input source.

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

Confirm a menu selection.

Return to the previous menu.

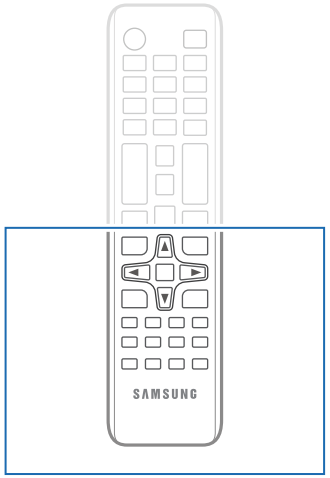
Exit the current menu.

Select from the connected external devices.

It sets safe lock function.

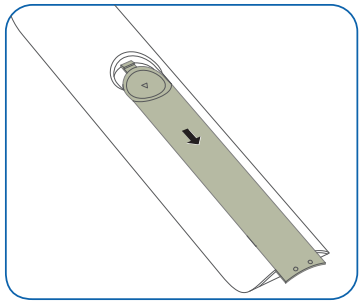
Press the **SET** button and enter a device ID using numeric buttons. Control the product using the remote control.

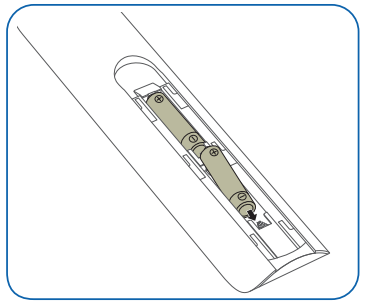
Cancel a value that has been set using the **SET** button and control all connected products using the remote control.

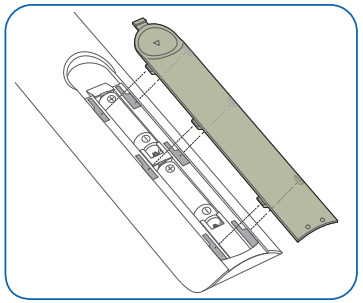


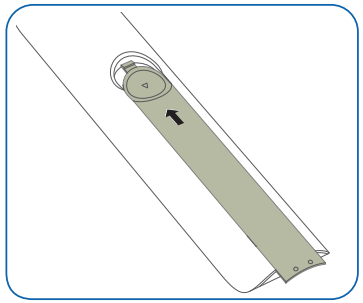
– Remote control button functions may differ for different products.

To place batteries in the remote control (AAA x 2)





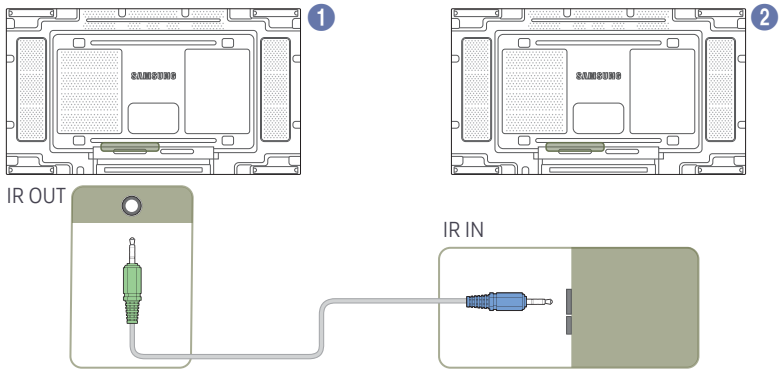




Connection Using an IR Stereo Cable (sold separately)

Make sure to connect the External IR cable while the product is powered off. Then, power on the product.

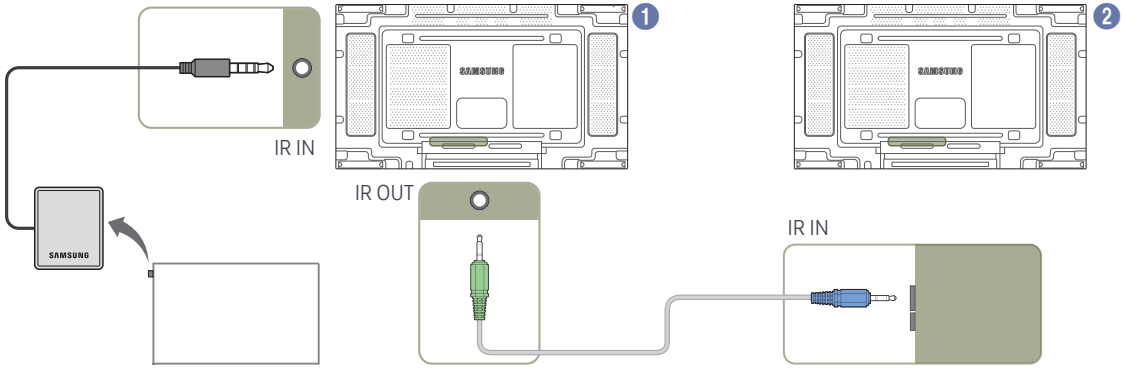
Controlling more than one display product using your remote control



- Connect the **IR OUT** port on the product to the **IR IN** port on the other display product using the dedicated stereo cable.
- A command sent from the remote control pointed at product 1 will be received by both display products 1 and 2.

― The appearance may differ depending on the product.

Controlling more than one display product using an External IR cable



- A command sent from the remote control pointed at product 1 (to which the External IR cable is connected) will be received by both display products 1 and 2.

― The appearance may differ depending on the product.

― The external IR cable can be placed on the side of the product as long as the cable length permits.

Before Installing the Product (Installation Guide)

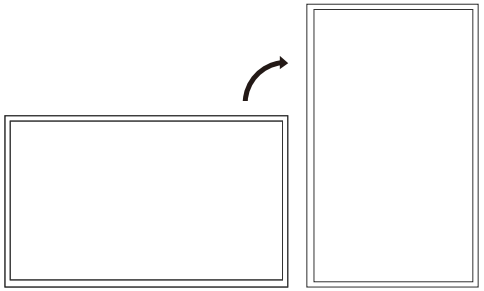
To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

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

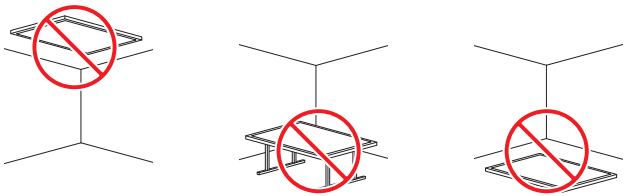
Switching between portrait and landscape

― Contact Samsung Customer Service Centre for further details.

- To use the product in portrait orientation, rotate it clockwise.



― Do not use this model installed on a ceiling, floor, or table.



Ventilation

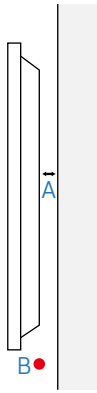
― Contact Samsung Customer Service Centre for further details.

Installation on a Perpendicular Wall

A Minimum 40 mm

B Ambient temperature: Under 35°C

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



Installation on an Indented Wall

Plane view

A Minimum 40 mm

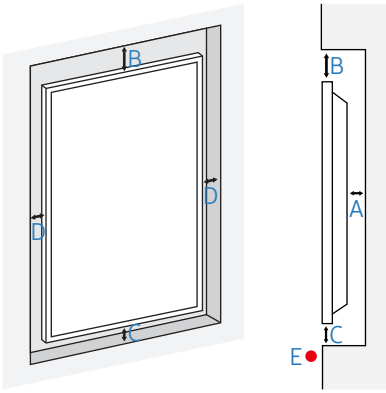
B Minimum 70 mm

C Minimum 50 mm

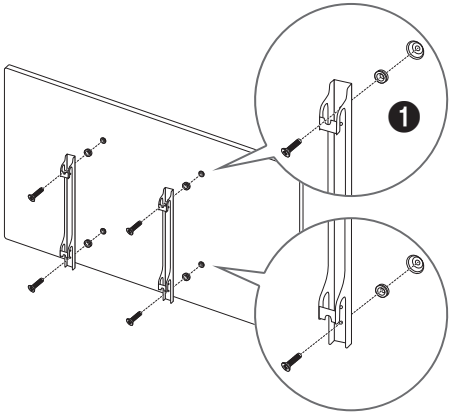
D Minimum 50 mm

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



Preparing before installing Wall-Mount

Use the Wall Mount Adapter (1) to install the wall mount.

