

User manual

S19E200NY
S19E200BR
S19E200NW
S19E200BW
S22E200NY
S22E200N
S22E200B
S22E200BW
S23E200B
S24E200BL

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

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Before Using the Product

Copyright

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Microsoft, Windows and Windows NT are registered trademarks of Microsoft Corporation.

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- 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.

Icons used in this manual



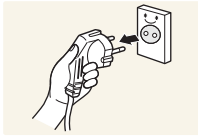
The following images are for reference only. Real-life situations may differ from what is shown in the images.

Before Using the Product

Cleaning

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

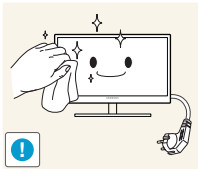
Take the following steps when cleaning.



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



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



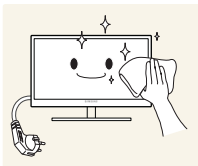
3. Wipe the monitor screen using a clean, soft and dry cloth.



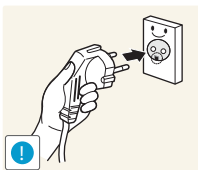
- Do not apply a cleaning agent that contains alcohol, solvent, or surfactant to the monitor.



- 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 monitor.



5. Connect the power cord to the product after cleaning the product.
6. Power on the monitor and computer.

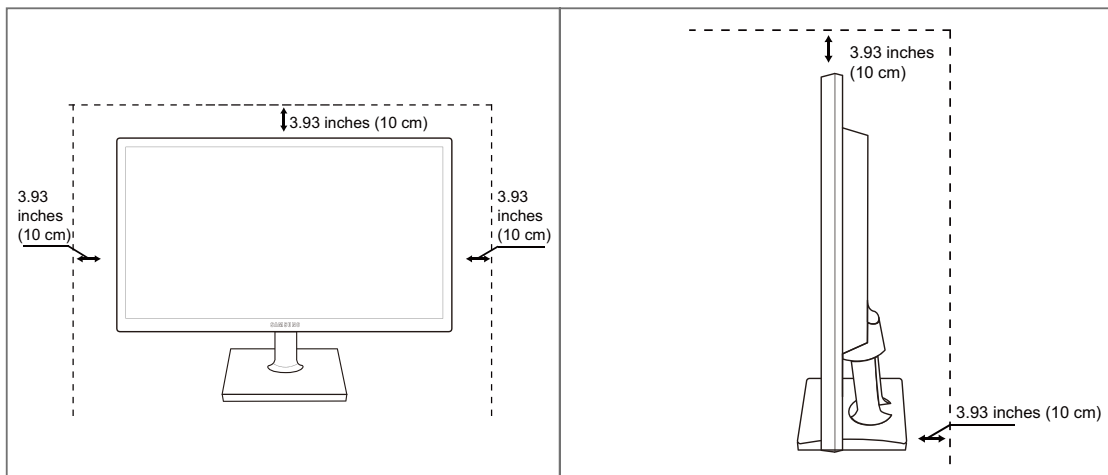
Before Using the Product

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



Be sure to contact Samsung Customer Service Center (page 95) if the inside of the monitor needs cleaning. (A service fee will be charged.)

Before Using the Product

Safety Precautions

Caution
RISK OF ELECTRIC SHOCK DO NOT OPEN
Caution: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.

	This symbol indicates that high voltage is present inside. It is dangerous to make any kind of contact with any internal part of this product.
	This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

Symbols

 Warning	A serious or fatal injury may result if instructions are not followed.
 Caution	Personal injury or damage to properties may result if instructions are not followed.
	Activities marked by this symbol are prohibited.
	Instructions marked by this symbol must be followed.

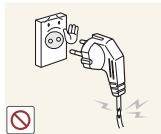
Before Using the Product

Electricity and Safety



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

Warning



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

- An electric shock or fire may result.



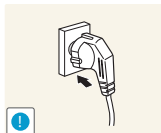
Do not plug many products into the same power socket.

- Otherwise, the socket may overheat and cause a fire.



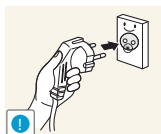
Do not touch the power plug with wet hands.

- Otherwise, an electric shock may result.



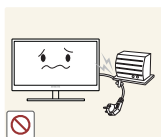
Insert the power plug all the way in so it is not loose.

- An unstable connection may cause a fire.



Ensure you connect the power plug to a grounded power socket. (type 1 insulated devices only).

- An electric shock or injury may result.



Do not bend or pull the power cord with force. Do not weigh the power cord down with a heavy object.

- A damaged power cord may cause an electric shock or fire.



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

- An electric shock or fire may result.



Remove foreign substances such as dust around the plug pins and power socket with a dry cloth.

- Otherwise, a fire may result.

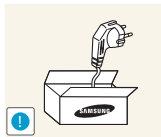
Before Using the Product

Caution



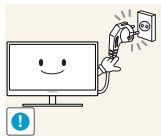
Do not unplug the power cord when the product is in use.

- The product may become damaged by an electric shock.



Do not use the power cord for products other than authorized products supplied by Samsung.

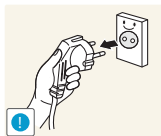
- An electric shock or fire may result.



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

- If any problem occurs in the product, unplug the power cable to completely cut the power to the product.

Power to the product cannot be completely cut off with the power button.



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

- An electric shock or fire may result.

Installation and Safety

Warning



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

- Otherwise, a fire may result.



Avoid installing the product in a narrow space with bad ventilation, such as a bookshelf or wall closet.

- Otherwise, a fire may result due to an increased internal temperature.



Keep the plastic packaging bag for the product in a place that cannot be reached by children.

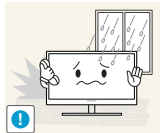
- Children may suffocate.

Before Using the Product



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

- The product may fall and break or cause a personal 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.

- An electric shock or fire may result.



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

- Otherwise, the product lifespan may be reduced, or a fire may result.



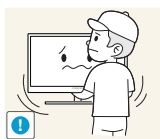
Do not install the product within the reach of young children.

- The product may fall and injure children.



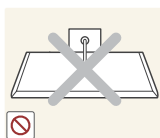
Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Caution



Take care not to drop the product when moving it.

- Otherwise, product failure or personal injury may result.



Do not set down the product on its front.

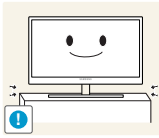
- The screen may become damaged.



