

SAMSUNG

USER MANUAL

Gaming Monitor

CFG7*

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

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

© Samsung Electronics

Samsung Electronics owns the copyright for this manual.

Use or reproduction of this manual in parts or entirety without the authorization of Samsung Electronics is prohibited.

Trademarks other than that of Samsung Electronics are owned by their respective owners.

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

Table of contents

Before Using the Product

Securing the Installation Space	4
Precautions for storage	4
Safety Precautions	4
Symbols	4
Cleaning	5
Electricity and Safety	5
Installation	6
Operation	7

Preparations

Parts	10
Control Panel	10
Function Key Guide	11
Changing Brightness, Contrast and Sharpness settings	13
Changing the Volume setting	13
Reverse Side	14
Adjusting the Product Tilt and Height	14
Rotating the Monitor Screen	15
Anti-theft Lock	16
Precautions for moving the monitor	16
Installation	17
Assembling the Stand base	17
Removing the Stand (For Attaching the BRACKET WALL)	18
Attaching the BRACKET WALL	19
Attaching the Stand	20

Connecting and Using a Source Device

Pre-connection Checkpoints	21
Connecting and Using a PC	21
Connection Using the HDMI Cable	21
Connection Using an HDMI-DVI Cable	21
Connection Using a DP Cable	22
Connecting to Headphones	22
Connecting the Power (C24FG70FQ* model only)	22
Connecting the Power (C27FG70FQ* model only)	23
Tidying Up the Connected Cables	23
Correct posture to use the product	24
Driver Installation	24
Setting Optimum Resolution	24

Game

Picture Mode	25
Refresh Rate	26
Black Equalizer	26
Response Time	26
FreeSync	27
Low Input Lag	28
Screen Size	28
Save Settings	29

Screen Setup

Picture Mode	30
Brightness	31
Contrast	31
Sharpness	31
Color	31
HDMI Black Level	32
Eye Saver Mode	32
Screen Adjustment	32

Adjusting OSD (On Screen Display) settings

Language	33
Display Time	33

Table of contents

Setup and Reset

Arena Lighting	34
Volume	35
Eco Saving Plus	35
Off Timer	35
PC/AV Mode	35
DisplayPort Ver.	35
Source Detection	36
Key Repeat Time	36
Power LED On	36
Reset All	36
Information	36

Installing the Software

Easy Setting Box	37
Restrictions and Problems with the Installation	37
System Requirements	37

Troubleshooting Guide

Requirements Before Contacting Samsung Customer Service Center	38
Testing the Product	38
Checking the Resolution and Frequency	38
Check the following.	38
Q & A	40

Specifications

General	41
Standard Signal Mode Table	42

Appendix

Responsibility for the Pay Service (Cost to Customers)	44
Not a product defect	44
A Product damage caused by customer's fault	44
Others	44

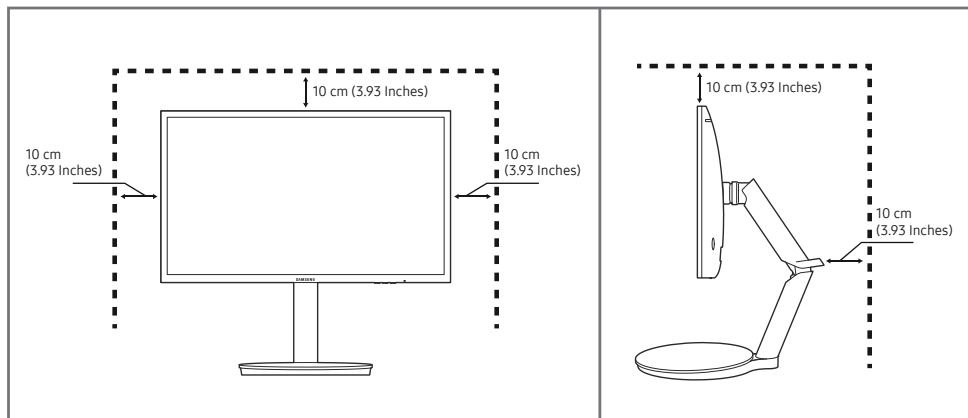
Chapter 01

Before Using the Product

Securing the Installation Space

Ensure some space around the product for ventilation. An internal temperature rise may cause fire and damage the product. Be sure to allow the amount of space as shown below or greater when installing the product.

— The exterior may differ depending on the product.



Precautions for storage

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

— Contact your nearest Samsung Customer Service Center if you want to clean the inside of the product (Service fee will be charged.)

Safety Precautions

Caution

RISK OF ELECTRIC SHOCK DO NOT OPEN

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

THERE ARE NO USER SERVICEABLE PARTS INSIDE.

REFER ALL SERVICING TO QUALIFIED PERSONNEL.

This symbol indicates that high voltage is present inside.

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

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



Symbols

Warning

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

Caution

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

Cleaning

— Take the following steps when cleaning.

- 1 Power off the product and computer.
- 2 Disconnect the power cord from the product.
 - Hold the power cable by the plug and do not touch the cable with wet hands. Otherwise, an electric shock may result.
- 3 Wipe the monitor with a clean, soft and dry cloth.
 - Do not apply a cleaning agent that contains alcohol, solvent, or surfactant to the monitor.
 - Do not spray water or detergent directly on the product.
- 4 Wet a soft and dry cloth in water and wring thoroughly to clean the exterior of the product.
- 5 Connect the power cord to the product when cleaning is finished.
- 6 Power on the product and computer.

Electricity and Safety

Warning

- Do not use a damaged power cord or plug, or a loose power socket.
- Do not use multiple products with a single power socket.
- Do not touch the power plug with wet hands.
- Insert the power plug all the way in so it is not loose.
- Connect the power plug to a grounded power socket (type 1 insulated devices only).
- Do not bend or pull the power cord with force. Be careful not to leave the power cord under a heavy object.
- Do not place the power cord or product near heat sources.
- Clean any dust around the pins of the power plug or the power socket with a dry cloth.

Caution

- Do not disconnect the power cord while the product is being used.
- Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.
- Keep the power socket where the power cord is connected unobstructed.
 - The power cord must be disconnected to cut off power to the product when an issue occurs.
- Hold the plug when disconnecting the power cord from the power socket.

Installation

Warning

- DO NOT PLACE CANDLES, INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT. DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.
- Do not install the product in poorly ventilated spaces such as a bookcase or closet.
- Install the product at least 10cm away from the wall to allow ventilation.
- Keep the plastic packaging out of the reach of children.
 - Children may suffocate.
- Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)
 - The product may fall and become damaged and/or cause an injury.
 - Using the product in an area with excess vibration may damage the product or cause a fire.
- Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.
- Do not expose the product to direct sunlight, heat, or a hot object such as a stove.
 - The product lifespan may be reduced or a fire may result.
- Do not install the product within the reach of young children.
 - The product may fall and injure children.
- Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Caution

- Do not drop the product while moving.
- Do not set down the product on its front.
- When installing the product on a cabinet or shelf, make sure that the bottom edge of the front of the product is not protruding.
 - The product may fall and become damaged and/or cause an injury.
 - Install the product only on cabinets or shelves of the right size.
- Set down the product gently.
 - Product failure or personal injury may result.
- Installing the product in an unusual place (a place exposed to a lot of fine dust, chemical substances, extreme temperatures or a significant presence of moisture, or a place where the product will operate continuously for an extended period of time) may seriously affect its performance.
 - Be sure to consult Samsung Customer Service Center if you want to install the product at such a place.

Operation

Warning

- There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.
 - Contact Samsung Customer Service Center for repairs.
- To move the product, first disconnect all the cables from it, including the power cable.
- If the product generates abnormal sounds, a burning smell or smoke, disconnect the power cord immediately and contact Samsung Customer Service Center.
- Do not let children hang from the product or climb on top of it.
 - Children may become injured or seriously harmed.
- If the product is dropped or the outer case is damaged, turn off the power and disconnect the power cord. Then contact Samsung Customer Service Center.
 - Continued use can result in a fire or electric shock.
- Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.
 - The product or heavy objects may fall as children try to reach for the toys or sweets resulting in a serious injury.
- During a lightning or thunderstorm, power off the product and remove the power cable.
- Do not drop objects on the product or apply impact.
- Do not move the product by pulling the power cord or any cable.
- If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.
- Do not lift or move the product by pulling the power cord or any cable.
- Do not use or keep combustible spray or an inflammable substance near the product.
- Ensure the vents are not blocked by tablecloths or curtains.
 - An increased internal temperature may cause a fire.
- Do not insert metallic objects (chopsticks, coins, hairpins, etc) or objects that burn easily (paper, matches, etc) into the product (via the vent or input/output ports, etc).
 - Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.
 - Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.

Caution

- Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.
 - Activate power-saving mode or a moving-picture screen saver if you will not be using the product for an extended period of time.
- Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc).
 - Dust accumulation combined with heat can cause a fire, electric shock or electric leakage.
- Use the product at the recommended resolution and frequency.
 - Your eyesight may deteriorate.
- Do not put AC/DC adapters together.
- Remove the plastic bag from the AC/DC adapter before you use it.
- Do not let water enter the AC/DC adapter device or get the device wet.
 - An electric shock or fire may result.
 - Avoid using the product outdoors where it can be exposed to rain or snow.
 - Be careful not to get the AC/DC adapter wet when you wash the floor.
- Do not put the AC/DC adapter near to any heating apparatus.
 - Otherwise, a fire may result.
- Keep the AC/DC adapter in a well-ventilated area.
- If you place the AC/DC power adapter so that it is hanging with the cord input facing upwards, water or other foreign substances could enter the Adapter and cause the Adapter to malfunction.
Make sure to rest the AC/DC power adapter flat on a table or the floor.
- Insert the power plug into the AC/DC adapter until a click sound is heard.
- Do not insert only the power plug into the power outlet.
- Do not use an AC/DC adapter other than the provided one.
 - It may cause electric shock or fire.
- Do not insert the AC/DC adapter into the power outlet on the ceiling.
 - It may cause electric shock or fire.
- Rotate the power plug not to exceed the range (0 to 90°) on the AC/DC adapter.
 - It may cause electric shock or fire.
- Never disassemble the power plug after being assembled. (It cannot be separated after assembly.)
- Never use the provided power plug for other devices.
- When removing the AC/DC adapter from the power outlet, hold the body of AC/DC adapter and pull it up.
 - It may cause electric shock or fire.
- Do not drop any objects or apply shock on the AC/DC adapter.
 - It may cause electric shock or fire.
- Use the AC/DC adapter after removing its plastic cover.
 - Otherwise, this may result fire.

-
- Do not hold the product upside-down or move it by holding the stand.
 - The product may fall and become damaged or cause an injury.
 - Looking at the screen too close for an extended period of time can deteriorate your eyesight.
 - Do not use humidifiers or stoves around the product.
 - Rest your eyes for more than 5 minutes for every 1 hour of product use.
 - Do not touch the screen when the product has been turned on for an extended period of time as it will become hot.
 - Store small accessories out of the reach of children.
 - Exercise caution when adjusting the product angle or stand height.
 - Your hand or finger may get stuck and injured.
 - Tilting the product at an excessive angle may cause the product to fall and an injury may result.
 - Do not place heavy objects on the product.
 - Product failure or personal injury may result.
 - When using headphones or earphones, do not turn the volume too high.
 - Having the sound too loud may damage your hearing.