Installing the Wall Mount

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

In order to respond to ADA compliance, it is necessary to use a wall mount that is compatible with our products and satisfies a thickness of 30 mm or less.

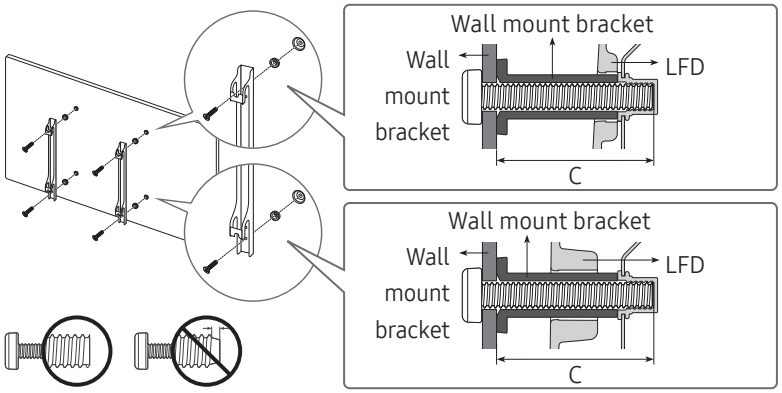
ex) RXT's ** product

SAMSUNG MAKES NO WARRANTIES OR REPRESENTATIONS AS TO THE PERFORMANCE OF ANY THIRD PARTY PRODUCTS, INCLUDING BUT NOT LIMITED TO WALL MOUNTS.

SAMSUNG EXPRESSLY DISCLAIMS ANY REPRESENTATION OR WARRANTY, TO PURCHASER OR ANY OTHER PERSON, WITH RESPECT TO THIRD PARTY PRODUCTS, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANITES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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

VESA screw hole specs (A * B) in millimetres	C (mm)	Standard Screw	Quantity
600 x 400	8 ~ 15	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.

Chapter 03
Connecting and Using a Source Device

Before Connecting

Pre-connection Checkpoints

― Refer to the user guide for the source device you want to connect with.
The number and location of ports available on the source device may vary.

― Do not connect the power cable until all connections are completed.
Connecting the power cable during connection may damage the product.

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

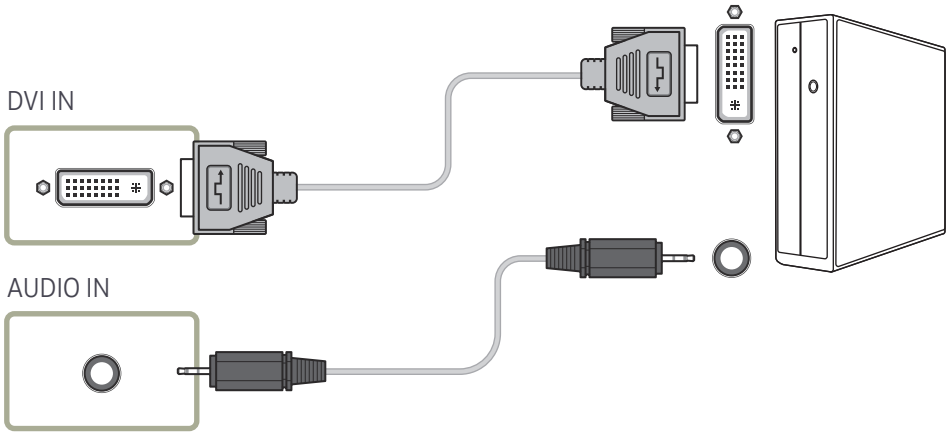
― We recommend using authorised cables for HDMI or DP cable connections.

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.

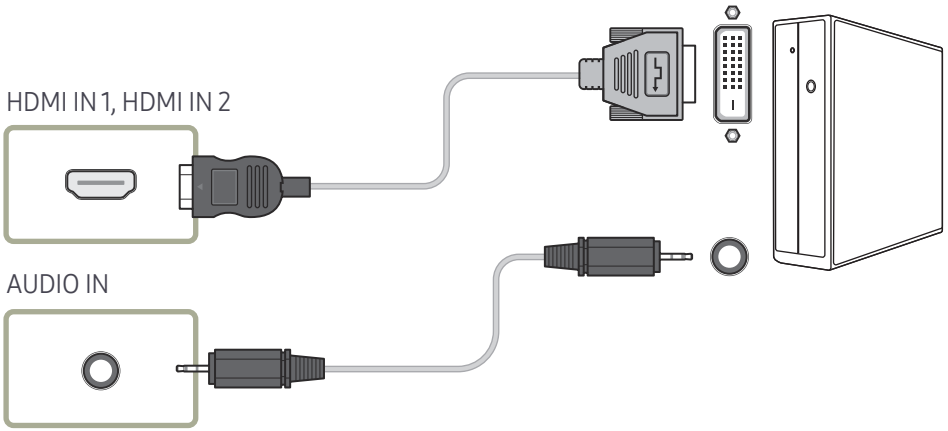
Connection using a DVI cable (Digital type)

― Connecting parts may differ in different products.



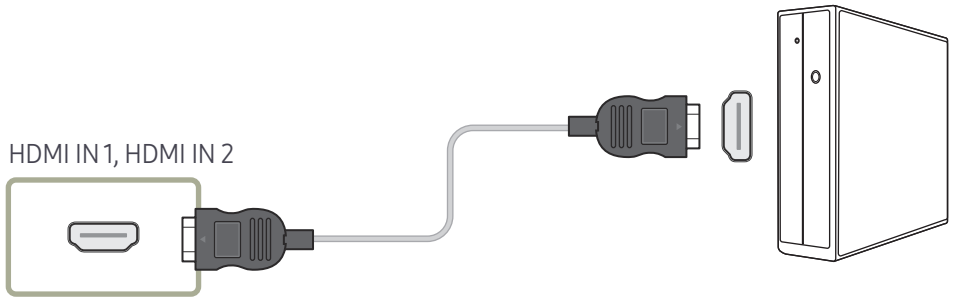
Connection Using an HDMI-DVI Cable

― Connecting parts may differ in different products.



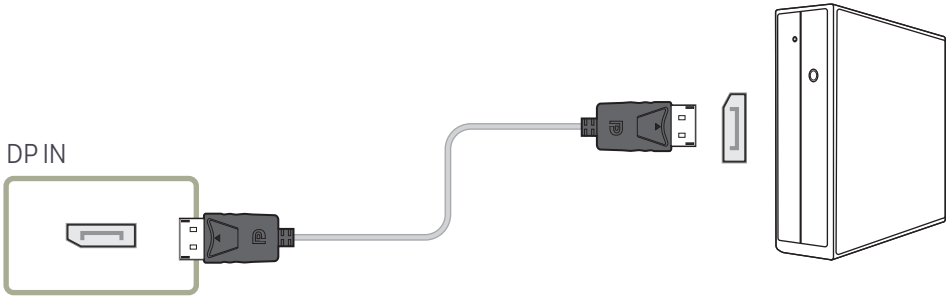
Connection Using an HDMI Cable

― Connecting parts may differ in different products.



Connection Using an DP Cable

― Connecting parts may differ in different products.