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

- The product may fall and break or cause a personal injury.
- Install the product only on cabinets or shelves of the right size.

Before Using the Product



Put down the product carefully.

- The product may fall and break or cause a personal injury.



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 (page 95) before installation if you want to install the product at such a place.

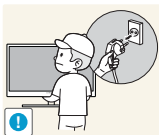
Operation and Safety

Warning



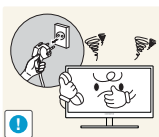
High voltage runs through the product. Do not attempt to disassemble, repair, or modify the product on your own.

- An electric shock or fire may result.
- Contact Samsung Customer Service Center (page 95) for repair.



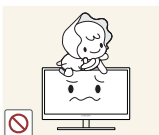
To move the product, first disconnect all the cables from it, including the power cable.

- Otherwise, the power cord may be damaged and a fire or electric shock may result.



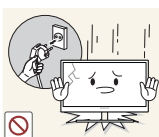
If the product generates a strange noise, a burning smell, or smoke, remove the power cord immediately and contact Samsung Customer Service Center (page 95).

- An electric shock or fire may result.



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

- The product may fall, and your child may become injured or seriously harmed.



If the product falls or the exterior is damaged, power off the product, remove the power cord, and contact Samsung Customer Service Center (page 95).

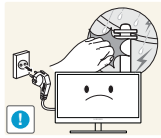
- Otherwise, an electric shock or fire may result.



Do not put a heavy object, toy, or sweets on top of the product.

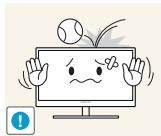
- The product or heavy objects may fall as children try to reach for the toy or sweets resulting in a serious injury.

Before Using the Product



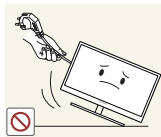
If there is a thunderstorm or lightning strike, turn off the power and disconnect the power cable.

- An electric shock or fire may result.



Do not drop objects on the product or apply impact.

- An electric shock or fire may result.



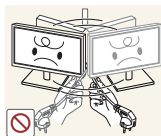
Do not move the product by pulling the power cord or any cable.

- Otherwise, the cable may be damaged and product failure, an electric shock or fire may result.



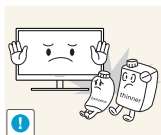
If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.



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

- Otherwise, the cable may be damaged and product failure, an electric shock or fire may result.



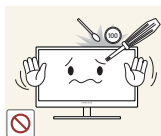
Do not use or keep combustible spray or an inflammable substance near the product.

- An explosion or fire may result.



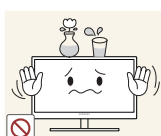
Ensure the vents are not blocked by tablecloths or curtains.

- Otherwise, a fire may result from an increased internal temperature.



Do not insert a metallic object (a chopstick, coin, hair pin, etc.) or inflammable object (paper, match, etc.) into the vent or ports of the product.

- If water or any foreign substance enters the product, be sure to power off the product, remove the power cord, and contact Samsung Customer Service Center (page 95).
- Product failure, an electric shock or fire may result.

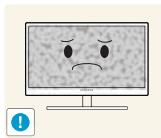


Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.

- If water or any foreign substance enters the product, be sure to power off the product, remove the power cord, and contact Samsung Customer Service Center (page 95).
- Product failure, an electric shock or fire may result.

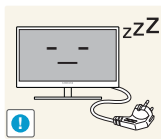
Before Using the Product

Caution



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

- If you are not going to use the product for an extended period of time, activate power-saving mode or a moving-picture screen saver.



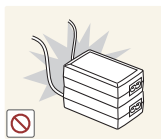
Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc.).

- Otherwise, a fire may result from accumulated dust, overheating, an electric shock, or electric leakage.



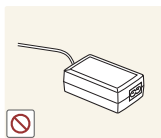
Use the product at the recommended resolution and frequency.

- Otherwise, Your eyesight may deteriorate.



Do not put DC power adapters together.

- Otherwise, a fire may result.



Remove the plastic bag from the DC power adapter before you use it.

- Otherwise, a fire may result.



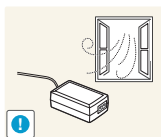
Do not let water enter the DC power device or get the device wet.

- 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 DC power adapter wet when you wash the floor.

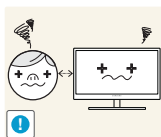


Do not put the DC power adapter near to any heating apparatus.

- Otherwise, a fire may result.



Keep the DC power adapter in a well-ventilated area.



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

Before Using the Product



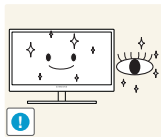
Do not hold the monitor upside-down or move it by holding the stand.

- The product may fall and break or cause a personal injury.



Do not use humidifiers or stoves around the product.

- An electric shock or fire may result.

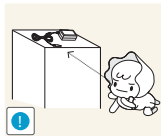


Rest your eyes for more than 5 minutes for every 1 hour of product use.

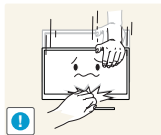
- Eye fatigue will be relieved.



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



Store the small accessories used with the product out of reach of children.



Exercise caution when adjusting the product angle or stand height.

- Otherwise, children's fingers or hands may become stuck and injured.
- Tilting the product excessively may cause it to fall and result in personal injury.



Do not place heavy objects on the product.

- Product failure or personal injury may result.

Before Using the Product

Correct posture to use the product



Use the product in the correct posture as follows:

- Straighten your back.
- Allow a distance of 45 to 50 cm between your eye and the screen, and look slightly downward at the screen.
Keep your eyes directly in front of the screen.
- 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.

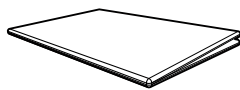
1.1 Checking the Components

1.1.1 Checking the Components



- Contact the dealer from whom you purchased the product if any item is missing.
- The appearance of the components and items sold separately may differ from the image shown.

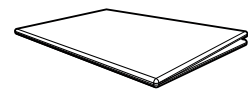
Components



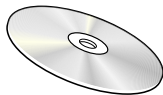
Quick setup guide



Warranty card
(Not available in some locations)



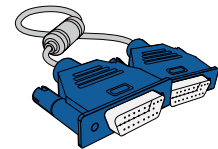
Regulatory guide



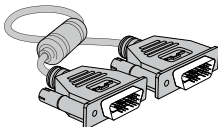
User manual
(optional)



Power cable



D-SUB cable
(optional)



DVI cable
(optional)



Stand



Stand Connector



Components may vary depending on the country.