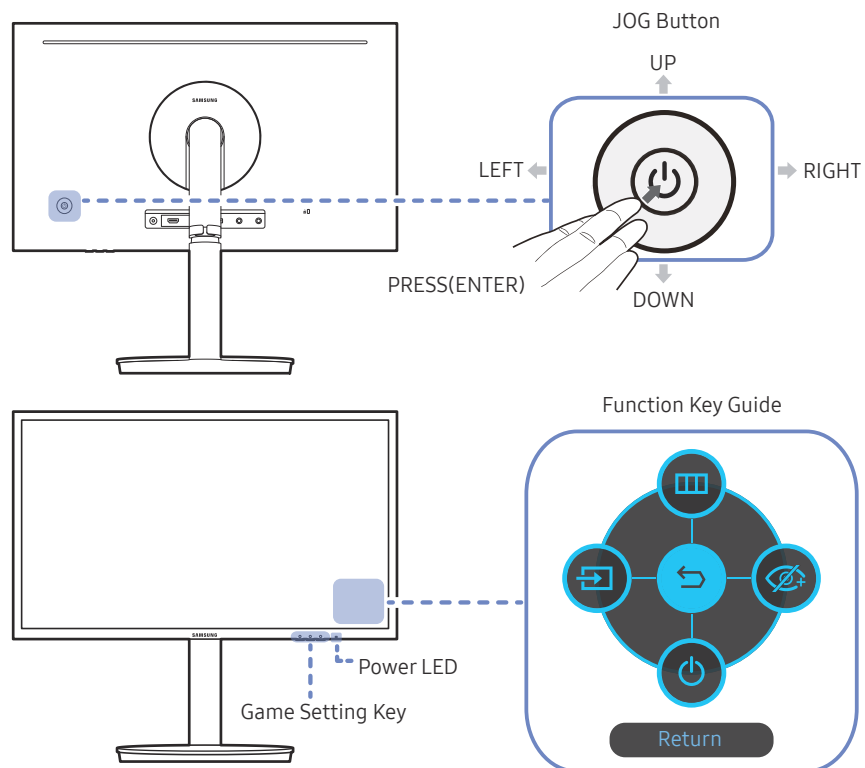
Chapter 02

Preparations

Parts

Control Panel

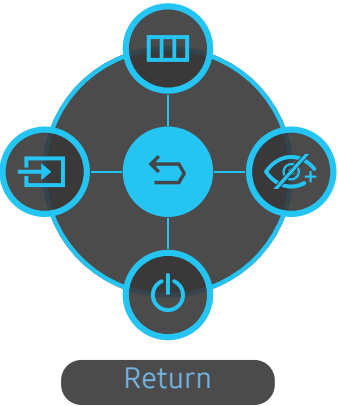
— The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.











Parts	Description
JOG Button	<p>Multi directional button that helps navigate.</p> <p>— The JOG button is located on the rear left side of the product. The button can be used to move up, down, left or right, or as Enter.</p>
Power LED	<p>This LED is power status indicator and works as</p> <ul style="list-style-type: none"> • Power On (Power button): Off • Power saving mode: Blinking • Power Off (Power button): On <p>— The power Indicator operation can be swapped by changing in the menu. (System → Power LED On) Actual models because of functional variation maybe haven't this function.</p>
Function Key Guide	<p>Press the JOG button when the screen is turned on. The Function Key Guide will appear. To access the onscreen menu when the guide is displayed, press the corresponding direction button again.</p> <p>— Function Key Guide may vary depending on the function or product model. Please refer to the actual product.</p>
Game Setting Key	<p>Use shortcut keys to access previously saved custom game modes.</p> <ul style="list-style-type: none"> • Game Setting 1 / Game Setting 2 / Game Setting 3 <p>— The Game Setting Keys are located at the bottom right on the front of the monitor. To edit and save a custom game mode, go to Game → Save Settings.</p>

Function Key Guide

— To enter the main menu or to use other items, press the JOG button to display the Function Key Guide. You can exit by pressing the JOG button again.



UP/DOWN/LEFT/RIGHT: Move to the item you want. The description for each item will appear when the focus changes.
PRESS(ENTER): The selected item will be applied.

Icons	Description
 Menu	Selects  by moving the JOG button in the function key guide screen. The OSD (On Screen Display) of your Monitor's feature appears.
 Source	Selects  to change the input signal by moving the JOG button in the Function Key Guide screen. A message will appear on the top left corner of the screen if the input signal has been changed.
 Eye Saver Mode	Selects  by moving the JOG button in the function key guide screen. Press to enable or disable Eye Saver Mode . The items below are not available if the Eye Saver Mode function is enable. <ul style="list-style-type: none">• Game → Picture Mode, Black Equalizer• Picture → Picture Mode, Brightness, Color• System → Eco Saving Plus
 Power Off	Selects  to turn the Monitor off by moving the JOG button in the function key guide screen.

— Actual models because of functional variation, Function key guide options will be different.

When the monitor displays nothing (i.e. Power saving mode or Non-signal mode), 2 direct keys for control source and power could be used as below.

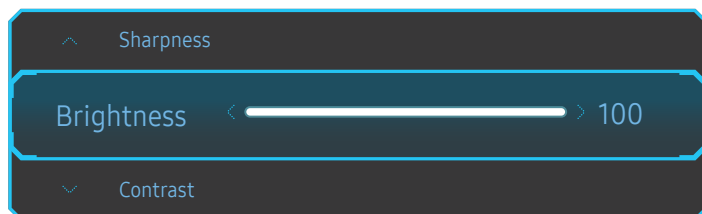
JOG Button	Power saving/Non-signal mode
UP	Source Change
Down	
PRESS(ENTER) for 2 seconds	Power Off

When the monitor displays the Main menu the JOG Button could be used as below.

JOG Button	Action
UP/DOWN	Move the option
LEFT	Exit the Main menu. Close Sublist without saving value. Value decreases in the slider.
RIGHT	Move to next depth. Value increases in the slider.
PRESS(ENTER)	Move to next depth. Save the value and close Sublist.

Changing Brightness, Contrast and Sharpness settings

You can adjust **Brightness**, **Contrast** or **Sharpness** by moving the JOG button up or down, if no OSD menu is displayed.



— The displayed image may differ depending on the model.

Brightness

— This menu is not available when **Eco Saving Plus** is enabled.

— This menu is not available when **Eye Saver Mode** is enabled.

Changing the Volume setting

You can adjust **Volume** by moving the JOG button left or right, if no OSD menu is displayed.



— The displayed image may differ depending on the model.

— If the audio quality of a connected input device is poor, the Auto Mute function on the product may mute the sound or cause choppy audio when applying the headphones or speakers. Set the input volume for the input device to at least 20% and control the volume using the volume control (JOG button LEFT/RIGHT) on the product.

— What is Auto Mute?

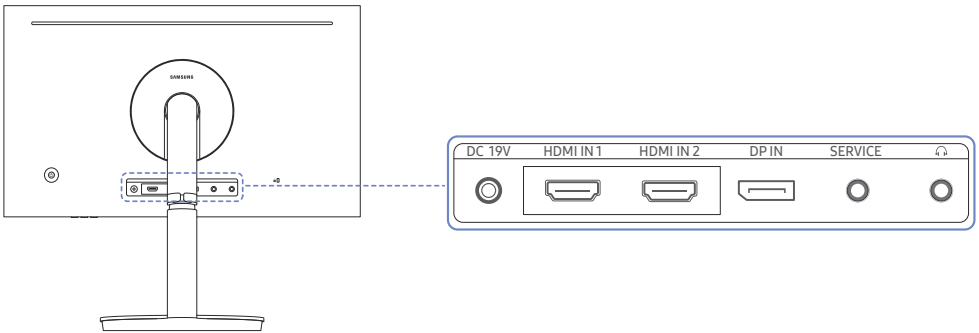
The function mutes the audio to improve sound effect when there is sound noise or when the input signal is weak, usually due to a problem with the volume of an input device.







— To activate the **Mute** function, access the **Volume** control screen, then use the JOG button to move the focus down.

To deactivate the **Mute** function, access the **Volume** control screen, then increase or decrease the **Volume**.

Reverse Side

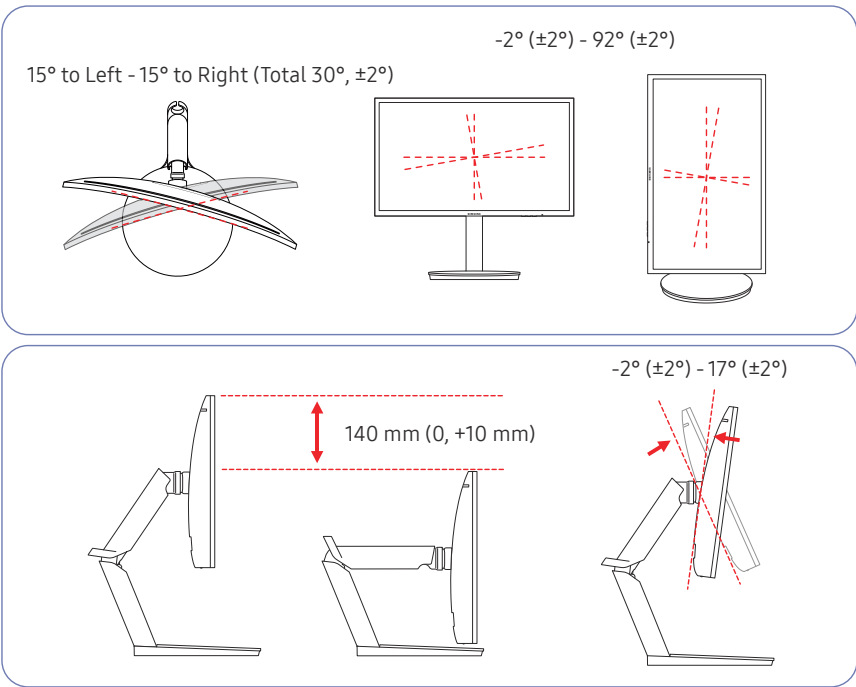
— The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.



Port	Description
<div>DC 19V</div> 	Connects to the AC/DC adapter.
<div>HDMI IN 1 HDMI IN 2</div> 	Connects to a source device using an HDMI cable or HDMI-DVI cable.
<div>DP IN</div> 	Connects to a PC using a DP cable.
<div>SERVICE</div> 	Dedicated to service technicians.
<div></div> 	Connect to an audio output device such as headphones.