- Precautions for using DP
  - ― To increase the standby power capacity, the product stops DP communication when it is turned off or in power-saving mode.
  - ― If the product in dual monitor mode is turned off or goes into power-saving mode, monitor setting changes may not be updated. As a result, screen output may not be displayed properly.
  - ― Some graphics cards that are not compliant with the DP standard may prevent the Windows Booting/Bios screen from being displayed when the product is in power-saving mode. If this is the case, make sure to turn on the product first before turning on your PC.
  - ― The DisplayPort interface (**DP IN**) on the product and the provided DP cable are designed based on the VESA standards. Using a DP cable that is not VESA compliant may cause the product to function improperly. Samsung shall not be held responsible for any issues from using a cable that is not VESA compliant.
    Make sure to use a DP cable that is VESA compliant.

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.

― Press the **SOURCE** button on the remote control to change the source.

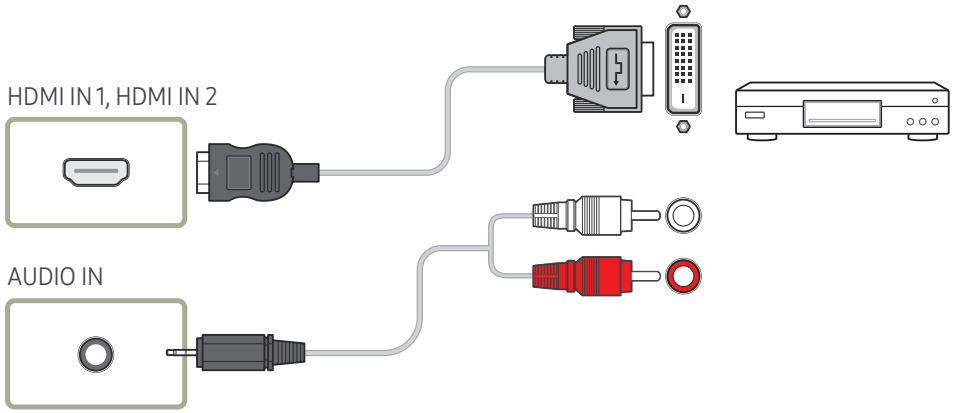
Connection Using an HDMI-DVI Cable

― Audio will not be enabled if the product is connected to a video device using an HDMI-DVI cable. To resolve this, additionally connect an audio cable to the audio ports on the product and video device.

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

― Make sure to connect the same colour connectors together. (white to white, red to red, etc.)

― Connecting parts may differ in different products.

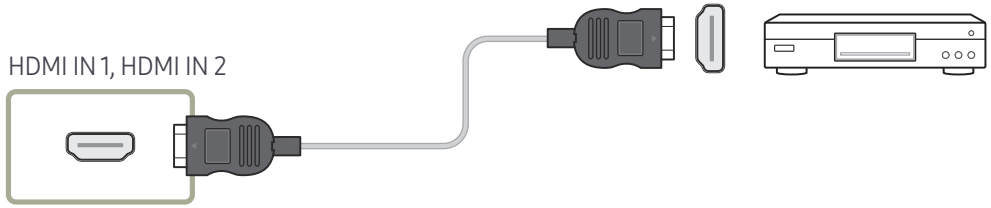


Connection Using an HDMI Cable

― Connecting parts may differ in different products.

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

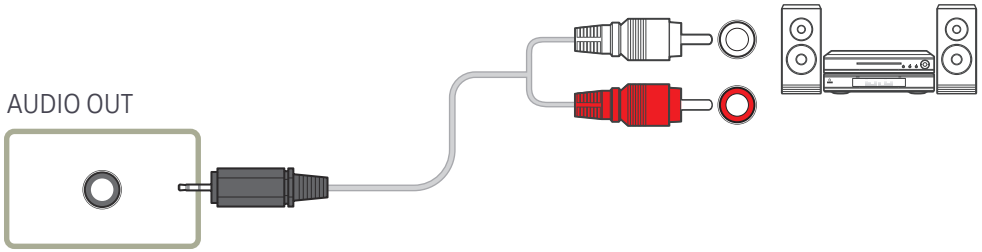
- For better picture and audio quality, connect to a digital device using an HDMI cable.
- An HDMI cable supports digital video and audio signals, and does not require an audio cable.
  - To connect the product to a digital device that does not support HDMI output, use an HDMI-DVI and audio cables.
-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



Connecting to an Audio System

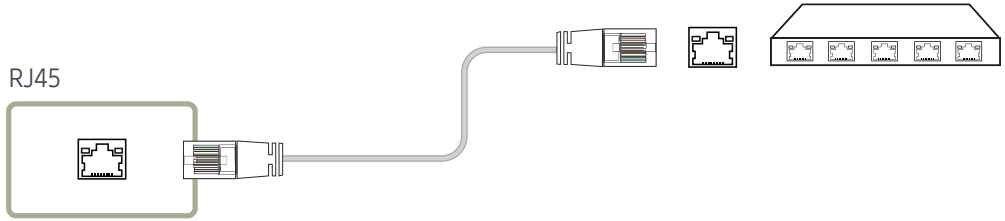
― Connecting parts may differ in different products.

― Make sure to connect the same colour connectors together. (white to white, red to red, etc.)



Connecting the LAN Cable

― Connecting parts may differ in different products.

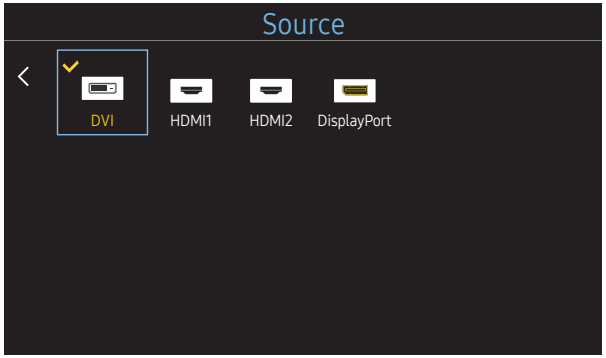


- Use Cat7(*STP Type) cable for the connection.
  *STP: Shielded Twist Pair

Changing the Input source

Source

SOURCE → Source



– The displayed image may differ depending on the model.

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

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

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

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

Edit Name

SOURCE → Source → TOOLS → Edit Name → ENTER

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

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

― The list can include the following source devices. Source devices on the list differ depending on the selected source.
VCR / DVD / Cable STB / HD STB / Satellite STB / AV Receiver / DVD Receiver / Game / Camcorder / DVD Combo / DHR / PC / DVI PC / DVI Devices

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

- When connecting a PC to the HDMI IN 1, HDMI IN 2 port, set Edit Name to PC. In other cases, set Edit Name to AV devices.
- When connecting a PC to the HDMI IN 1, HDMI IN 2 port with HDMI to DVI cable, you should set the product to DVI PC mode under Edit Name.
- When connecting an AV devices to the HDMI IN 1, HDMI IN 2 port with HDMI to DVI cable, you should set the product to DVI Devices mode under Edit Name.

Chapter 04
Multiple Display Control

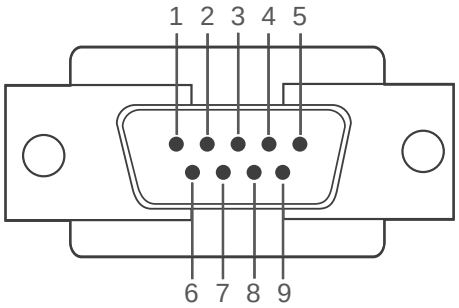
Control multiple display devices connected to a PC simultaneously.