1.2 Parts

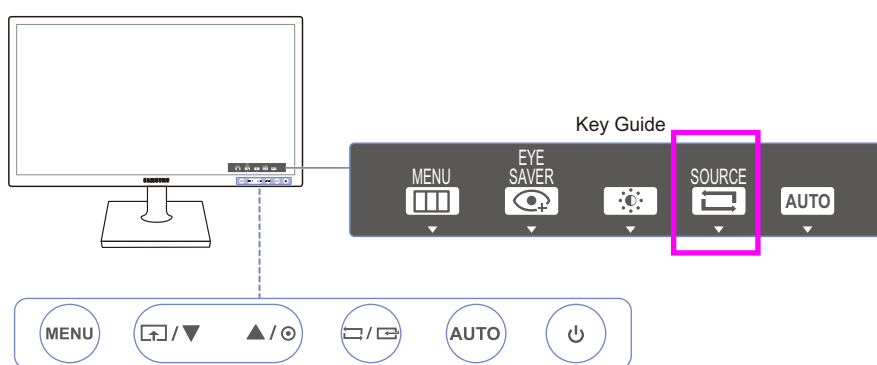
1.2.1 Frontal Buttons



The color and shape of parts may differ from what is shown.

Specifications are subject to change without notice to improve quality.

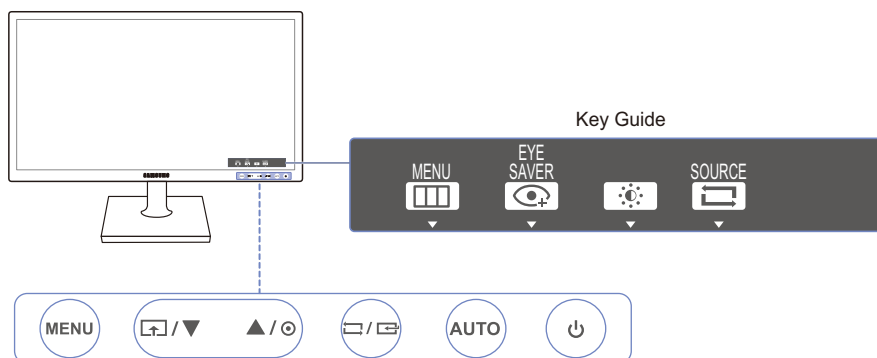
S19E200NY / S19E200NW / S22E200NY / S22E200N



Icons	Description
MENU	- Open or close the onscreen display (OSD) menu, or return to the parent menu. - OSD control lock: Maintain the current settings, or lock the OSD control to prevent unintended changes to settings. Enable: To lock the OSD control, press the [MENU] button for 10 seconds. Disable: To unlock the locked OSD control, press the [MENU] button for more than 10 seconds. If the OSD control is locked, Brightness and Contrast can be adjusted. Eye Saver Mode is available. INFORMATION can be viewed. - The Eye Saver Mode function can be used by pressing the [] button. (The Eye Saver Mode is available even when the OSD control is locked.)
	Select [] 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. PICTURE → Game Mode, SAMSUNG MAGICBright, Brightness, COLOR SETUP&RESET → Eco Saving Plus

Icons	Description
	Move to the upper or lower menu or adjust the value for an option on the OSD menu.
	Use this button to control the brightness, contrast and sharpness of the screen.
	Confirm a menu selection. Pressing the [Input source] button when the OSD menu is not displayed will change the input source (Analog/DVI). If you power on the product or change the input source by pressing the [Input source] button, a message that shows the changed input source will appear at the top left corner of the screen.  This function is not available for products with an Analog interface only.
AUTO	Press the [AUTO] button to automatically adjust the screen settings.  - Changing the resolution in Display Properties will activate the Auto Adjustment function. - This function is only available in Analog mode.
	Turn the screen on or off.
Key Guide	When a control button on the product is pressed, the Key Guide will be displayed before the onscreen menu opens. (The guide shows the function of the button pressed.) To access the onscreen menu when the guide is displayed, press the corresponding button again. The Key Guide may vary depending on the function or product model. Refer to the actual product.

S19E200BR / S19E200BW / S22E200B / S22E200BW / S23E200B / S24E200BL



Icons	Description
MENU	- Open or close the onscreen display (OSD) menu, or return to the parent menu. - OSD control lock: Maintain the current settings, or lock the OSD control to prevent unintended changes to settings. Enable: To lock the OSD control, press the [MENU] button for 10 seconds. Disable: To unlock the locked OSD control, press the [MENU] button for more than 10 seconds. If the OSD control is locked, Brightness and Contrast can be adjusted. Eye Saver Mode is available. INFORMATION can be viewed. - The Eye Saver Mode function can be used by pressing the [↕] button. (The Eye Saver Mode is available even when the OSD control is locked.)
↕	Select [↕] 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. PICTURE → Game Mode, SAMSUNG MAGICBright, Brightness, COLOR SETUP&RESET → Eco Saving Plus
▲/▼	Move to the upper or lower menu or adjust the value for an option on the OSD menu.
⦿	Use this button to control the brightness, contrast and sharpness of the screen.

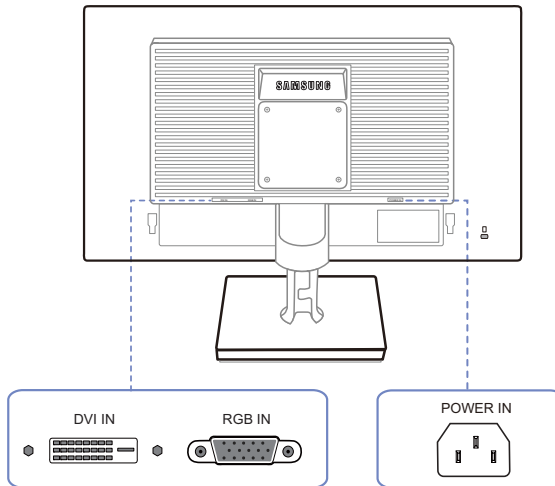
Icons	Description
	Confirm a menu selection. Pressing the [/] button when the OSD menu is not displayed will change the input source (Analog/DVI). If you power on the product or change the input source by pressing the [/] button, a message that shows the changed input source will appear at the top left corner of the screen.  This function is not available for products with an Analog interface only.
AUTO	Press the [AUTO] button to automatically adjust the screen settings.  - Changing the resolution in Display Properties will activate the Auto Adjustment function. - This function is only available in Analog mode.
	Turn the screen on or off.
Key Guide	When a control button on the product is pressed, the Key Guide will be displayed before the onscreen menu opens. (The guide shows the function of the button pressed.) To access the onscreen menu when the guide is displayed, press the corresponding button again. The Key Guide may vary depending on the function or product model. Refer to the actual product.