Adjusting the Product Tilt and Height

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

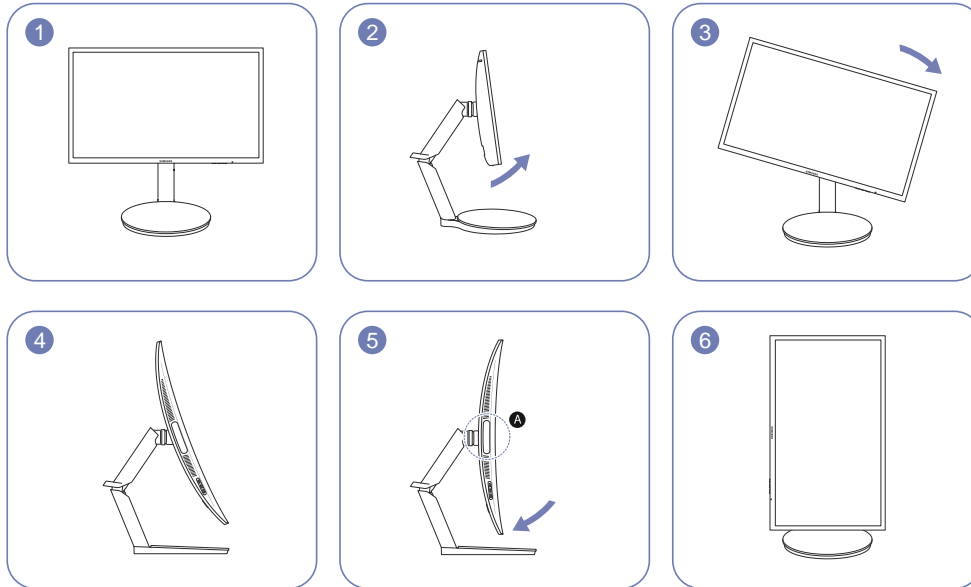


- The monitor tilt and height can be adjusted.
- When adjusting the tilt and height, hold both sides of the product and avoid using excessive force to prevent damage.
- The rotation and height adjustment has a certain tolerance. Stay within the tolerances when rotating or adjusting the height of the product.

Rotating the Monitor Screen

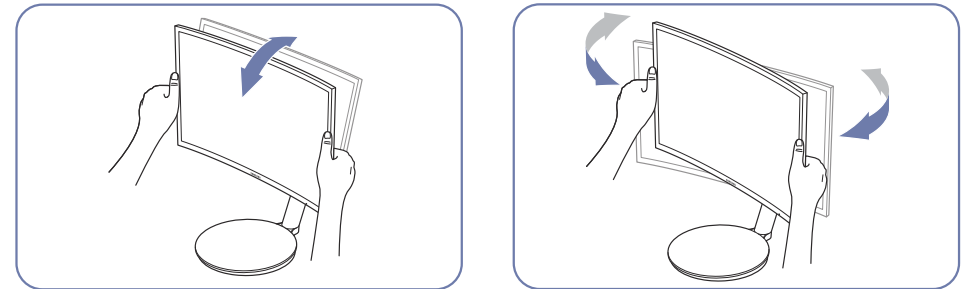
— The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

You can rotate your monitor as shown below.

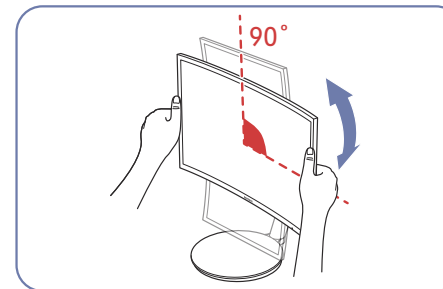


- Adjust the screen following the arrow direction.
- Rotate the screen in clockwise direction till it becomes completely vertical to the desktop.
- Rotating the screen counterclockwise can damage the product. Rotating the screen when the product is upright or when the height is not at the maximum can also damage the product.
- When rotating the monitor, set **Arena Lighting** to **Off**. Direct eye exposure to the bright light (A) on the bottom front of the monitor may cause your eyesight to deteriorate.

Caution



- Grasp the left and right sides of the monitor and adjust the tilt.

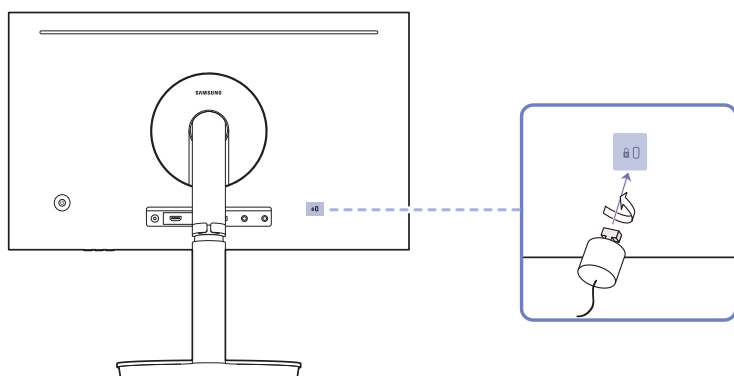


- Hold the bezel at both side edges and rotate the monitor. (Be careful not to directly hold the LCD display.)
- The screen can be rotated up to 90° clockwise if you are facing the screen.

Anti-theft Lock

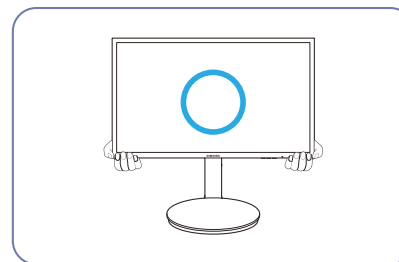
- An anti-theft lock allows you to use the product securely even in public places.
- The locking device shape and locking method depend on the manufacturer. Refer to the user guide provided with your anti-theft locking device for details.

To lock an anti-theft locking device:

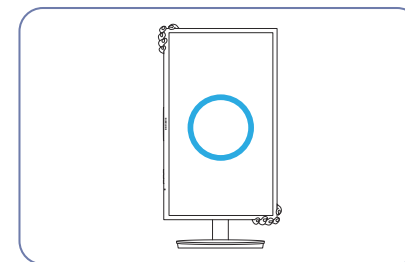


- 1 Fix the cable of your anti-theft locking device to a heavy object such as a desk.
- 2 Put one end of the cable through the loop on the other end.
- 3 Insert the locking device into the anti-theft lock slot at the back of the product.
- 4 Lock the locking device.
 - An anti-theft locking device can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

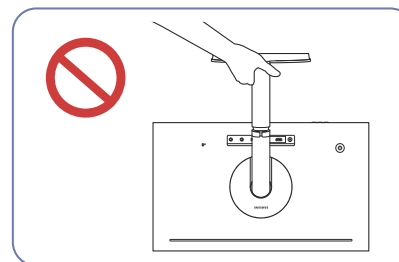
Precautions for moving the monitor



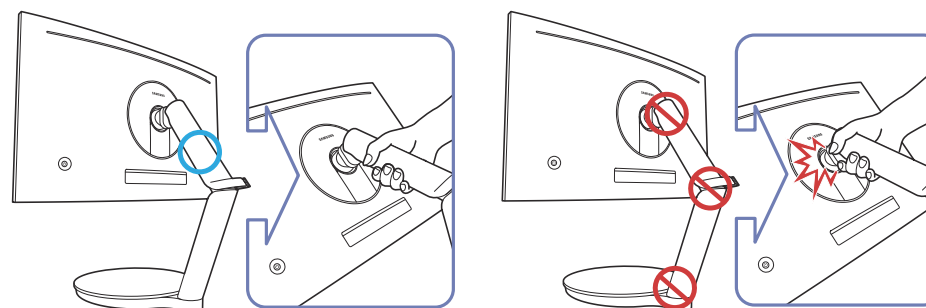
- Hold the lower part of the monitor when moving it.



- When moving the monitor, rotate to portrait orientation and hold the top and bottom of the monitor.



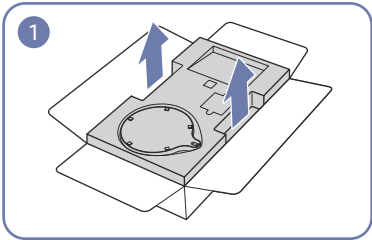
- Do not hold the product upside down only by the stand.



- Exercise caution to ensure that your fingers do not get caught.

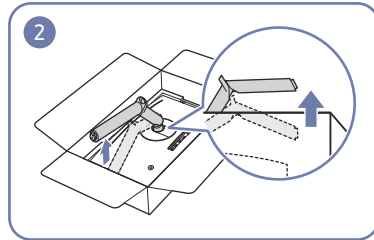
Installation

Assembling the Stand base

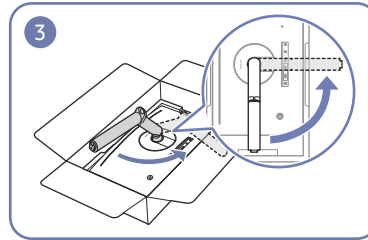


Open the packaging. Be careful when using a sharp object to open the packaging. The product may be damaged.

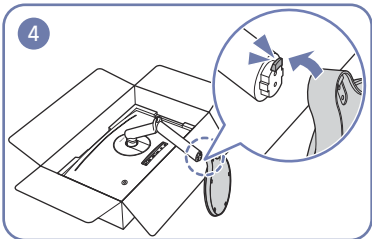
Put your hands in the grooves on either side of the top layer of styrofoam covering the product and remove it.



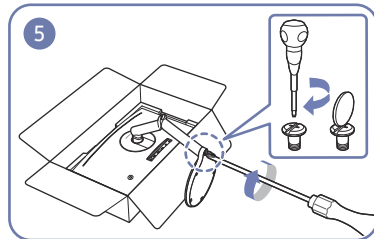
While pressing down with one hand on the lower styrofoam layer, lift the stand's neck with the other hand.



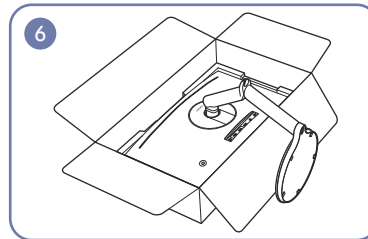
Rotate the stand neck 90° counterclockwise and put the connecting area on the edge of the packaging.



Attach the stand base to the neck, as shown in the image. Make sure there is no gap between the stand neck and base.



Attach the stand base to the stand neck, and then fasten the two screws on the base to tightly fix it.

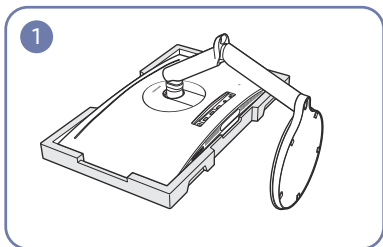


The stand is now completely assembled.

Removing the Stand (For Attaching the BRACKET WALL)

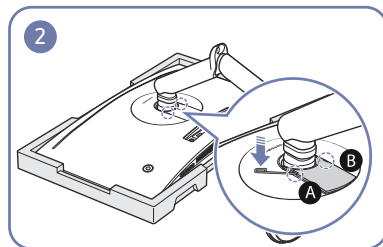
— Before removing the stand from the monitor, place the monitor on a flat and stable surface with the screen facing down.

⚠ : The product is curved. Placing pressure on the product when on a flat surface may damage the product. When the product is on the ground facing up or down, do not put pressure on it.

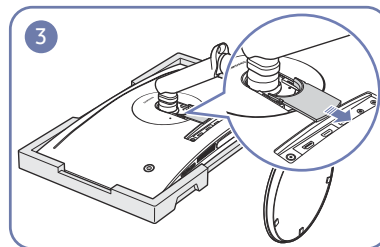


Place the protective Styrofoam (cushion) included in the package on the floor and place the product facing down on the Styrofoam, as shown in the image.