Cable Connection

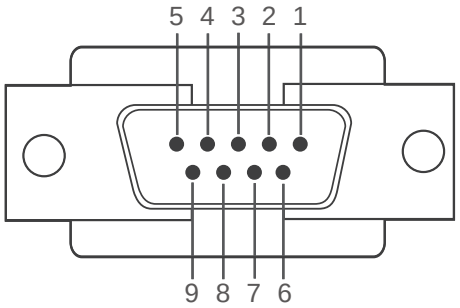
RS232C Cable

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

- Pin assignment



<Male type>

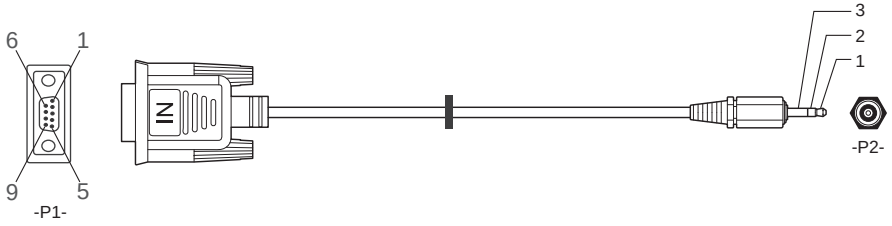


<Female type>

Pin	Signal
1	Detect data carrier
2	Received data
3	Transmitted data
4	Prepare data terminal
5	Signal ground

Pin	Signal
6	Prepare data set
7	Send request
8	Clear to send
9	Ring indicator

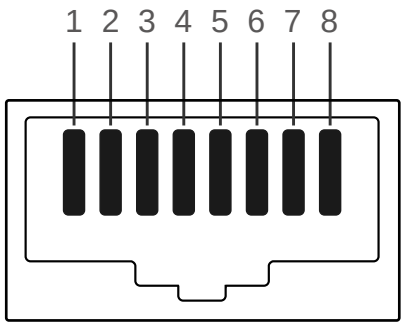
- RS232C cable
  Connector: 9-Pin D-Sub to Stereo Cable



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

LAN Cable

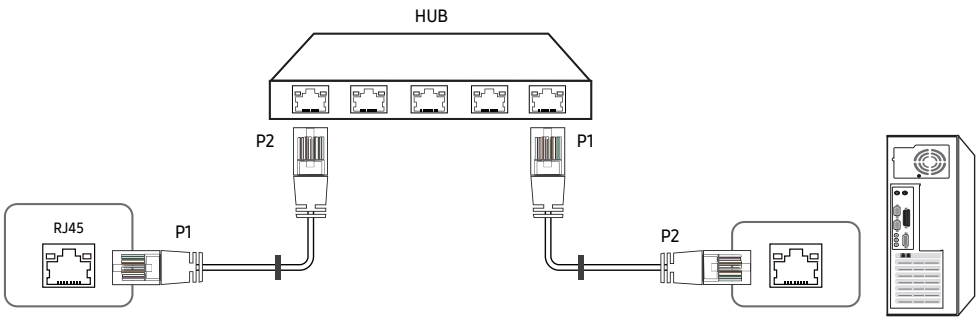
- Pin assignment



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

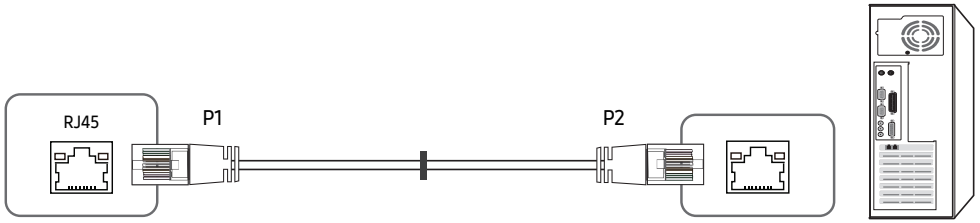
- Connector : RJ45

Direct LAN cable (PC to HUB)



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

Cross LAN cable (PC to LFD)

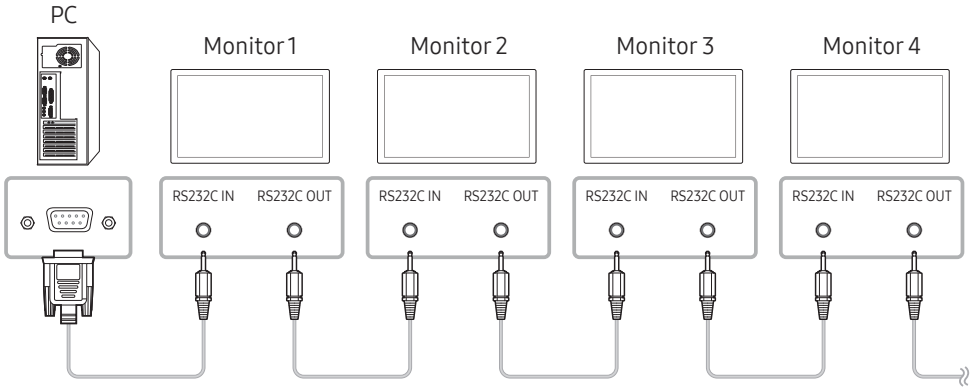


Signal	P1		P2	Signal
TX+	1	⟷	3	RX+
TX-	2	⟷	6	RX-
RX+	3	⟷	1	TX+
RX-	6	⟷	2	TX-

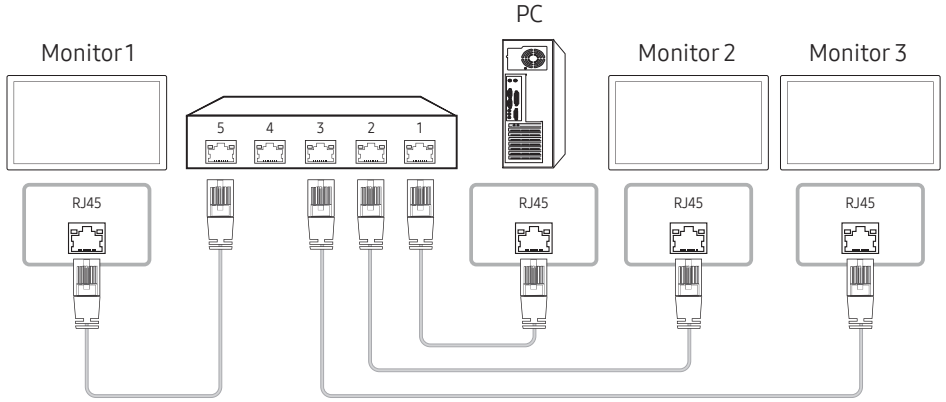
Connection

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

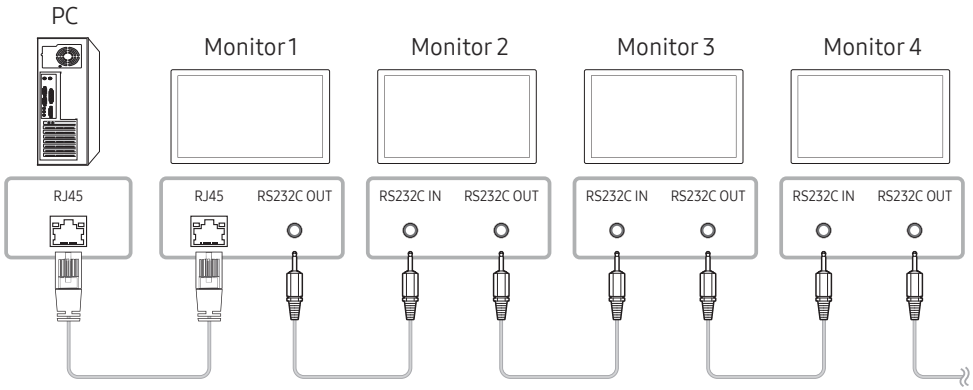
- Connection 1



- Connection 2



- Connection 3



Control Codes

Viewing control state (Get control command)

Header	Command	ID	Data length	Checksum
0xAA	Command type		0	

Controlling (Set control command)