1.2.2 Reverse Side

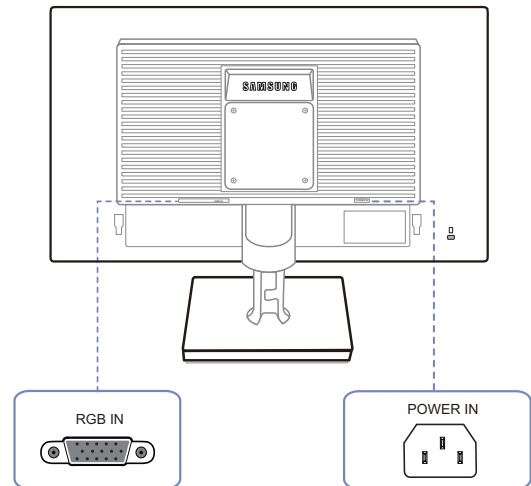


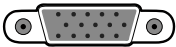
The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

S19E200BR / S19E200BW / S22E200B
S22E200BW / S23E200B / S24E200BL



S19E200NY / S19E200NW / S22E200NY /
S22E200N



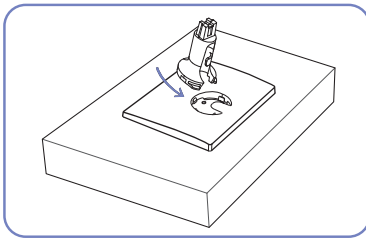
Port	Ports
	Connect the power cord for your monitor to the POWER IN port on the back of the product.
	Connect to a PC using the DVI cable.  The [DVI IN] terminal is supplied for the digital (DVI)-dedicated models only.
	Connect to a PC using the D-SUB cable.

1.3 Installation

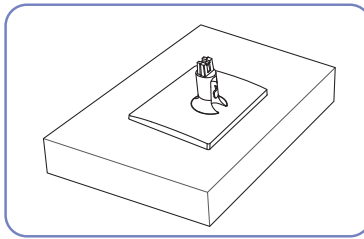
1.3.1 Attaching the Stand



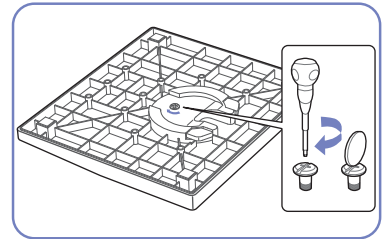
Before assembling the product, place the product down on a flat and stable surface so that the screen is facing downwards.



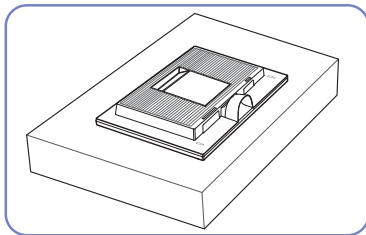
Insert the Stand Connector into the Stand in the direction shown by the figure.



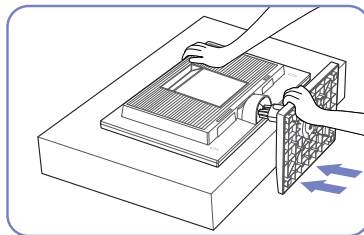
Check if the Stand Connector is firmly connected.



Turn the connecting screw at the bottom of the stand fully so that it is completely fixed.

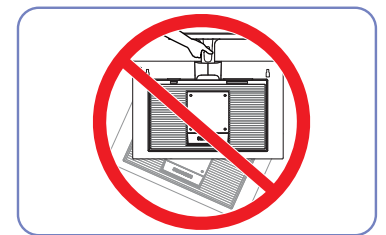


Place a soft cloth over the table to protect the product and place the product onto the cloth so that the front of the product is facing downwards.



Hold the main body of the product with your hand as shown by the figure.

Push the assembled stand into the main body in the direction of the arrow as shown in the figure.



- Caution

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

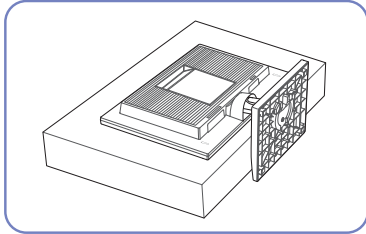


The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.

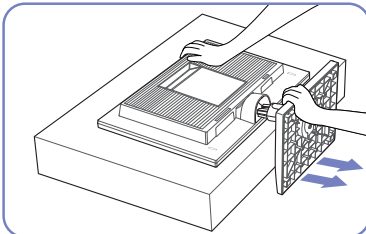
1.3.2 Removing the Stand



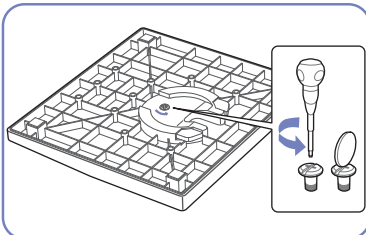
The exterior may differ depending on the product.



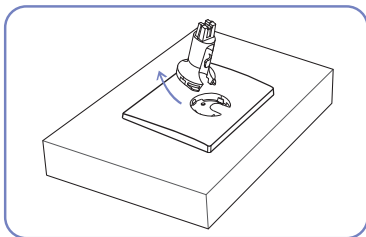
Place a soft cloth over the table to protect the product and place the product onto the cloth so that the front of the product faces downwards.



While holding the stand neck with one hand, pound the other fisted hand down onto the top of the stand base in the direction of the arrow to detach the stand base.



Turn the connecting screw at the bottom of the stand base to separate it.

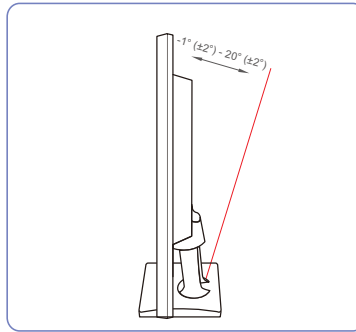


Remove the stand neck from the stand base by pulling it in the direction of the arrow as shown in the figure.