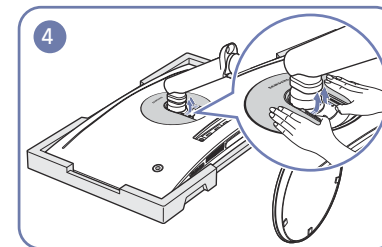
— Make sure to use the styrofoam (cushion) that came with the monitor.



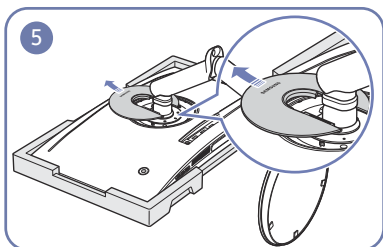
Insert the dedicated disassembly pin into tabs **A** and **B**, then use the pin as a lever to lift the COVER REAR SUB.



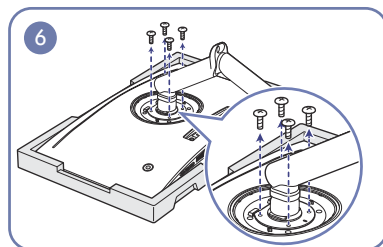
Remove the COVER REAR SUB in the arrow direction.



On the back of the monitor, use your fingers to lift the COVER REAR TOP in the direction of the arrows, as shown in the image.

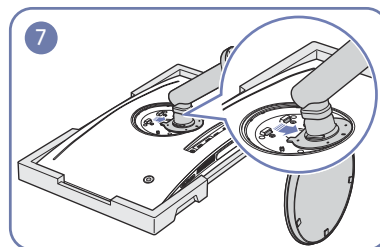


Remove the COVER REAR TOP in the direction of the arrow.



Unfasten the screws on the stand, as shown in the image.

— The screws are also used to attach the BRACKET WALL. Be careful to ensure the screws are not missing.



Lift and remove the stand.

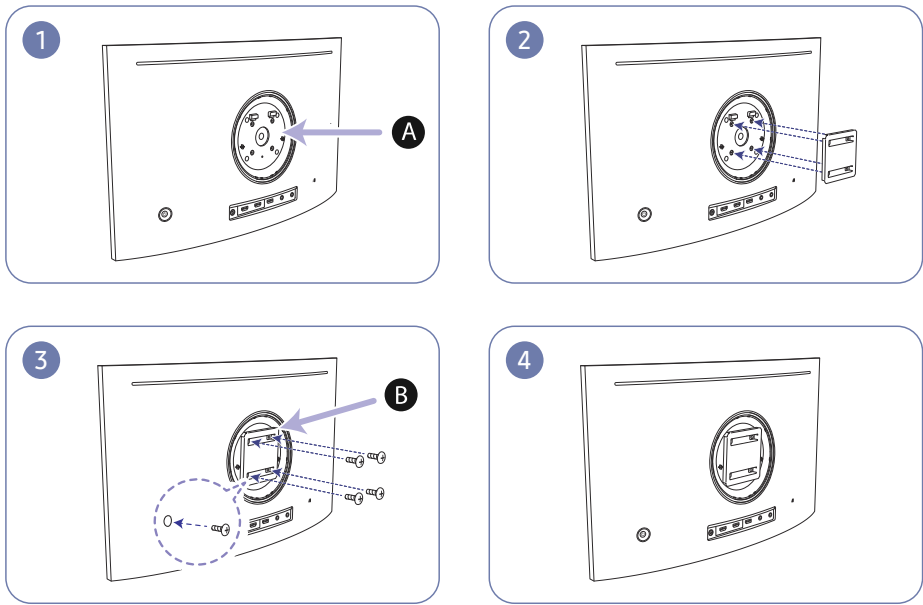


Caution

Do not press down on the monitor. There is a risk of damaging the monitor.

Attaching the BRACKET WALL

— Power the product off and remove the power cable from the power socket.



A Attach the BRACKET WALL here

B BRACKET WALL

Align **B** with **A** on the monitor, then tightly fasten with the screws removed from the stand (P18).

- Notes
 - Using a screw longer than the standard length can damage the internal components of the product.
 - The length of screws required for a wall mount that does not comply with the VESA standards may vary depending on the specifications.
 - Do not use screws that do not comply with the VESA standards. Do not attach the wall-mount kit or desktop stand using excessive force. The product may get damaged or fall and cause personal injury. Samsung shall not be held liable for any damage or injury caused by using improper screws or attaching the wall-mount kit or desktop stand using excessive force.
 - Samsung shall not be held liable for any product damage or personal injury caused by using a wall-mount kit other than the one specified or from an attempt to install the wall-mount kit on your own.
 - To mount the product on a wall, ensure you purchase a wall-mount kit that can be installed 10 cm or farther away from the wall.
 - Be sure to use a wall-mount kit that complies with the standards.
 - To install the monitor using a wall mount, disconnect the stand base from the monitor.

Unit: mm (inches)

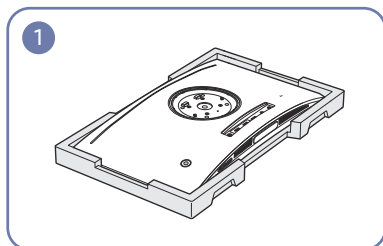
Model name	VESA screw hole specs in millimeters	Standard Screw	Quantity
C24FG70FQ*	75 x 75 (3.0 x 3.0)	4 mm Φ , 0.7 pitch * 10 mm long	4 EA
C27FG70FQ*			

— Do not attach the BRACKET WALL when the monitor is turned on. This may cause electric shock and might result in injury.

Attaching the Stand

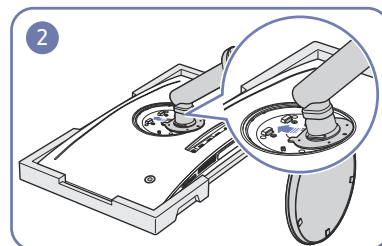
— Before assembling the product, place the product down on a flat and stable surface so that the screen is facing downwards.

⚠ : The product is curved. Placing pressure on the product when on a flat surface may damage the product. When the product is on the ground facing up or down, do not put pressure on it.

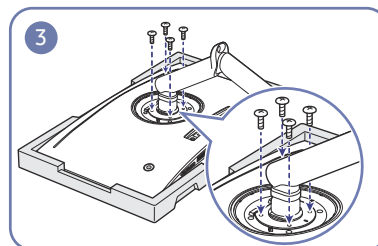


Place the protective Styrofoam (cushion) included in the package on the floor and place the product facing down on the Styrofoam, as shown in the image.

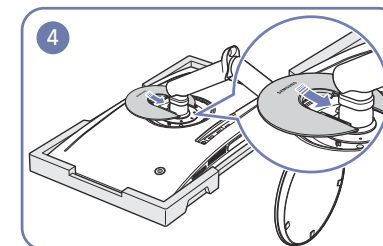
— Make sure to use the styrofoam (cushion) that came with the monitor.



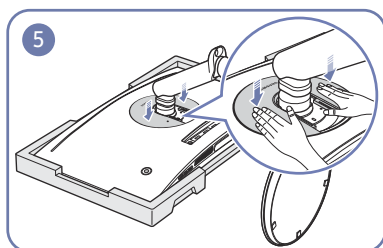
Attach the stand to the back of the monitor, in the direction of the arrow.



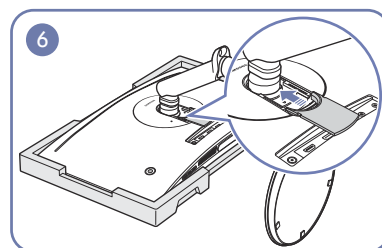
Use the screws on the stand to tightly fasten.



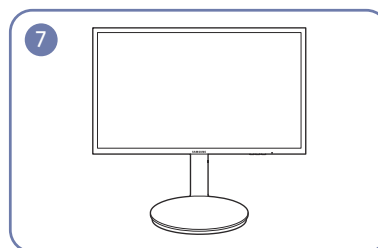
On the back of the monitor, align and push the COVER REAR TOP in the groove in the direction of the arrow.



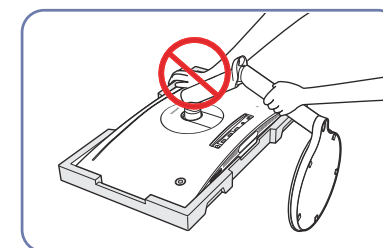
Push the COVER REAR TOP in the direction of the arrows.



On the back of the monitor, align and push the COVER REAR SUB in the groove in the direction of the arrow.



After attaching the stand, place the product in an upright position.



Caution

Do not press down on the monitor. There is a risk of damaging the monitor.

Chapter 03

Connecting and Using a Source Device

Pre-connection Checkpoints

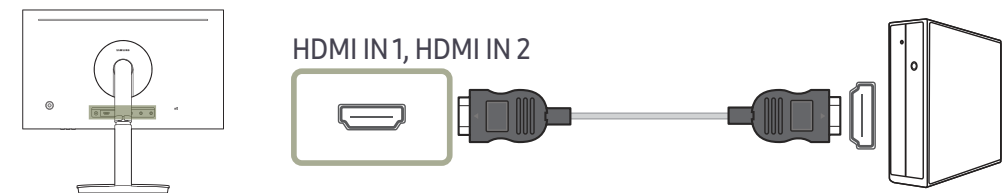
- Before connecting a source device, read the user manual provided with it.
The number and locations of ports on source devices may differ from device to device.
- Do not connect the power cable before connecting all other cables.
Ensure you connect a source device first before connecting the power cable.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

Connecting and Using a PC

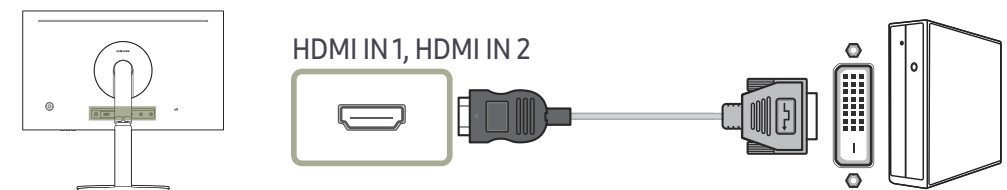
Select a connection method suitable for your PC.

- Connecting parts may differ in different products.
- Provided ports may vary depending on the product.

Connection Using the HDMI Cable

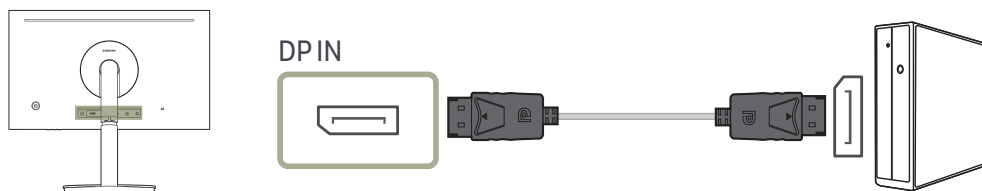


Connection Using an HDMI-DVI Cable



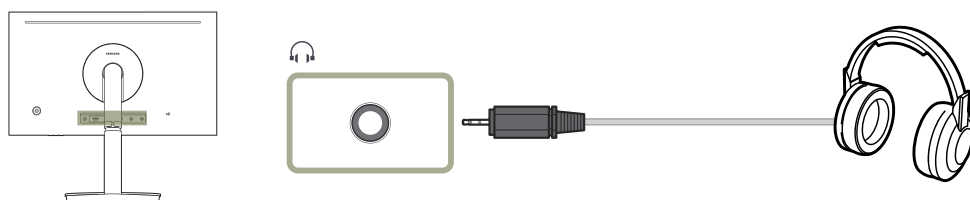
- The audio function is not supported if the source device is connected using the HDMI-DVI cable.
- The **Interactive** feature in **Arena Lighting** is not supported. This feature works in conjunction with sound input.