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

Command

No.	Command type	Command	Value range
1	Power control	0x11	0~1
2	Volume control	0x12	0~100
3	Input source control	0x14	-
4	Screen size control	0x19	0~255
5	Video wall mode control	0x5C	0~1
6	Safety Lock	0x5D	0~1
7	Video Wall On	0x84	0~1
8	Video Wall User Control	0x89	-

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

E.g. Power On & ID=0

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

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

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

Power control

- Function
  A product can be powered on and off using a PC.
- Viewing power state (Get Power ON / OFF Status)

Header	Command	ID	Data length	Checksum
0xAA	0x11		0	

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

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

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

1: Power ON

0: Power OFF

- Ack

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

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

- Nak

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

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

Volume control

- Function
  The volume of a product can be adjusted using a PC.
- Viewing volume state (Get Volume Status)

Header	Command	ID	Data length	Checksum
0xAA	0x12		0	

- Setting the volume (Set Volume)

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

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

- Ack

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

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

- Nak

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

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

Input source control

- Function
  The input source of a product can be changed using a PC.
- Viewing input source state (Get Input Source Status)

Header	Command	ID	Data length	Checksum
0xAA	0x14		0	

- Setting the input source (Set Input Source)

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

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

0x14	PC
0x18	DVI
0x0C	Input source
0x08	Component
0x1F	DVI_video
0x30	RF(TV)
0x40	DTV
0x21	HDMI1
0x22	HDMI1_PC
0x23	HDMI2
0x24	HDMI2_PC
0x25	DisplayPort

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

― This model does not support HDMI1_PC and HDMI2_PC ports.

― 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 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

Video Wall Mode Control

- Function
  Video Wall mode can be activated on a product using a PC.
  This control is only available on a product whose Video Wall is enabled.
- Viewing video wall mode (Get Video Wall Mode)

Header	Command	ID	Data length	Checksum
0xAA	0x5C		0	

- Setting the video wall (Set Video Wall Mode)

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

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

1: Full

0: Natural

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5C	"Video Wall Mode"	

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

- Nak

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

"ERR": A code showing what error has occurred

Safety Lock

- Function
  PC can be used to turn the Safety Lock function on or off on a product.
  This control is available regardless of whether or not the power is turned on.
- Viewing the safety lock state (Get Safety Lock Status)

Header	Command	ID	Data length	Checksum
0xAA	0x5D		0	

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

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

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

1: ON

0: OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5D	"Safety Lock"	

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

- Nak

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

"ERR": A code showing what error has occurred

Video Wall On

- Function
  Turn Video Wall on or off on the product from your computer.
- Get Video Wall On/Off Status

Header	Command	ID	Data length	Checksum
0xAA	0x84		0	

- Set Video Wall On/Off

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

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

1: Video Wall ON

0: Video Wall OFF

- Ack

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

V.Wall_On : Same as above

- Nak

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

"ERR": A code showing what error has occurred

Video Wall User Control

- Function
  Turn the Video Wall function on or off on the product from your computer.
- Get Video Wall Status

Header	Command	ID	Data length	Checksum
0xAA	0x89		0	

- Set Video Wall

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

Wall_SNo: Product Number code assigned to the product

10x10 Video Wall Model : (1 ~ 100)

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

- Ack

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

- Nak

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

"ERR": A code showing what error has occurred

Wall_Div: Video Wall Divider code assigned to the product

10x10 Video Wall Model

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

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. (http://displaysolutions.samsung.com)

― If you press the On or Off button located at the top left of the screen, the product checks its status for about one minute. To run other commands, try after the one minute.

― For details on how to connect devices for multiple display control, refer to page 31.

MDC Programme Installation/Uninstallation

― Installing and uninstalling steps can vary depending on the OS.

Installation

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

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

2 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 the program" 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
Home feature

This feature is provided in Support → Go to Home.

Accessible using the HOME button on the remote control.

Video Wall

HOME → Video Wall → ENTER

– The displayed image may differ depending on the model.

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

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

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

Video Wall

You can activate or deactivate Video Wall.

To organise a video wall, select On.

- Off / On

Horizontal x Vertical

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

Enter the videowall matrix.

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

― A videowall display can be split into a maximum of 225 screens.

― The Horizontal x Vertical option is only enabled when Video Wall is set to On.

Screen Position

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

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

To change the order of a display device, change the device number and press the button.

― A maximum of 225 displays can be arranged in Screen Position.

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

― To use the function, make sure Horizontal x Vertical is configured.

Format

Select how to display images on the videowall display.

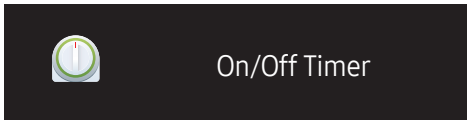
- Full: Display images in full screen.
- Natural: Display images in the original aspect ratio.

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

― When using Video Wall mode, a resolution of 1280x720P, 1920x1080P or 3840x2160P is recommended.

On/Off Timer

HOME → On/Off Timer → ENTER



– The displayed image may differ depending on the model.

― You must set the clock before you can use Clock Set.

On Timer

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

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

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

(On Timer 1 ~ On Timer 7)

- Setup: Select Off, Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun or Manual.
  If you select Manual, you can choose the days you want On Timer to turn on your product.
  – The check mark indicates days you've selected.
- Time: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.
- Volume: Set the desired volume level. Use the left and right arrow buttons to change the volume level.
- Source: Select the input source of your choice.

Off Timer

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

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

Holiday Management

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

- Add Holiday: Specify the period you want to add as a holiday.
  Select the start and end dates of the holiday you want to add using the ▲/▼ buttons, and click the Save button.

  The period will be added to the list of holidays.

  – Start: Set the start date of the holiday.
  – End: Set the end date of the holiday.

  ― Edit: Select a holiday item and then change the date.

  ― Delete: Delete selected items from the list of holidays.

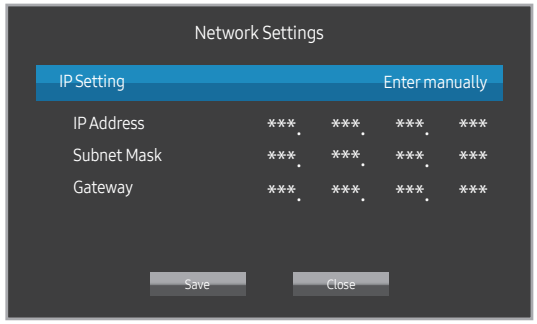
- Set Applied Timer: Set the On Timer and Off Timer to not activate on public holidays.
  – Press ↵ to select the On Timer and Off Timer settings you do not want to activate.
  – The selected On Timer and Off Timer will not activate.

Network Settings

HOME → Network Settings → ENTER

– The displayed image may differ depending on the model.

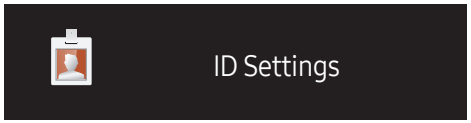
View the network settings.



- IP Setting: Obtain automatically, Enter manually
- IP Address: Manually enter the IP Address if IP Setting is set to Enter manually.
- Subnet Mask: Manually enter the Subnet Mask if IP Setting is set to Enter manually.
- Gateway: Manually enter the Gateway if IP Setting is set to Enter manually.

ID Settings

HOME → ID Settings → ENTER



– The displayed image may differ depending on the model.

Assign an ID to a set.

Device ID

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

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

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

Device ID Auto Set

― Assign ID number automatically for all connected products.

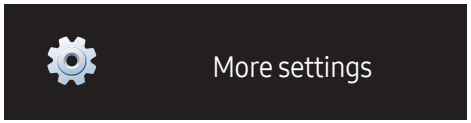
PC Connection Cable

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

- RS232C cable
  Communicate with MDC via the RS232C cable.
- RJ45(LAN) cable
  Communicate with MDC via the RJ45 cable.