1.3.3 Adjusting the Product Tilt



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



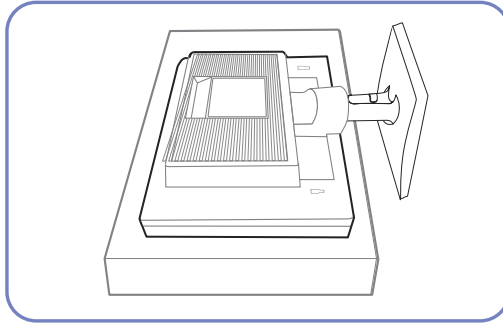
- You can adjust the tilt of your monitor.
- Hold the lower part of the product and adjust the tilt carefully.

1.3.4 Installing a Wall-mount Kit or Desktop Stand

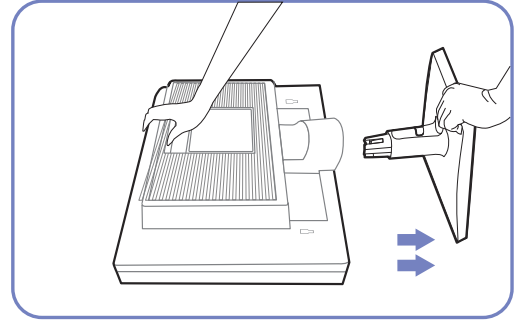
Before Installation



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



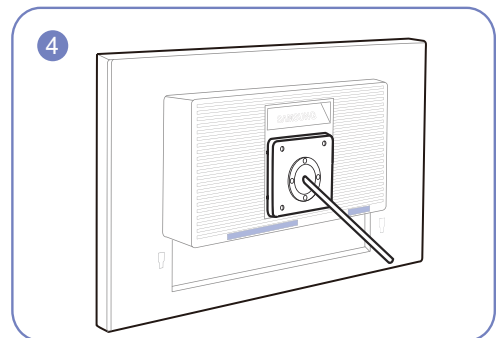
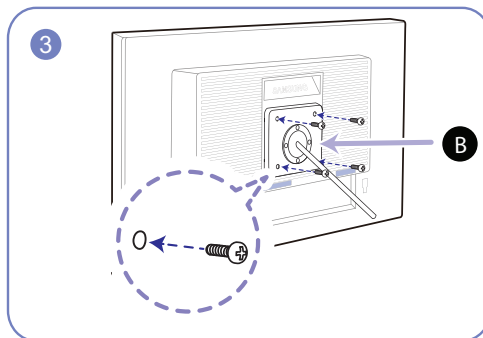
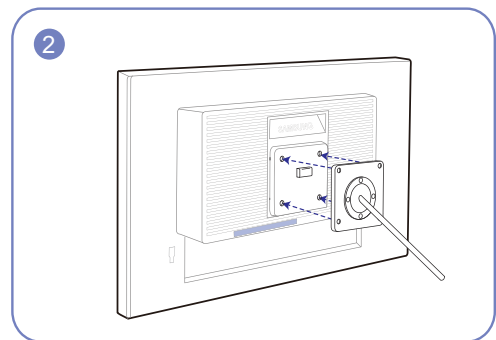
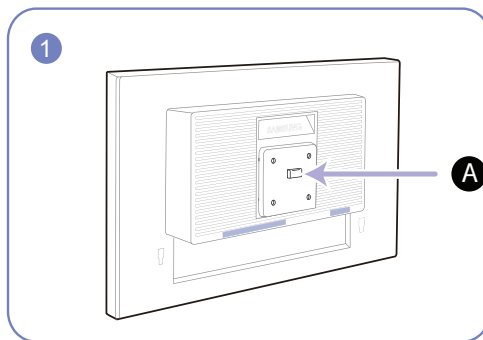
Place a protective cloth or cushion on a flat surface. Next, place the product with the face down on top of the cloth or cushion.



Hold the main body of the product with your hand as shown by the figure.

Pull the stand in the direction of the arrow as shown in the figure to separate it.

Installing a Wall-mount Kit or Desktop Stand



A Attach the wall-mount kit or desktop stand here

B Bracket (sold separately)

Align the grooves and tightly fasten the screws on the bracket on the product with the corresponding parts on the wall-mount kit or desktop stand you want to attach.

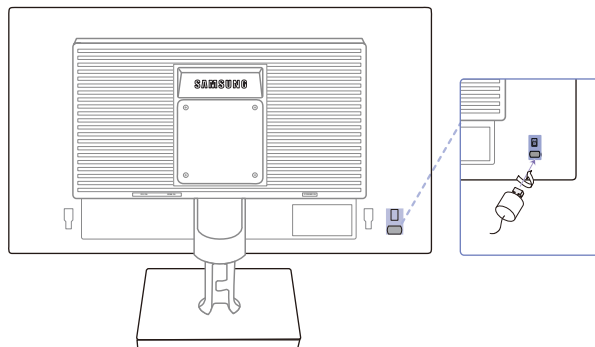


Notes

- 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 10cm or farther away from the wall.
- Be sure to use a wall-mount kit that complies with the standards.

1.3.5 Anti-theft Lock

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



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

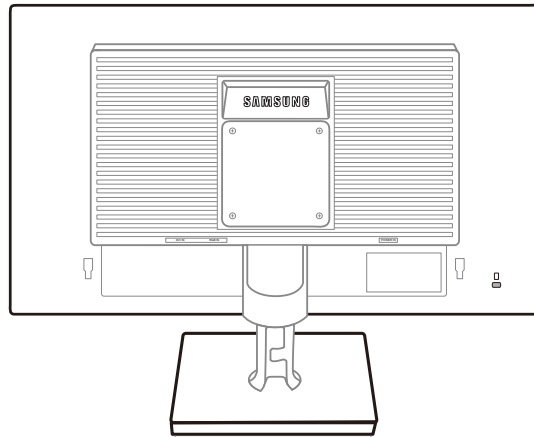
To lock an anti-theft locking device:

- 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.