Connection Using an DP Cable



— A DP cable shorter under 1.5 m in length is recommended. Using a cable longer than 1.5 m can affect the picture quality.

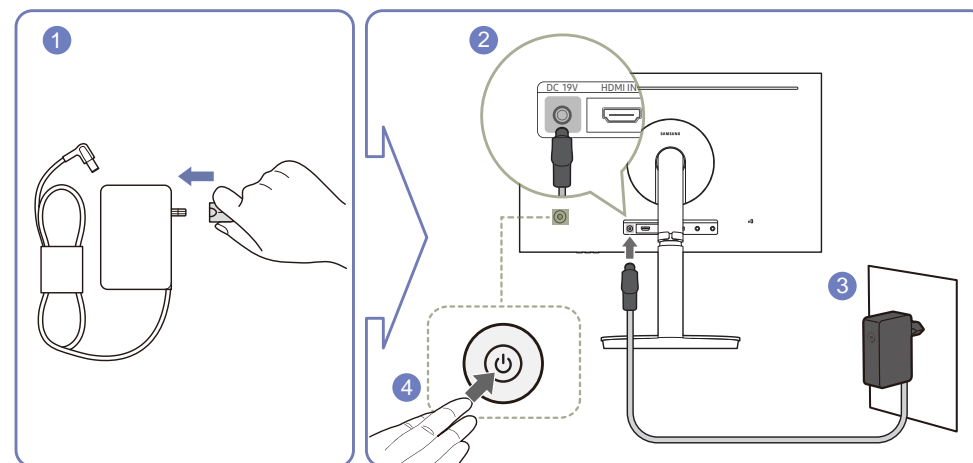
Connecting to Headphones



— Use headphones when activating sound with a HDMI-HDMI or DP cable.

— The **Interactive** feature in **Arena Lighting** is available. This feature works in conjunction with audio input.

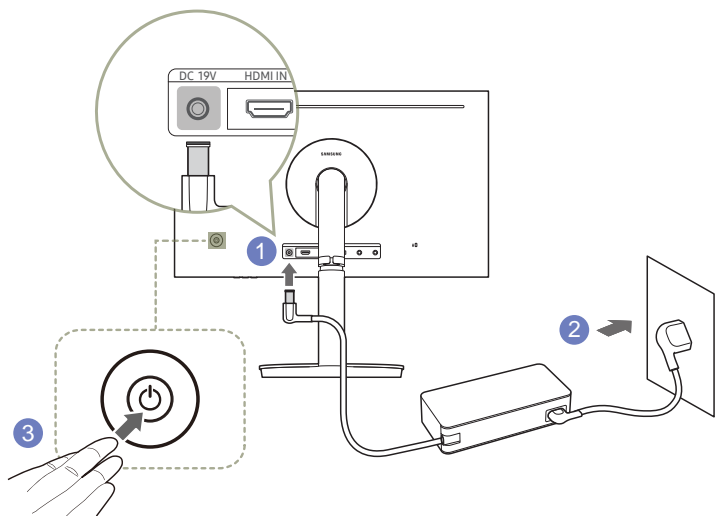
Connecting the Power (C24FG70FQ* model only)



- 1 Connect the power plug to the AC/DC adapter.
- 2 Connect the AC/DC adapter cable to the DC19V port on the back of the monitor.
- 3 Plug the AC/DC adapter into the power outlet.
- 4 Press the JOG button on the back of the monitor to turn it on.

— The input voltage is switched automatically.

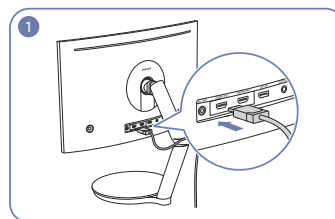
Connecting the Power (C27FG70FQ* model only)



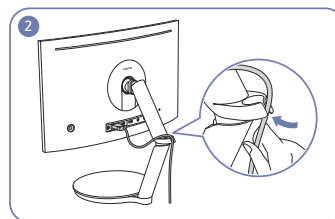
- 1 Connect the power cable to the AC/DC adapter. Then, connect the AC/DC adapter to the DC19V port on the back of the product.
- 2 Next, connect the power cable to the power outlet.
- 3 Press the JOG button on the back of the monitor to turn it on.

— The input voltage is switched automatically.

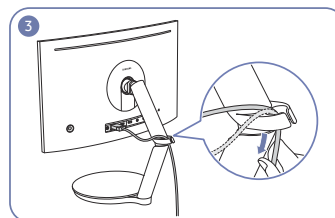
Tidying Up the Connected Cables



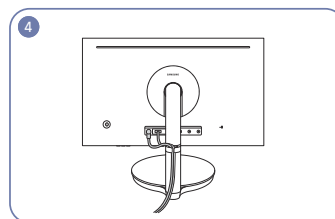
Connect cables to the appropriate connectors.



Run the cables through the holder in the direction of the arrow from the lower part of the holder, as shown in the image.



Pull cable down to adjust the length.



Use the same method to clean up the other cables.

Caution

While rotating the cable fixed on the holder, the cable may be separated or damaged. In this case, first remove the cable from the holder.

Correct posture to use the product



Use the product in the correct posture as follows:

- Straighten your back.
- Adjust the angle so light does not reflect on the screen.
- Keep your forearms perpendicular to your upper arms and level with the back of your hands.
- Keep your elbows at about a right angle.
- Adjust the height of the product so you can keep your knees bent at 90 degrees or more, your heels attached to the floor, and your arms lower than your heart.

Driver Installation

- You can set the optimum resolution and frequency for this product by installing the corresponding drivers.
- To install the latest version of the product driver, download it from the Samsung Electronics website at <http://www.samsung.com>.

Setting Optimum Resolution

An information message about setting optimum resolution will appear if you power on the product for the first time after purchase.

Select a language on the product and change the resolution on your PC to the optimum setting.

- If the optimum resolution is not selected, the message will appear up to three times for a specified time even when the product is turned off and on again.
- The optimum resolution can also be selected in **Control Panel** on your PC.
- To change the refresh rate while retaining the current resolution, select **Game** → **Refresh Rate** on the OSD menu.

Chapter 04

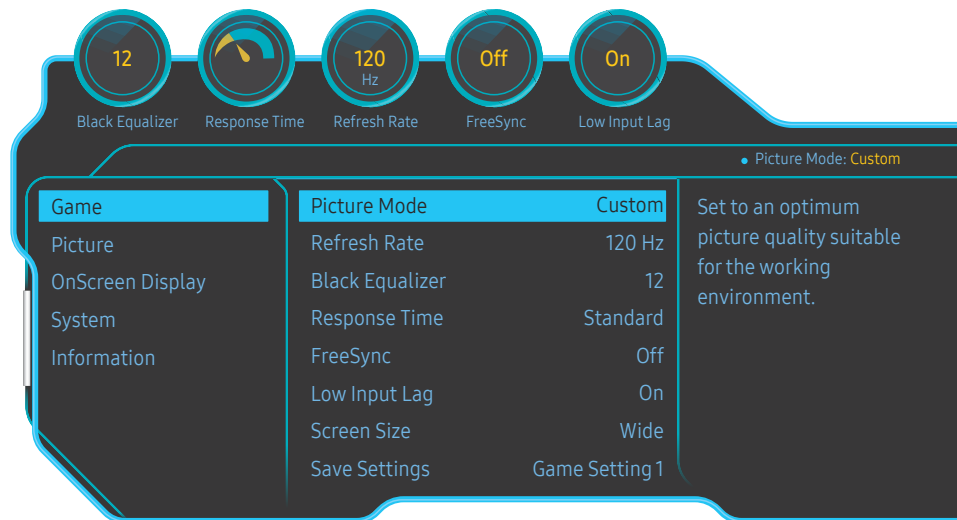
Game

A detailed description of each function is provided. Refer to your product for details.

Picture Mode

This menu provides an optimum picture quality suitable for the environment where the product will be used.

— This menu is not available when **Eye Saver Mode** is enabled.



— The displayed image may differ depending on the model.

In PC mode

- **Custom**: Customize the screen settings.
- **High-Brightness**: Maximize the screen brightness.
- **FPS**: Increase the brightness of darker areas of the FPS game screen. This mode increases visibility of your enemies during a FPS game.
- **RTS**: Increase the color temperature and contrast ratio to improve visibility of the RTS screen and minimap.
- **RPG**: This mode is optimized for 3D graphics and instant messaging on the RPG game screen.
- **AOS**: Increase the contrast ratio to obtain a picture quality optimized for the AOS game screen.
- **sRGB**: Adjust the color system to **sRGB** mode. This is the standard mode of this monitor.
- **Cinema**: Obtain the brightness and sharpness of TVs suitable for enjoying video and DVD content.

In AV mode

When the external input is connected through HDMI/DP and **PC/AV Mode** is set to **AV**, **Picture Mode** has four automatic picture settings (**Dynamic**, **Standard**, **Movie** and **Custom**) that are preset at the factory. You can activate either **Dynamic**, **Standard**, **Movie** or **Custom**. You can select **Custom** which automatically recalls your personalized picture settings.

- **Dynamic**: Select this mode to view a sharper image than in **Standard** mode.
- **Standard**: Select this mode when the surroundings are bright. This also provides a sharp image.
- **Movie**: Select this mode when the surroundings are dark. This will save power and reduce eye fatigue.
- **Custom**: Select this mode when you want to adjust the image according to your preferences.

Refresh Rate

Change the screen refresh rate. A higher refresh rate makes pictures easier to look at for longer.

- **DisplayPort** : 60 Hz / 100 Hz / 120 Hz / 144 Hz
- **HDMI1, HDMI2** : 60 Hz / 100 Hz / 120 Hz

- This menu is not available when **FreeSync** is set to **On** mode. Set **FreeSync** to **Off** and change the **Refresh Rate**.
- When changing the **Refresh Rate**, the screen may flicker depending on the computer graphics card.
- The function is available in a computer equipped with the graphic card that can change the refresh rate. It is unavailable in the devices (e.g. AV devices) with fixed refresh rates. If the function is applied, the screen may have malfunction.

Black Equalizer

Adjust the brightness of the dark areas.

As the value gets closer to 0, the darker areas of the screen become brighter, making it easier to find enemies when playing a game. To find enemies more easily during a game, use a lower value.

As the value gets closer to 20, the darker areas of the screen become darker and the contrast increases.

- This menu is not available when **Eye Saver Mode** is enabled.

Response Time

Increase the response rate of the video or game screen.

The **Faster** and **Fastest** modes display motion blur-free sharper pictures with faster movements by analyzing movement of liquid crystals in the panel and controlling the LED behavior.