More settings

HOME → More settings → ENTER



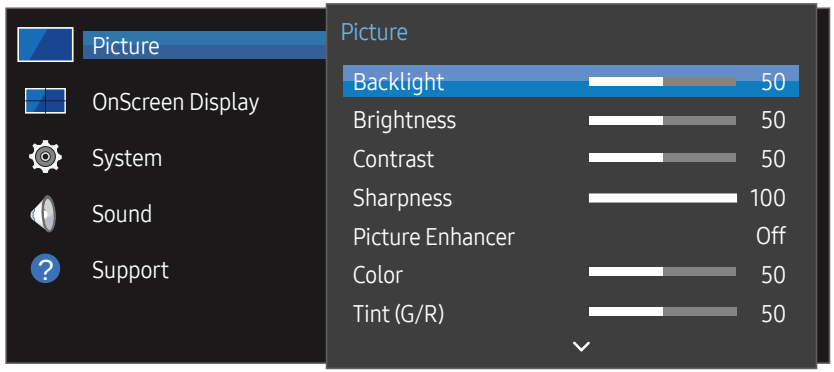
– The displayed image may differ depending on the model.

The on-screen menu appears.

Chapter 06
Screen Adjustment

Configure the Picture settings (Backlight, Color Tone, etc.).

The layout of the Picture menu options may vary depending on the product.



– The displayed image may differ depending on the model.

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

MENU → Picture → ENTER

Your product has several options for adjusting picture quality.

― 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.

Color Temperature

MENU → Picture → Color Temperature → ENTER

Adjust the colour temperature. (Range: 2800K–16000K)

White Balance Settings

MENU → Picture → White Balance Settings → ENTER

Adjust the colour temperature of the picture so that white objects appear brighter.

- White Balance (Custom / Color Expert): Select Colour Expert to apply the PC calibration settings.
- R-Gain / G-Gain / B-Gain: Adjust the proportion of each of red, green and blue colours in bright areas.
- Reset: Restore the white balance settings to the default values.

Uniformity

MENU → Picture → Uniformity → ENTER

Calibrate the brightness and colour uniformity within each screen.

- Off / On

― Supported model: VMB-R

Gamma

MENU → Picture → Gamma → ENTER

Adjust the mid-range brightness of the picture.

Black Equalizer

MENU → Picture → Black Equalizer → ENTER

Adjust the brightness of the dark areas. The dark areas become brighter when set to High, easier to see the details.

- Off / Low / High

Picture Options

MENU → Picture → Picture Options → ENTER

Color Tone

- Off / Cool / Standard / Warm1 / Warm2

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

HDMI Black Level

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

- Auto / Low / Normal

― Only available if the input signal from the external device connected to the HDMI port is RGB444.

Input Signal Plus

MENU → Picture → Input Signal Plus → ENTER

Expands the input signal range for HDMI/DisplayPort connections.

- HDMI1 (Off / On)
- HDMI2 (Off / On)
- DisplayPort (Off / On)

Apply Picture Settings

MENU → Picture → Apply Picture Settings → ENTER

Apply the picture settings to all external devices connected to the device or to the current source only.

- All Sources / Current Source

Picture Size

MENU → Picture → Picture Size → ENTER

choose size and aspect ratio picture displayed on screen.

Picture Size

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

- 16:9: Sets the picture to 16:9 wide mode.
- 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.
- Original: Display images in the original picture quality.

Picture Off

MENU → Picture → Picture Off → ENTER

Selecting Picture Off switches off the screen. The volume is not disabled.

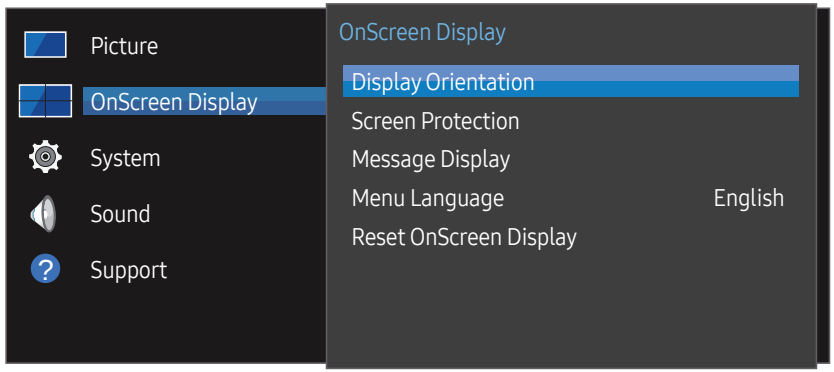
To switch the screen on, press any button other than the volume and power buttons.

Reset Picture

MENU → Picture → Reset Picture → ENTER

Resets your current picture mode to its default settings.

Chapter 07
OnScreen Display



– The displayed image may differ depending on the model.

Display Orientation

MENU ▥ → OnScreen Display → Display Orientation → ENTER ↵

Onscreen Menu Orientation

Set the menu screen orientation.

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

Source Content Orientation

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

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

― Portrait orientation mode is not supported when a UHD resolution is in use.

Aspect Ratio

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

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

― Available only when Source Content Orientation is set to Portrait.

Screen Protection

MENU → OnScreen Display → Screen Protection → ENTER

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

Minimise 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 model.

― 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.

Timer

You can set the timer for Screen Protection.

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

- Timer (Off / Repeat / Interval)
  - Off
  - Repeat: Display the anti-burn in pattern at a specified interval.
  - Interval: Display the anti-burn in pattern for a specified period of time (from the starting to finishing time).

  ― When Clock Set is configured, Interval will be enabled.

  ― Period, Start Time and End Time are enabled only when Timer is set to Repeat or Interval.
- Period: Specify the time interval to activate the Screen Protection function.

  ― The option is enabled when Repeat is selected for Timer.
- 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.

Immediate Display

Select the screen saver you want to display immediately.

- Off / Fading Screen

Side Gray

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

- Off / Light / Dark

Message Display

MENU → OnScreen Display → Message Display → ENTER

Source Info

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

- Off / On

No Signal Message

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

- Off / On

MDC Message

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

- Off / On

Menu Language

MENU → OnScreen Display → Menu Language → ENTER

Set the menu language.

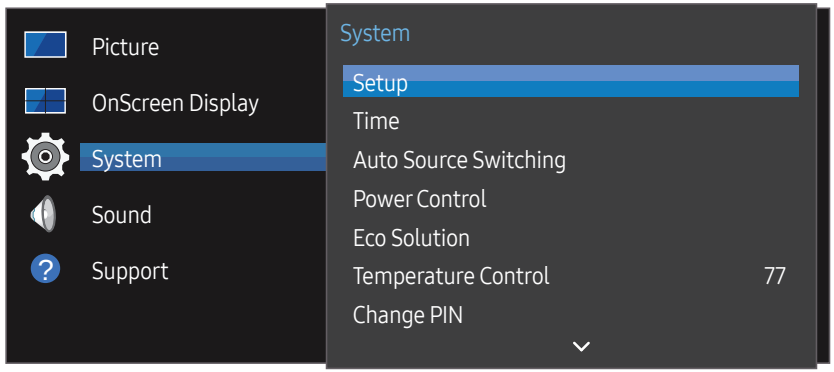
― A change to the language setting will only be applied to the onscreen menu display. It will not be applied to other functions on your PC.

Reset OnScreen Display

MENU → OnScreen Display → Reset OnScreen Display → ENTER

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

Chapter 08
System



– The displayed image may differ depending on the model.

Setup

MENU ▥ → System → Setup → ENTER ↵

Change the initial settings that were configured when you first used the product.

1 Language

Select your language to start the on screen setup.

2 Display Orientation

Configure the menu page orientation.

– Landscape / Portrait

3 PC Connection Cable

Select which type of cable you are using to connect the display to the PC. And then select **Next**.