2.1 Before Connecting

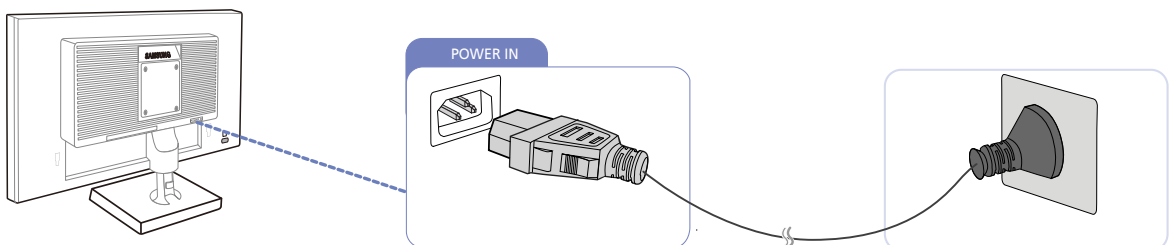


2.1.1 Pre-connection Checkpoints

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

2.2 Connecting the Power

- To use the product, connect the power cable to a power outlet and the [POWER IN] port on the product. (The input voltage is switched automatically.)



2.3 Connecting and Using a PC

2.3.1 Connecting to a PC

- Select a connection method suitable for your PC.

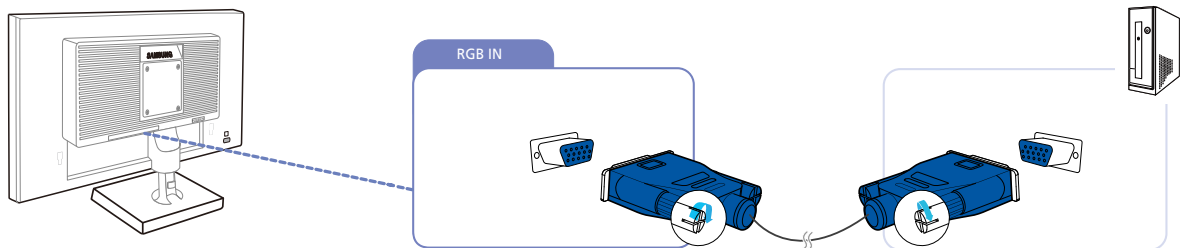


Connecting parts may differ in different products.

Connection Using the D-SUB Cable (Analog Type)



Do not connect the power cable before connecting all other cables. Ensure you connect a source device first before connecting the power cable.



- 1 Connect the D-SUB cable to the [RGB IN] port on the back of the product and the RGB port on the PC.
- 2 Press [⏏/⏏] to change the input source to **Analog**.



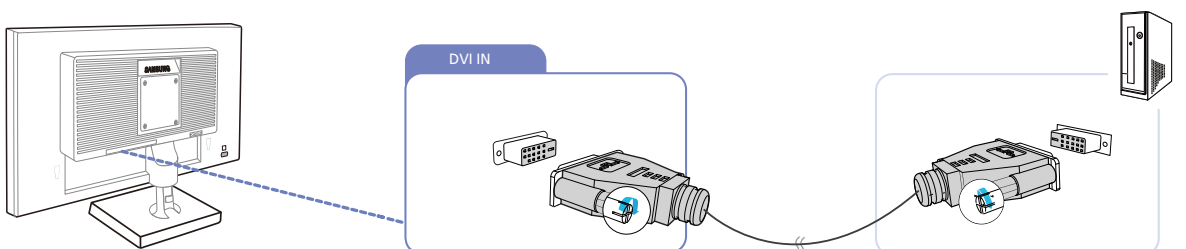
This function is not available for products with an Analog interface only.

Connection Using the DVI Cable

(S19E200BR / S19E200BW / S22E200B / S22E200BW / S23E200B / S24E200BL)



Do not connect the power cable before connecting all other cables. Ensure you connect a source device first before connecting the power cable.



- 1 Connect the DVI cable to the [DVI IN] port on the back of the product and the DVI port on the PC.
- 2 Press [⏏/⏏] to change the input source to **DVI**.



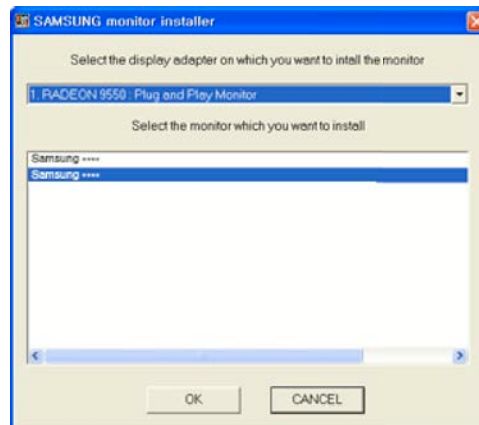
The [DVI IN] terminal is supplied for the digital (DVI)-dedicated models only.

2.3.2 Driver Installation



- You can set the optimum resolution and frequency for this product by installing the corresponding drivers.
- An installation driver is contained on the CD supplied with the product.
- If the file provided is faulty, visit the Samsung homepage (<http://www.samsung.com>) and download the file.

- 1 Insert the user manual CD provided with the product into the CD-ROM drive.
- 2 Click "Windows Driver".
- 3 Follow the instructions given on the screen to proceed with installation.
- 4 Select your product model from the list of models.

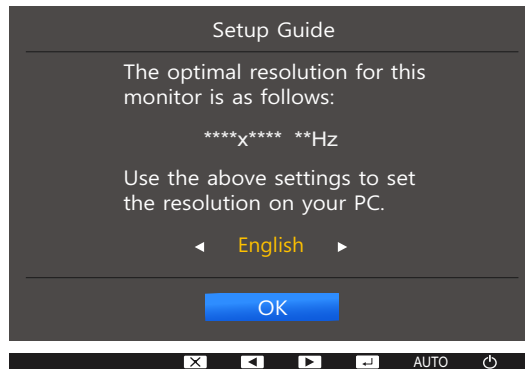


- 5 Go to Display Properties and check that the resolution and refresh rate are appropriate. Refer to your Windows OS manual for further details.

2.3.3 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.



1 Press [▲/▼] to move to the language you want and press [↵/↵].

2 To hide the information message, press [MENU].



- 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.

Configure the screen settings such as brightness.