- In **Faster** and **Fastest** modes, the brightness is decreased according to the panel LED behavior. This will prevent motion blur.
- Use **Standard** mode when not playing a video or game.
- When **FreeSync** is set to **On**, you cannot use both **Faster** and **Fastest** modes.
- In **Faster** and **Fastest** modes, Flicker Free is unavailable, regardless of LED control.

FreeSync

FreeSync technology is solution that eliminates screen tearing without all the usual lag and latency. This feature will eliminate screen tearing and lag during game play. Improve your gaming experience. The displayed **FreeSync** menu items on the monitor may vary, depending on the monitor model and compatibility with the AMD graphics card.

Menu item 1

- **Off**: Disable **FreeSync**.
- **On**: Turn on the AMD graphics cards' **FreeSync** function. You may experience intermittent flickers when playing some games.

Apply the optimum resolution when using **FreeSync**.

The refresh rate setting method please refer to Q & A → How can I change the frequency?

— The **FreeSync** function is only enabled in **HDMI1**, **HDMI2** or **DisplayPort** mode.
Use the HDMI/DisplayPort cable provided by the manufacturer when using **FreeSync**.

If you use the **FreeSync** function while playing a game, the following symptoms may occur:

- The screen may flicker depending on the type of graphics card, the game option settings, or the video being played. Try the following actions: decrease the game setting values, change the current **FreeSync** mode to **On**, or visit the AMD website to check your graphics driver's version and update it with the latest one.
- While you are using the **FreeSync** function, the screen may flicker due to variation of the output frequency from the graphics card.
- The response rate during the game may fluctuate depending on the resolution. A higher resolution generally decreases the response rate.
- The sound quality of the monitor may be degraded.

— If you encounter any issues when using the function, contact the Samsung Service Center.

— If you change the screen resolution while the function is **On**, the screen may intermittently blank out due to the graphi card. Set **FreeSync** to **Off** and change the resolution.

— The function is unavailable in the devices (e.g. AV devices) that have no AMD graphic card. If the function is applied, the screen may have malfunction.

How do you enable FreeSync?

- 1 Set **FreeSync** to **On** in the OSD on the monitor.
- 2 Enable **FreeSync** in AMD Radeon Settings:
Right-click the mouse → AMD Radeon Settings → Display
The "AMD FreeSync" feature should be set to "On". Select to "On" if not already enabled.

Menu item 2

- **Off**: Disable **FreeSync**.
- **Standard Engine**: Enable the basic **FreeSync** functions of the AMD graphics card.
- **Ultimate Engine**: Enable the **FreeSync** feature with a higher screen frame rate. Screen tearing (abnormal sync between the screen and content) is reduced in this mode. Note that screen flickering may occur during game play.

Apply the optimum resolution when using **FreeSync**.

The refresh rate setting method please refer to Q & A → How can I change the frequency?

— The **FreeSync** function is only enabled in **HDMI1**, **HDMI2** or **DisplayPort** mode.
Use the HDMI/DisplayPort cable provided by the manufacturer when using **FreeSync**.

If you use the **FreeSync** function while playing a game, the following symptoms may occur:

- The screen may flicker depending on the type of graphics card, the game option settings, or the video being played. Try the following actions: decrease the game setting values, change the current **FreeSync** mode to **Standard Engine**, or visit the AMD website to check your graphics driver's version and update it with the latest one.
- While you are using the **FreeSync** function, the screen may flicker due to variation of the output frequency from the graphics card.
- The response rate during the game may fluctuate depending on the resolution. A higher resolution generally decreases the response rate.
- The sound quality of the monitor may be degraded.

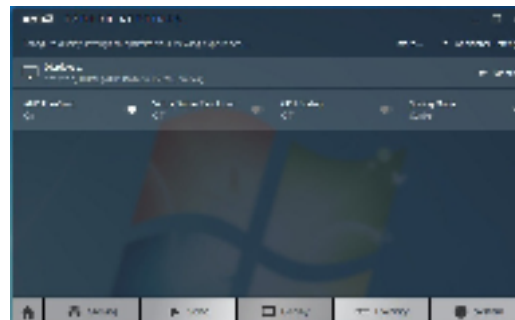
— If you encounter any issues when using the function, contact the Samsung Service Center.

— When the resolution is changed while setting **FreeSync** to **Standard Engine** or **Ultimate Engine**, the screen tearing can happen intermittently. Set **FreeSync** to **Off** and change the resolution.

— The function is unavailable in the devices (e.g. AV devices) that have no AMD graphic card. If the function is applied, the screen may have malfunction.

How do you enable FreeSync?

- 1 Set **FreeSync** to **Standard Engine** or **Ultimate Engine** in the OSD menu.
- 2 Enable **FreeSync** in AMD Radeon Settings:
Right-click the mouse → AMD Radeon Settings → Display
The "AMD FreeSync" feature should be set to "On". Select to "On" if not already enabled.



The models in the Graphic Cards list supports FreeSync

FreeSync can only be used with specific AMD graphics card models. Refer to the following list for supported graphics cards:

Make sure to install the latest official graphics drivers from AMD that support **FreeSync**.

For additional AMD graphics card models that support the **FreeSync** feature, visit the official AMD website.

Select **FreeSync Off** if you are using a graphics card from a different manufacturer.

- AMD Radeon R9 300 Series
- AMD Radeon R9 Fury X
- AMD Radeon R7 360
- AMD Radeon R9 295X2
- AMD Radeon R9 290X
- AMD Radeon R9 290
- AMD Radeon R9 285
- AMD Radeon R7 260X
- AMD Radeon R7 260
- AMD Radeon RX480

Low Input Lag

Minimize input lag for fast reactions by reducing the video processing time.

- It is recommended to set the refresh rate of the graphic card to any of 100 Hz, 120 Hz, and 144 Hz. With 60 Hz, the function is unavailable.
- This feature is not available if the scanning rate on the computer is different from the settings in the **Refresh Rate** menu.

Screen Size

Select the best screen size and ratio.

In PC mode

- Auto**: Display the picture according to the aspect ratio of the input source.
- Wide**: Display the picture in full screen regardless of the aspect ratio of the input source.
- 17" (4:3)**: Use a 4:3 aspect ratio on a 17-inch screen. Pictures with a different aspect ratio will not be displayed.
- 19" (4:3)**: Use a 4:3 aspect ratio on a 19-inch wide screen. Pictures with a different aspect ratio will not be displayed.
- 19" Wide (16:10)**: Use a 16:10 aspect ratio on a 19-inch wide screen. Pictures with a different aspect ratio will not be displayed.
- 21.5" Wide (16:9)**: Use a 16:9 aspect ratio on a 21.5-inch wide screen. Pictures with a different aspect ratio will not be displayed.
- 22" Wide (16:10)**: Use a 16:10 aspect ratio on a 22-inch wide screen. Pictures with a different aspect ratio will not be displayed.
- 23" Wide (16:9)**: Use a 16:9 aspect ratio on a 23-inch wide screen. Pictures with a different aspect ratio will not be displayed.

In AV mode

- **4:3**: Display the picture with an aspect ratio of 4:3. Suitable for videos and standard broadcasts.
- **16:9**: Display the picture with an aspect ratio of 16:9.
- **Screen Fit**: Display the picture with the original aspect ratio without cutting off.
- **17" (4:3)**: Use a 4:3 aspect ratio on a 17-inch screen. Pictures with a different aspect ratio will not be displayed.
- **19" (4:3)**: Use a 4:3 aspect ratio on a 19-inch wide screen. Pictures with a different aspect ratio will not be displayed.
- **19" Wide (16:10)**: Use a 16:10 aspect ratio on a 19-inch wide screen. Pictures with a different aspect ratio will not be displayed.
- **21.5" Wide (16:9)**: Use a 16:9 aspect ratio on a 21.5-inch wide screen. Pictures with a different aspect ratio will not be displayed.
- **22" Wide (16:10)**: Use a 16:10 aspect ratio on a 22-inch wide screen. Pictures with a different aspect ratio will not be displayed.
- **23" Wide (16:9)**: Use a 16:9 aspect ratio on a 23-inch wide screen. Pictures with a different aspect ratio will not be displayed.

- The function may not be supported depending on the ports provided with the product.
- Changing the screen size is available when the following conditions are satisfied.
 - A digital output device is connected using the HDMI/DP cable.
 - The input signal is 480p, 576p, 720p, or 1080p and monitor can display normally (Not every model can support all of these signals.).
 - This can only be set when the external input is connected through HDMI/DP and **PC/AV Mode** is set to **AV**. (**DisplayPort/HDMI1/HDMI2**: This option is available when **FreeSync** is disabled)

Save Settings

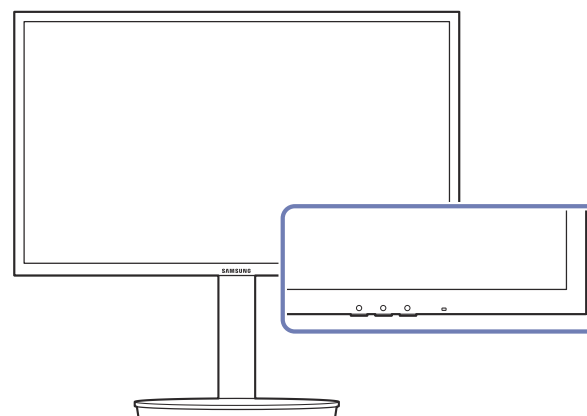
Save up to three custom game modes to suit your preferences. Press a game mode shortcut key at the lower part of the monitor to directly access your favorite custom game mode.

- If you edit and save a custom game mode, the previous settings will be deleted. Be careful when editing a mode.

- **Game Setting 1 / Game Setting 2 / Game Setting 3**

Game Setting Key

You can quickly view the setting with a shortcut key at the bottom without using an OSD menu. You can directly see the settings for three different modes.



Chapter 05

Screen Setup

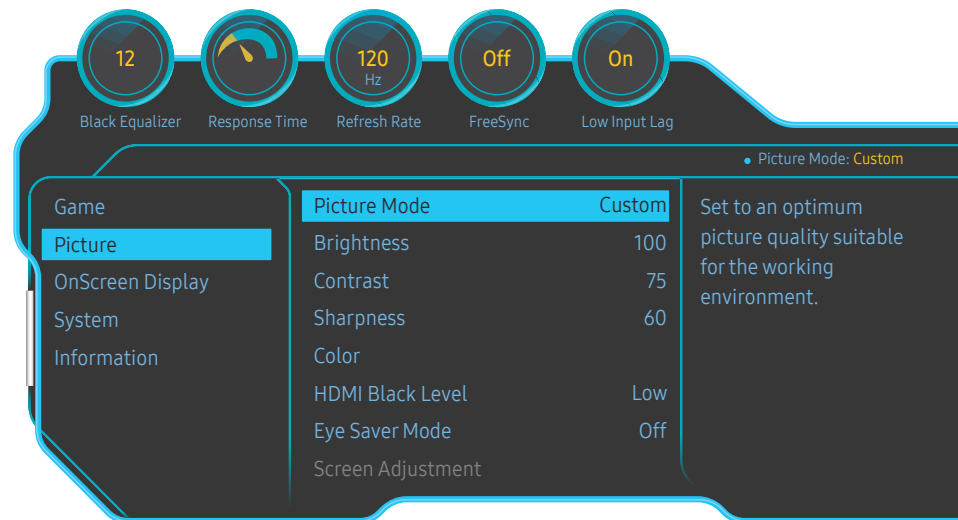
Configure the screen settings such as brightness.