4 Network Settings

Set the IP settings, and then select **Next**.

5 Clock Set

Set the current date and time, and then select **Next**.

6 Complete

Setup is complete and you're ready to get started.

Time

MENU → System → Time → ENTER

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

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

Clock Set

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

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

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

DST

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

Off / On

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

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.

Power On Delay

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

Auto Source Switching

MENU → System → Auto Source Switching → ENTER

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

Auto Source Switching

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

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

― 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.

Power Control

MENU → System → Power Control → ENTER

Auto Power On

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

- Off / On

Standby Control

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

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

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

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

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

Remote Configuration

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

- Off / On

Power Button

The power button can be set to either turn on the power or turn on/off the power.

- Power On Only: Set the power button to turn on the power.
- Power On/Off: Set the power button to turn on/off the power.

Eco Solution

MENU → System → Eco Solution → ENTER

Energy Saving

Reduce the power consumption by adjusting the screen brightness.

- Off / Low / Medium / High

Screen Lamp Schedule

Screen Lamp Schedule

Enable or disable the lamp schedule.

- Off / On

Schedule1, Schedule2

Time

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

Lamp

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

- 0 ~ 100

No Signal Power Off

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

- Off / 10 min. / 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 do not operate the product for the specified period.

- Off / 4 hours / 6 hours / 8 hours

Temperature Control

MENU → System → Temperature Control → ENTER

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.

Recommended temperature for Temperature Control is 75 °C ~ 80 °C (provided that the surrounding temperature is 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 Change PIN screen will appear.

Choose any 4 digits for your PIN and enter it in Enter a new PIN.. Reenter the same 4 digits in Enter the PIN again..

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

― Change the PIN to keep your device secure.

General

MENU → System → General → ENTER

Security

Enter your 4 digit PIN number.

If you want to change the PIN number, use the Enter PIN function.

― Change the PIN to keep your device secure.

Safety Lock

It sets safe lock function.

- Off / On

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

To unlock the menus and buttons, press the LOCK button and then enter the password.

Power On Button

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

- Off / On

HDMI Hot Plug

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

- Off / On

Frame Alignment

MENU → System → Frame Alignment → ENTER

Improve the screen alignment between devices when using the video wall function.

- Auto / Off / On

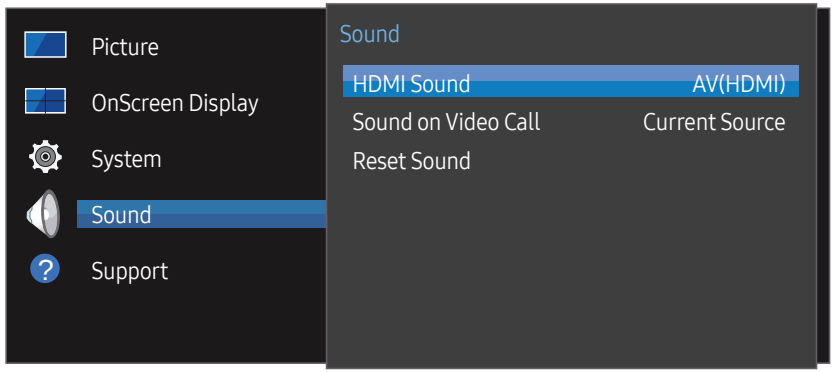
Reset System

MENU → System → Reset System → ENTER

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

Chapter 09
Sound Adjustment

Configure the sound (Sound) settings for the product.



– The displayed image may differ depending on the model.

HDMI Sound

MENU ▥ → Sound → HDMI Sound → ENTER ↵

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

- AV(HDMI) / PC(DVI)

Sound on Video Call

MENU ▥ → Sound → Sound on Video Call → ENTER ↵

Select sound output to listen to during a video call.

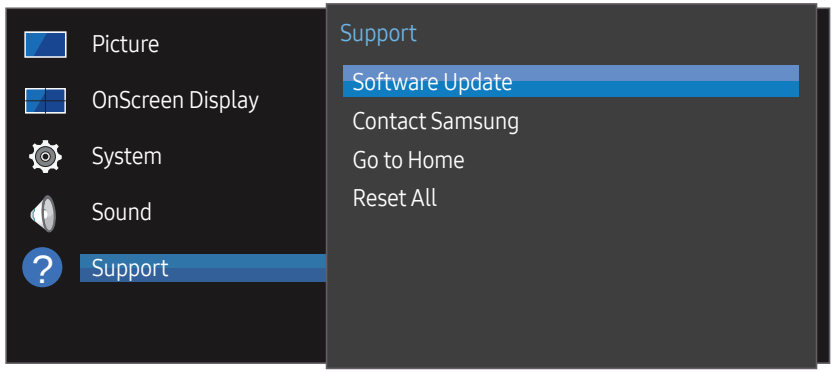
- Current Source / Video Call

Reset Sound

MENU ▥ → Sound → Reset Sound → ENTER ↵

The displayed image may differ depending on the model. Reset all sound settings to the factory defaults.

Chapter 10
Support



– The displayed image may differ depending on the model.

Software Update

MENU ▥ → Support → Software Update → ENTER ↵

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

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

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

Updating via USB Device

Download the update package from Samsung's website to a USB storage device and then connect the device to the product to update the product's software.

― Remember to save the update package to the top-most directory of the USB device. Otherwise, the product will not be able to find the update package.

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.

― Go to Contact Samsung and find the product Model Code and Software Version.

Go to Home

Accessible using the HOME button on the remote control.

MENU → Support → Go to Home → ENTER

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

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

Video Wall

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

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

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

On/Off Timer

― You must set the clock before you can use On/Off 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.

Network Settings

View the network settings.

ID Settings

Assign an ID to a set.

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

More settings

The picture settings menu appears.

Reset All

MENU → Support → Reset All → ENTER

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

Chapter 11
Troubleshooting Guide

Requirements Before Contacting Samsung Customer Service Centre

– Follow the instruction on the right to test your product before requesting for service. If the problem persists, contact Samsung Customer Service Centre.

Testing the Product

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

If the product is properly connected to the PC and the screen remains turned off, run the product's self-diagnostics.

1 Power off both the PC and product.

2 Disconnect all the cables from the product.

3 Power on the product.

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

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

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

Screen issue

The screen is not clear. The screen is blurry.	Remove any accessories (video extension cable, etc) and try again.
	Set the resolution and frequency to the recommended level.
The screen appears unstable and shaky.	Check that the resolution and frequency of the PC and graphics card are set within a range compatible with the product. Then, change the screen settings if required by referring to the Additional Information on the product menu and the Standard Signal Mode Table.
There are shadows or ghost images left on the screen.	
The screen is too bright. The screen is too dark.	Adjust Brightness and Contrast.
White does not really look white.	Go to Picture and adjust the White Balance Settings settings.
The product will turn off automatically.	Go to System and make sure Sleep Timer is set to Off.
	If a PC is connected to the product, check the power status of the PC.
	Make sure the power cable is connected properly to the product and power outlet.
	If the signal from a connected device is not detected, the product automatically turns off after 10 to 15 minutes.
Picture quality of the product is different from the dealer shop where it was purchased.	Use an HDMI cable to obtain high-definition (HD) picture quality.

Screen issue

The screen display does not look normal.	Encoded video content may cause the display to appear corrupted in scenes featuring fast moving objects such as in a sports event or action video.
	Low signal level or low picture quality may cause the display to appear corrupted. This does not mean the product is defective.
	A cell phone within a distance of one-meter radius may cause static on analogue and digital products.
The brightness and colour do not look normal.	Go to Picture and adjust the screen settings such as Color, Brightness and Sharpness.
	Go to System and adjust the Energy Saving settings.
	Reset the screen settings to the default settings.
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.