3.1 Brightness

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

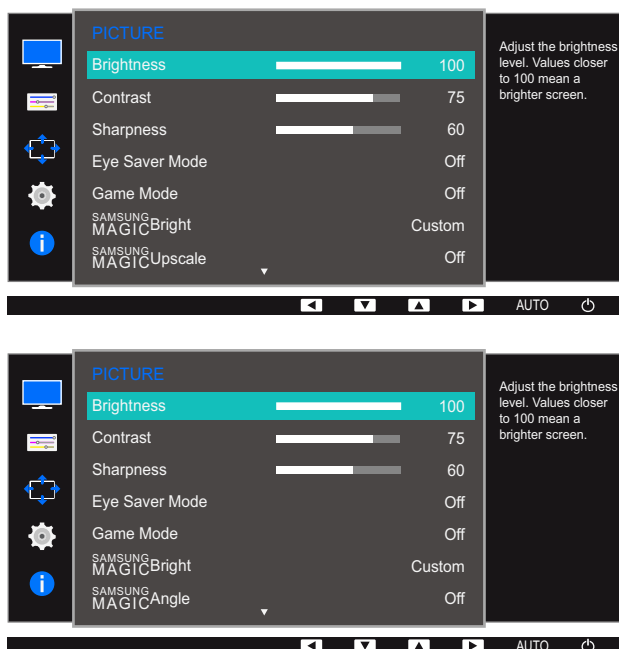
A higher value will make the picture appear brighter.



- This menu is not available when **SAMSUNG MAGICBright** is set to **Dynamic Contrast** mode.
- This menu is not available when **Eco Saving Plus** is set.
- This menu is not available when **Eye Saver Mode** is enabled.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

3.1.1 Configuring Brightness

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **PICTURE** and press [↔/⏏] on the product.
- 3 Press [▲/▼] to move to **Brightness** and press [↔/⏏] on the product.
The following screen will appear.



- 4 Adjust the **Brightness** using the [▲/▼] buttons.

3.2 Contrast

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

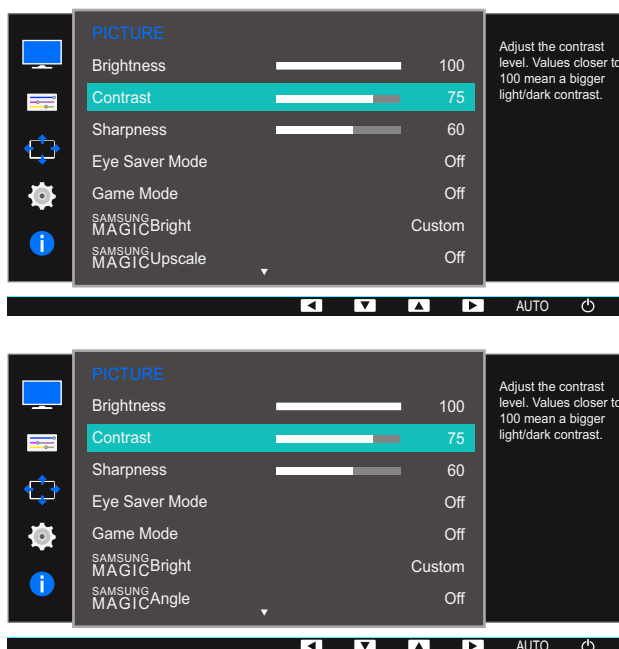
A higher value will increase the contrast to make the object appear clearer.



- This menu is not available when **SAMSUNG MAGICBright** is in **Cinema** or **Dynamic Contrast** mode.
- This menu is not available when **Game Mode** is enabled.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

3.2.1 Configuring Contrast

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **PICTURE** and press [□/⏏] on the product.
- 3 Press [▲/▼] to move to **Contrast** and press [□/⏏] on the product.
The following screen will appear.



- 4 Adjust the **Contrast** using the [▲/▼] buttons.

3.3 Sharpness

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

A higher value will make the outline of objects clearer.



- This menu is not available when **SAMSUNG MAGICBright** is in **Cinema** or **Dynamic Contrast** mode.
- This menu is not available when **SAMSUNG MAGICUpscale** is in **Mode1** or **Mode2**.
- This menu is not available when **Game Mode** is enabled.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

3.3.1 Configuring Sharpness

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **PICTURE** and press [↔/↔] on the product.
- 3 Press [▲/▼] to move to **Sharpness** and press [↔/↔] on the product.
The following screen will appear.



- 4 Adjust the **Sharpness** using the [▲/▼] buttons.

3.4 Eye Saver Mode

Set to an optimum picture quality suitable for eye relaxation.

TÜV Rheinland “Low Blue Light Content” is a certification for products which meet requirements for lower blue light levels. When **Eye Saver Mode** is 'On', the blue light that wavelength is around 400nm will become lower and lower, and one hour later it will approach the optimum picture quality suitable for eye relaxation. At the same time, the blue light level is lower than in the default settings, and it was tested by TÜV Rheinland and certified as it met the requirements of TÜV Rheinland “Low Blue Light Content” standards.



The functions available on the monitor may vary depending on the model. Refer to the actual product.

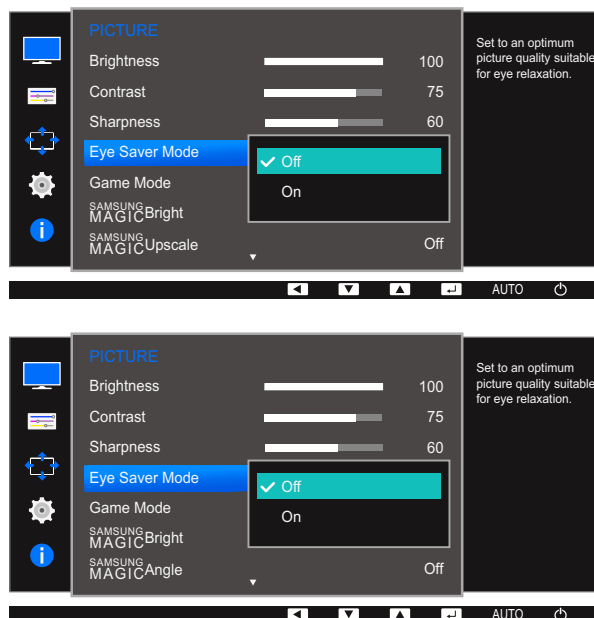
3.4.1 Configuring Eye Saver Mode

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.

Next, press the [⏻] button.

- 2 Press [▲/▼] to move to **PICTURE** and press [⏻/⏹] on the product.
- 3 Press [▲/▼] to move to **Eye Saver Mode** and press [⏻/⏹] on the product.