A detailed description of each function is provided. Refer to your product for details.

Picture Mode

This menu provides an optimum picture quality suitable for the environment where the product will be used.

— This menu is not available when **Eye Saver Mode** is enabled.



— The displayed image may differ depending on the model.

In PC mode

- **Custom**: Customize the screen settings.
- **High-Brightness**: Maximize the screen brightness.
- **FPS**: Increase the brightness of darker areas of the FPS game screen. This mode increases visibility of your enemies during a FPS game.
- **RTS**: Increase the color temperature and contrast ratio to improve visibility of the RTS screen and minimap.
- **RPG**: This mode is optimized for 3D graphics and instant messaging on the RPG game screen.
- **AOS**: Increase the contrast ratio to obtain a picture quality optimized for the AOS game screen.
- **sRGB**: Adjust the color system to **sRGB** mode. This is the standard mode of this monitor.
- **Cinema**: Obtain the brightness and sharpness of TVs suitable for enjoying video and DVD content.

In AV mode

When the external input is connected through HDMI/DP and **PC/AV Mode** is set to **AV**, **Picture Mode** has four automatic picture settings (**Dynamic**, **Standard**, **Movie** and **Custom**) that are preset at the factory. You can activate either **Dynamic**, **Standard**, **Movie** or **Custom**. You can select **Custom** which automatically recalls your personalized picture settings.

- **Dynamic**: Select this mode to view a sharper image than in **Standard** mode.
- **Standard**: Select this mode when the surroundings are bright. This also provides a sharp image.
- **Movie**: Select this mode when the surroundings are dark. This will save power and reduce eye fatigue.
- **Custom**: Select this mode when you want to adjust the image according to your preferences.

Brightness

You can adjust the general brightness of the picture. (Range: 0~100)

A higher value will make the picture appear brighter.

— This menu is not available when **Eco Saving Plus** is enabled.

— This menu is not available when **Eye Saver Mode** is enabled.

Contrast

Adjust the contrast between the objects and background. (Range: 0~100)

A higher value will increase the contrast to make the object appear clearer.

Sharpness

Make the outline of objects more clear or blurry. (Range: 0~100)

A higher value will make the outline of objects clearer.

Color

Adjust the tint of the screen.

— This menu is not available when **Eye Saver Mode** is enabled.

- **Red**: Adjust the red saturation level. Values closer to 100 mean greater intensity for the color.
- **Green**: Adjust the green saturation level. Values closer to 100 mean greater intensity for the color.
- **Blue**: Adjust the blue saturation level. Values closer to 100 mean greater intensity for the color.
- **Color Tone**: Select a color tone that best suits your viewing needs.
 - **Cool 2**: Set the color temperature to be cooler than **Cool 1**.
 - **Cool 1**: Set the color temperature to be cooler than **Normal** mode.
 - **Normal**: Display the standard color tone.
 - **Warm 1**: Set the color temperature to be warmer than **Normal** mode.
 - **Warm 2**: Set the color temperature to be warmer than **Warm 1**.
 - **Custom**: Customize the color tone.
- When the external input is connected through HDMI/DP and **PC/AV Mode** is set to **AV**, **Color Tone** has four color temperature settings (**Cool**, **Normal**, **Warm** and **Custom**).
- **Gamma**: Adjust the middle level of luminance.
 - **Mode1** / **Mode2** / **Mode3**

HDMI Black Level

If a DVD player or set-top box is connected to the product via HDMI, image quality degradation (contrast/color degradation, black level, etc.) may occur, depending on the connected source device. In such case, **HDMI Black Level** can be used to adjust the image quality.

If this is the case, correct the degraded picture quality using **HDMI Black Level**.

— This function is only available in **HDMI1**, **HDMI2** mode.

- **Normal**: Select this mode when there is no contrast ratio degradation.
- **Low**: Select this mode to reduce the black level and increase the white level when there is a contrast ratio degradation.

— **HDMI Black Level** may not be compatible with some source devices.

— The **HDMI Black Level** feature is only activated at a certain **AV** resolution, such as 720P and 1080P.

Eye Saver Mode

Set to an optimum picture quality suitable for eye relaxation.

When **Eye Saver Mode** is 'On', the blue light that wavelength is around 400nm will decrease, and it will provide an optimum picture quality suitable for eye relaxation. The blue light level is lower than the default value.

Screen Adjustment

— This option is only available when **PC/AV Mode** is set to **AV**.

— This menu is only available when **Screen Size** is set to **Screen Fit** in **AV** Mode.

When a 480P or 576P or 720P or 1080P signal is input in **AV** mode and the monitor can display normally, select **Screen Fit** to adjust horizontal position in 0-6 levels.

Configuring H-Position & V-Position

H-Position: Move the screen to the left or right.

V-Position: Move the screen up or down.

Chapter 06

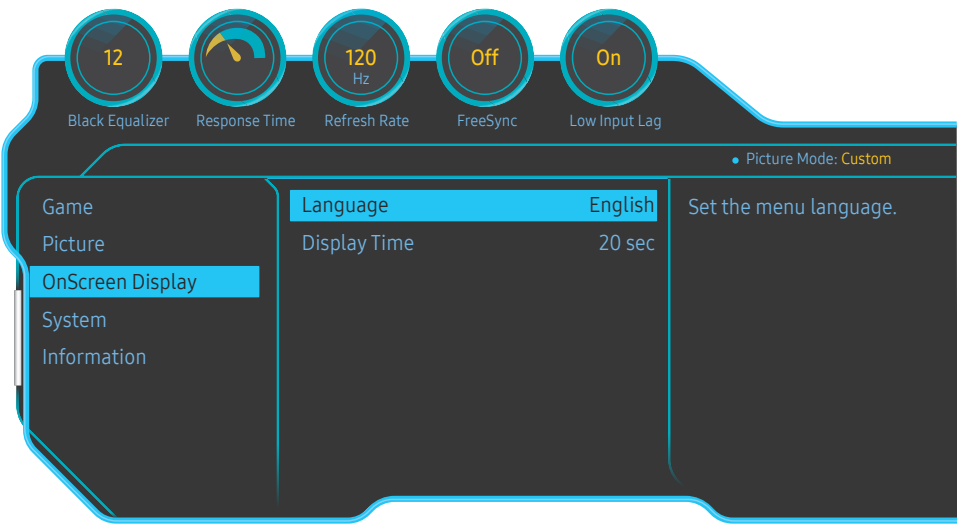
Adjusting OSD (On Screen Display) settings

A detailed description of each function is provided. Refer to your product for details.

Language

Set the menu language.

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



- The displayed image may differ depending on the model.

Display Time

Set the on-screen display (OSD) menu to automatically disappear if the menu is not used for a specified period of time.

Display Time can be used to specify the time after which you want the OSD menu to disappear.

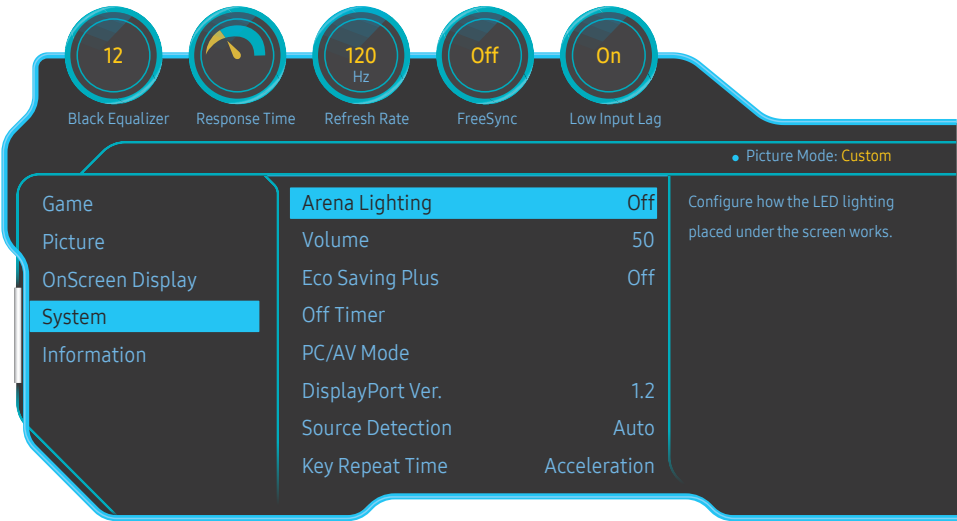
Chapter 07

Setup and Reset

A detailed description of each function is provided. Refer to your product for details.

Arena Lighting

Configure how the LED lighting placed under the screen works.



- **Off:** Deactivate the **Arena Lighting** function.
- **Blinking:** The LED lighting works at a constant interval.
- **Interactive:** Automatically change the LED brightness according to the sound from the computer.
 - This mode changes the illumination level by detecting the intensity of the audio signal received by the monitor. A lower sound volume on the computer decreases the illumination level. Increase the sound volume to improve the illumination effect of the **Arena Lighting** feature for a better gaming experience.

— The displayed image may differ depending on the model.

Volume

Adjust the **Volume** controlling the JOG button LEFT/RIGHT.

Eco Saving Plus

The **Eco Saving Plus** function reduces power consumption by controlling the electric current used by the monitor panel.

— This menu is not available when **Eye Saver Mode** is enabled.


- **Off**: Deactivate the **Eco Saving Plus** function.
- **Auto**: The power consumption will automatically be reduced by about 10% over the current setting. (The reduction of power consumption depends on the customer screen brightness condition.)
- **Low**: The power consumption will be reduced by 25% over the default setting.
- **High**: The power consumption will be reduced by 50% over the default setting.

Off Timer

Off Timer: Turn on **Off Timer** mode.

Turn Off After: The off timer can be set within a range of 1 to 23 hours. The product will automatically power off after the specified number of hours.

— This option is only available when **Off Timer** is set to **On**.

— For products for the market in some regions, the **Off Timer** is set to automatically activate 4 hours after the product powers on. This is done in accordance with power supply regulations. If you do not want the timer to activate, go to  → **System** and set **Off Timer** to **Off**.


PC/AV Mode

Set **PC/AV Mode** to **AV**. The picture size will be enlarged.

This option is useful when you view a movie.

- Set to **PC** when connected to a PC.
- Set to **AV** when connected to an AV device.


— Supplied for the wide models only such as 16:9 or 16:10.

— If the monitor is in **HDMI1**, **HDMI2**, **DisplayPort** mode and the screen says **Check Signal Cable** or power saving mode activates, press the JOG button to display the function-button screen and then select the  icon. You can select **PC** or **AV**.

DisplayPort Ver.

Select your Displayport. Displayport 1.1 supports High Bit Rate 1, while 1.2 supports High Bit Rate 2.

— Incorrect settings may cause the screen to go blank. If this occurs, check the device specifications.