Screen issue

The screen cannot be displayed in full screen.	A scaled SD (4:3) content file can cause black bars on both sides of an HD channel screen.
	A video with an aspect ratio different from the product can cause black bars at the top and bottom of the screen.
	Change the screen size setting to full screen on the product or source device.

Sound issue

There is no sound.	Check the connection of the audio cable or adjust the volume.
	Check the volume.
The volume is too low.	Adjust the volume.
	If the volume is still low after turning it up to the maximum level, adjust the volume on your PC sound card or software programme.
Video is available but there is no sound.	If an HDMI cable is connected, check the audio output settings on the PC.
	If a source device is used • Make sure the audio cable is properly connected to the audio input port on the product. • Check the audio output settings for the source device. (For example, if an HDMI cable is connected to the monitor, the audio setting for the cable box may need to be changed to HDMI.)
	If a DVI-HDMI cable is used, a separate audio cable is required.
	If the product has a headphone port, make sure nothing is connected to it.
	Reconnect the power cable to the device and then reboot the device.

Sound issue

There is static coming from the speakers.	Check the cable connection. Make sure a video cable is not connected to an audio input port.
	Check the signal strength after connecting a cable.
	Low signal level can cause corrupted sound.
There is audible sound when the volume is muted.	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).

Remote control issue

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

Source device issue

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

Other issue

The product smells like plastic.	The plastic smell is normal and disappears over time.
The monitor appears tilted.	Remove and then attach the stand again to the product.
Audio or video cuts out intermittently.	Check the cable connection and connect it again if required.
	Using a very hard or thick cable may corrupt audio and video files. Make sure cables are flexible enough to ensure durability. When mounting the product onto a wall, it is recommended to use right-angle cables.
Small particles are found on the edges of the product.	The particles are part of the product design. The product is not defective.
When I try to change the PC resolution, a message "Mode not Supported" appears.	The message "Mode 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 these issues occur, connect an audio cable along with the HDMI cable.
	Some PC graphics cards may not automatically recognise HDMI signals that do not include sound. In this case, manually select a sound input.

Other issue

HDMI-CEC does not work.	This product does not support the HDMI-CEC feature. To use several external devices compatible with the HDMI-CEC feature that are connected to the HDMI1 and HDMI2 ports on the product, turn off the HDMI-CEC features on all the external devices. External devices include Blu-ray and DVD players. Operating an external device when its HDMI-CEC feature is enabled may automatically stop other external devices. To change HDMI-CEC settings, refer to the device user guide or contact the device manufacturer for assistance.
The IR sensor is not functioning.	• Contact your nearest service centre to have the product serviced.
	• This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.
When booting the PC with the input source set to DisplayPort the BIOS and booting screens do not appear.	• Boot the PC when the product is turned on or when the input source is not DisplayPort.

Chapter 12
Specifications

General

Model Name		VM55B-R	VH55B-E
Panel	Size	55 CLASS (54.6 inches / 138.7 cm)	55 CLASS (54.6 inches / 138.7 cm)
	Display area	1209.6 mm (H) x 680.3 mm (V)	1209.6 mm (H) x 680.4 mm (V)

Model Name		VM46B-U	VM55B-U / VM55B-E
Panel	Size	46 CLASS (45.9 inches / 116.8 cm)	55 CLASS (54.6 inches / 138.7 cm)
	Display area	1018.08 mm (H) x 572.67 mm (V)	1209.6 mm (H) x 680.4 mm (V)

Resolution	Optimum resolution	1920 x 1080 @ 60 Hz
	Maximum resolution	1920 x 1080 @ 60 Hz (DVI) 3840 x 2160 @ 60 Hz (HDMI1, HDMI2, DP)
Power Supply		AC100-240V~ 50/60Hz Refer to the label at the back of the product as the standard voltage can vary in different countries.
Environmental considerations	Operating	Temperature : 0 °C - 40 °C (32 °F - 104 °F) * For installing the enclosure, keep the internal temperature at 35 °C or below. Humidity : 10 % - 80 %, non-condensing
	Storage	Temperature : -20 °C - 45 °C (-4 °F - 113 °F) Humidity : 5 % - 95 %, non-condensing * Applicable before the product package is unpacked.

- 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.
- 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 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.
- For detailed device specifications, visit the Samsung website.
- (Europe only)
  To access energy labelling information about this product on the European Product Registry for Energy Labelling (EPREL), go to https://eprel.ec.europa.eu/qr/******
  where ****** is the product's EPREL registration number. You can find the registration number on the rating label of your product.
- (Türkiye only)
  To access the energy labelling information of the model: VM55B-R, VH55B-E, VM46B-U, VM55B-U, VM55B-E

  (1) Go to https://www.samsung.com/global/ecodesign_energy

  (2) Get the model identifier from the energy label of the product and type it in the search box

  (3) Energy labelling information can be found

Preset Timing Modes

The screen will automatically be adjusted if a signal that belongs to the following standard signal modes is transmitted from your PC. Note that the screen will be unable to display content if the signal from the PC is not one of the standard signal modes. Refer to the manual for your graphic card and configure as the following.

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
VESA/IBM, 640 x 480	31.469	59.940	25.175	-/-
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	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
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	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	+/+
VESA, 2560 x 1440	88.787	59.951	241.500	+/-
VESA, 3840 x 2160	133.313	59.997	533.250	+/-
CEA, 3840 x 2160	67.500	30.000	297.000	+/+
CEA, 3840 x 2160	54.000	24.000	297.000	+/+
CEA, 3840 x 2160	56.250	25.000	297.000	+/+
CEA, 3840 x 2160	112.500	50.000	594.000	+/+

Chapter 13
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 is requested to give 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 the customer requests instructions on how to use 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-authorised electrical connections.
- Not following the "cautions" in User Manual.
- If a malfunction occurs due to iron powder or other conductive metal materials.

Others

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

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

Prevention of Afterimage Burn-in

What is afterimage burn-in?

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

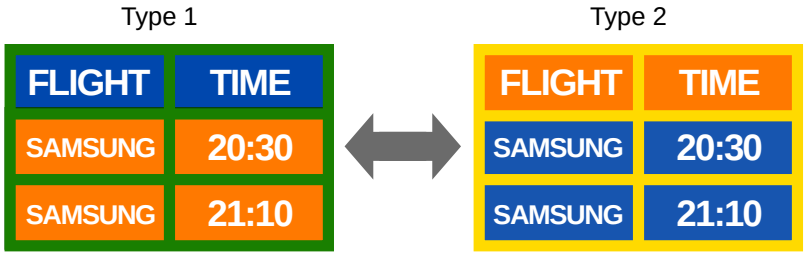
Such a voltage difference between electrodes increases with time and makes the liquid crystals thinner. When this occurs, a previous image can remain on the screen when the pattern changes.

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

Recommended prevention practices

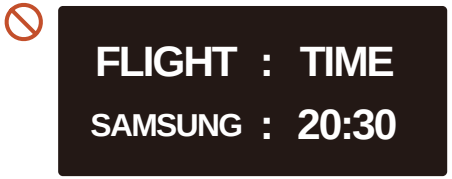
Viewing a fixed screen for an extended period of time may cause afterimage burn-ins or smudges. If the product is not to be used for a long time, turn it off, or activate the Power Saving mode or Screen Saver with a moving image.

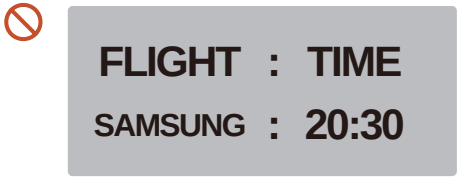
- Change the colours regularly.



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

― Avoid using colours of contrasting brightness (black and white; grey and black).





Licence

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.

Open Source License Notice

In the case of using open source software, Open Source Licenses are available on the product menu.

For information on the Open Source License Notice, contact Samsung Open Source (http://opensource.samsung.com)