— If the monitor (when set to **HDMI1**, **HDMI2** or **DisplayPort**) is in power saving mode or is displaying the message **Check Signal Cable** or power saving mode activates, press the JOG button to display the function-button screen and then select the  button to display the On Screen Display (OSD). You can select **1.1** or **1.2**.

Source Detection

Select either **Auto** or **Manual** as the method to recognize input signal.

Key Repeat Time

Acceleration, **1 sec**, or **2 sec** can be selected. If **No Repeat** is selected, a command responds only once when a button is pressed.

Power LED On

Configure the settings to enable or disable the power LED located at the lower part of the product.

- **Working**: The power LED is on when the product is turned on.
- **Stand-by**: The power LED is on when the product is turned off.

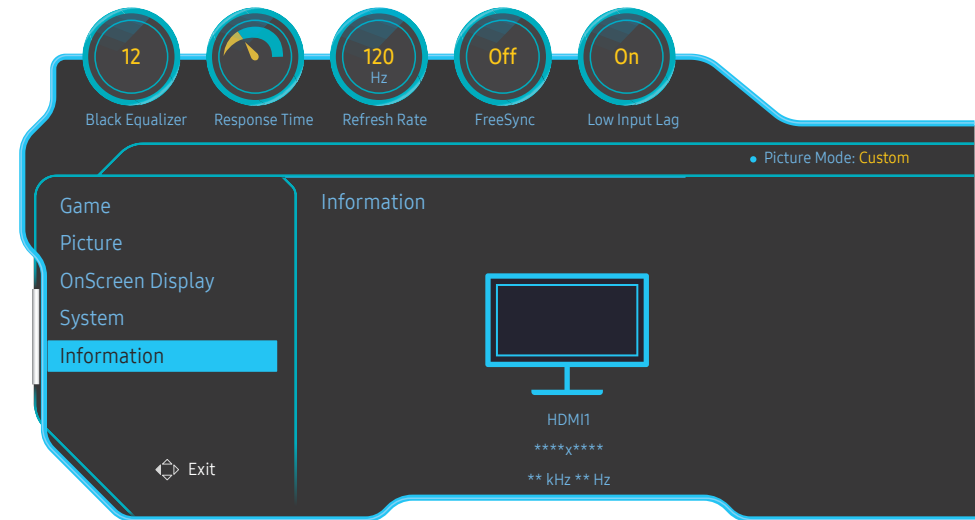
Reset All

Return all the settings for the product to the default factory settings.

— **Game Setting 1**, **Game Setting 2**, and **Game Setting 3** saved under **Save Settings** will not be changed.

Information

View the current input source, frequency and resolution.



— The displayed image may differ depending on the model.

Chapter 08

Installing the Software

Easy Setting Box



Easy Setting Box

Easy Setting Box enables users to use the monitor by partitioning multiple sections.

To install the latest version of **Easy Setting Box**, download it from the Samsung Electronics website at <http://www.samsung.com>.

- The software may not work properly if you do not restart the computer after the installation.
- The **Easy Setting Box** icon may not appear depending on the computer system and the product specifications.
- If the shortcut icon does not appear, press the F5 key.

Restrictions and Problems with the Installation

The **Easy Setting Box** installation may be affected by the Graphics Card, Motherboard and the Networking Environment.

System Requirements

OS	Hardware
<ul style="list-style-type: none">• Windows 7 32Bit/64Bit• Windows 8 32Bit/64Bit• Windows 8.1 32Bit/64Bit• Windows 10 32Bit/64Bit	<ul style="list-style-type: none">• At least 32MB of memory• At least 60MB of free space on the hard disk drive

Chapter 09

Troubleshooting Guide

Requirements Before Contacting Samsung Customer Service Center

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

Testing the Product

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

If the screen is turned off and the power indicator blinks even though the product is properly connected to a PC, perform a self-diagnosis test.

- 1 Power off both the PC and product.
- 2 Disconnect the cables from the product.
- 3 Power on the product.
- 4 If the message **Check Signal Cable** appears, the product is working normally.

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

Checking the Resolution and Frequency

For a mode that exceeds the supported resolution(refer to [Standard Signal Mode Table](#)), the message **Not Optimum Mode** will appear for a short time.

— The displayed resolution may vary, depending on the computer system settings and cables.

Check the following.

Installation issue (PC mode)

The screen keeps switching on and off.

Check the cable connection between the product and PC, and ensure the connectors are locked.

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

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

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

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

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

Screen issue

The power LED is off. The screen will not switch on.

Check that the power cable is connected properly.

The message **Check Signal Cable** appears.

Check that the cable is properly connected to the product.

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

Not Optimum Mode is displayed.

This message appears when the signal from the graphics card exceeds the maximum resolution or frequency for the product.

Change the maximum resolution and frequency to suit the product performance, referring to Standard Signal Mode Table (P.42).

The images on the screen look distorted.

Check the cable connection to the product.

The screen is not clear. The screen is blurry.

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

Set the resolution and frequency to the recommended level.

The screen appears unstable and shaky. There are shadows or ghost images left on the screen.

Check that the resolution and frequency for the PC are within the range of resolution and frequency compatible with the product. Next, if required, change the settings, referring to Standard Signal Mode Table (P.42) in this manual and the **Information** menu on the product.

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

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

Screen color is inconsistent.

Change the **Color** settings.

The colors on the screen have a shadow and are distorted.

Change the **Color** settings.

White does not really look white.

Change the **Color** settings.

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

The product is operating in power-saving mode.

Press any key on the keyboard or move the mouse to return to normal operating mode.

Text is blurry.

If using a Windows OS (e.g. Windows 7, Windows 8, Windows 8.1 or Windows 10): Go to **Control Panel** → **Fonts** → **Adjust ClearType text** and change **Turn on ClearType**.

Video playback is choppy.

Playback of high-definition large video files can be choppy. This may be because the video player is not optimized for the computer resource.

Try playing the file on another video player.

Sound issue

There is no sound.

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

Check the volume.

The volume is too low.

Adjust the volume.

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

Video is available but there is no sound.

Sound cannot be heard if a HDMI-DVI cable is used to connect the input device.

Connect the device using an HDMI cable or a DP cable.

Source device issue

A beeping sound is heard when my PC is booting.

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

Q & A

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

How can I change the frequency?

Set the frequency on your graphics card.

- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Screen Resolution** → **Advanced settings** → **Monitor**, and adjust **Refresh rate** under **Monitor settings**.
- Windows 8(Windows 8.1): Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Screen Resolution** → **Advanced settings** → **Monitor**, and adjust **Refresh rate** under **Monitor settings**.
- Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings** → **Display adapter properties** → **Monitor**, and adjust **Screen refresh rate** under **Monitor settings**.

How can I change the resolution?

- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution**, and adjust the resolution.
- Windows 8(Windows 8.1): Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution**, and adjust the resolution.
- Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings**, and adjust the resolution.

How do I set power-saving mode?

- Windows 7: Set power-saving mode in **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** → **Power options** or **BIOS SETUP** on the PC.
 - Windows 8(Windows 8.1): Set power-saving mode in **Settings** → **Control Panel** → **Appearance and Personalization** → **Personalize** → **Screen Saver Settings** → **Power options** or **BIOS SETUP** on the PC.
 - Windows 10: Set power-saving mode in **Settings** → **Personalization** → **Lock screen** → **Screen timeout settings** → **Power & sleep** or **BIOS SETUP** on the PC.
-

Chapter 10

Specifications

General

Model Name	C24FG70FQ*	C27FG70FQ*
Size	24 Class (23.5 Inches / 59.8 cm)	27 Class (27.0 Inches / 68.6 cm)
Display area	521.3952 mm (H) x 293.2848 mm (V) 20.5 Inches (H) x 11.5 Inches (V)	597.888 mm (H) x 336.312 mm (V) 23.5 Inches (H) x 13.2 Inches (V)
Pixel Pitch	0.27156 mm (H) x 0.27156 mm (V) 0.010691 Inches (H) x 0.010691 Inches (V)	0.3114 mm (H) x 0.3114 mm (V) 0.01226 Inches (H) x 0.01226 Inches (V)
Maximum Pixel Clock	HDMI: 297 MHz Display Port: 346.5 MHz	
Power Supply	AC 100 - 240 V - (+/- 10 %), 50/60 Hz \pm 3 Hz Refer to the label at the back of the product as the standard voltage can vary in different countries.	
Signal connectors	HDMI, DisplayPort	
Environmental conditions	Operating Temperature: 50 °F – 104 °F (10 °C – 40 °C) Humidity: 10 % – 80 %, non-condensing	
	Storage Temperature: -4 °F – 113 °F (-20 °C – 45 °C) Humidity: 5 % – 95 %, non-condensing	

Plug-and-Play

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

Panel Dots (Pixels)

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

The above specifications are subject to change without notice to improve quality.

This device is a Class B digital apparatus.

For detailed device specifications, visit the Samsung Electronics website.

(USA only)

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website:

www.samsung.com/recyclingdirect or call, (877) 278 - 0799

Standard Signal Mode Table

Synchronization	Horizontal Frequency	30 – 168 kHz
	Vertical Frequency	48 – 144 Hz
Resolution	Optimum resolution	1920 x 1080 @ 120 Hz (HDMI) 1920 x 1080 @ 144 Hz (Display Port)
	Maximum resolution	1920 x 1080 @ 120 Hz (HDMI) 1920 x 1080 @ 144 Hz (Display Port)

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

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
VESA, 640 x 480	31.469	59.940	25.175	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1280 x 720	45.000	60.000	74.250	+/+
VESA, 1280 x 800	49.702	59.810	83.500	-/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 1440 x 900	55.935	59.887	106.500	-/+
VESA, 1600 x 900 RB	60.000	60.000	108.000	+/+
VESA, 1680 x 1050	65.290	59.954	146.250	-/+
VESA, 1920 x 1080	67.500	60.000	148.500	+/+
CEA, 1920 x 1080	112.500	100.000	297.000	+/+
CEA, 1920 x 1080	135.000	120.000	297.000	+/+
CVT, 1920 x 1080 RB	166.587	143.981	346.500	+/-

Horizontal Frequency

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

Vertical Frequency

Repeating the same picture dozens of times per second allows you to view natural pictures. The repeat frequency is called "vertical frequency" or "refresh rate" and is indicated in Hz.

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

Chapter 11

Appendix

Responsibility for the Pay Service (Cost to Customers)

— When the service is requested, in spite of in warranty, we may charge you for a visit from a service technician in the following cases.

Not a product defect

Cleaning of the product, Adjustment, Explanation, Re-installation and etc.

- If a service technician gives instructions on how to use product or simply adjusts options without disassembling product.
- If a defect is caused by external environmental factors (Internet, Antenna, Wired Signal, etc.)
- If a product is reinstalled or devices are connected additionally after installing the purchased product for the first time.
- If a product is reinstalled to move to a different spot or to move to a different house.
- If customer requests instructions on how to use because of another company's product.
- If customer requests instructions on how to use the network or another company's program.
- If customer requests software installation and setup for the product.
- If a service technician removes/cleans dusts or foreign materials inside of the product.
- If customer requests an installation additionally after purchasing a product through home-shopping or online.

A Product damage caused by customer's fault

Product damage caused by customer's mishandling or wrong repair

If a product damage is caused by;

- External impact or drop.
- Use of supplies or 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.

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.