The following screen will appear.



- 4 Move the focus to the desired option by pressing [▲/▼] button on the DOME Type JOG Button. Press [⏻] button.
- 5 The selected option will be applied.

3.5 Game Mode

Configure the product screen settings for game mode.

Use this feature when playing games on a PC or when a game console such as PlayStation™ or Xbox™ is connected.

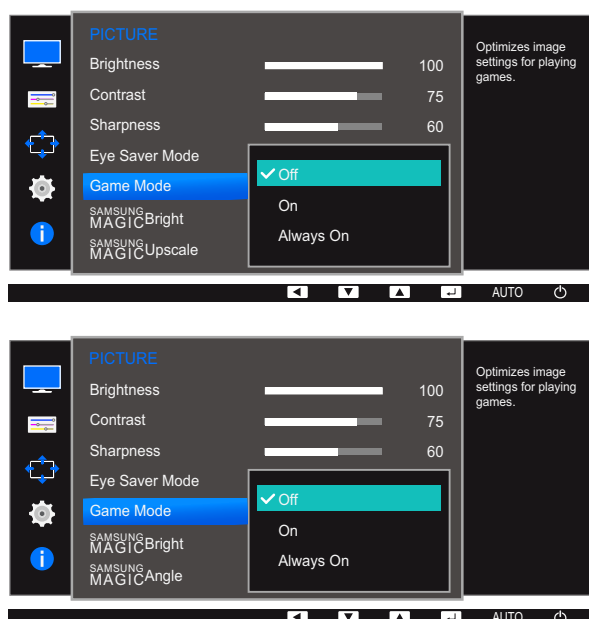


- This menu is not available when **Eye Saver Mode** is enabled.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

3.5.1 Configuring Game Mode

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **PICTURE** and press [□/⏏] on the product.
- 3 Press [▲/▼] to move to **Game Mode** and press [□/⏏] on the product.

The following screen will appear.



- 4 Move the focus to the desired option by pressing [^/∨] button on the DOME Type JOG Button. Press [⏏] button.
- 5 The selected option will be applied.



- When the monitor turns off, enters power-saving mode or changes input sources, **Game Mode** turns **Off** even if it is set to **On**.
- If you want to keep **Game Mode** enabled all the time, select **Always On**.

3.6 SAMSUNG MAGIC Bright

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

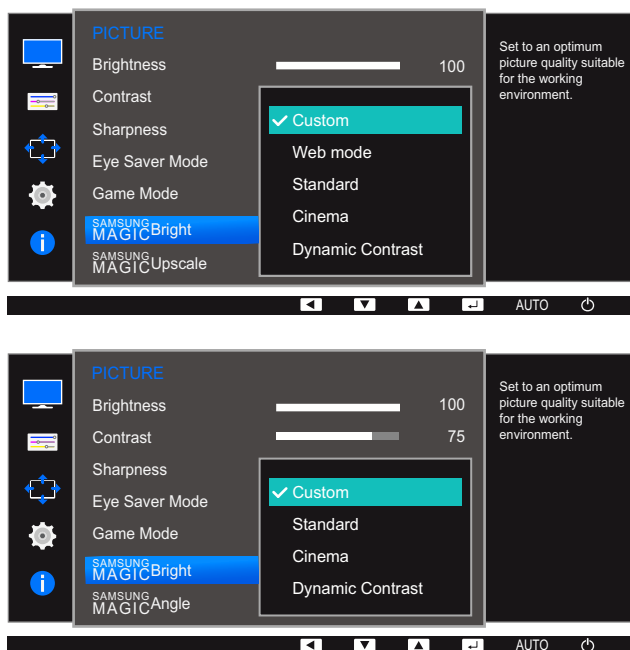


- This menu is not available when **Eco Saving Plus** is set.
- This menu is not available when **Game Mode** is enabled.
- This menu is not available when **Eye Saver Mode** is enabled.
- This menu is not available when **SAMSUNG MAGICAngle** is enabled.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

You can customize the brightness to suit your preferences.

3.6.1 Configuring SAMSUNG MAGIC Bright

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
 - 2 Press [▲/▼] to move to **PICTURE** and press [□/⏏] on the product.
 - 3 Press [▲/▼] to move to **SAMSUNG MAGICBright** and press [□/⏏] on the product.
- The following screen will appear.



- **Custom:** Customize the contrast and brightness as required.
- **Web mode:** Obtain the best screen for editing documents and browsing the Internet without the issue of narrow viewing angles. (S19E200NY / S19E200NW / S22E200NY / S22E200N)

- **Standard:** Obtain a picture quality suitable for editing documents or using Internet.
 - **Cinema:** Obtain the brightness and sharpness of TVs suitable for enjoying video and DVD content.
 - **Dynamic Contrast:** Obtain balanced brightness through automatic contrast adjustment.
- 4 Press [**▲**/**▼**] to move to the option you want and press [**□**/**Ⓢ**].
- 5 The selected option will be applied.

3.7 SAMSUNG MAGIC Angle (S19E200NY / S19E200NW / S22E200NY / S22E200N)

SAMSUNG MAGIC Angle allows you to configure the settings to obtain the optimum picture quality according to your viewing angle.

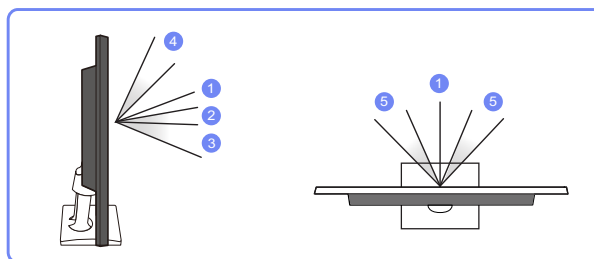
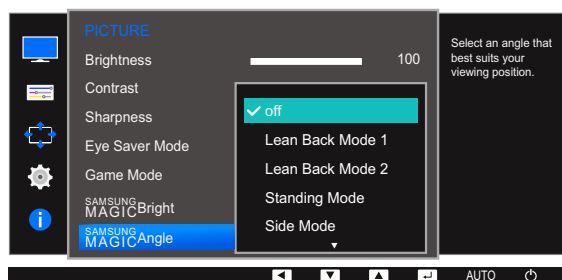


- This menu is not available when **SAMSUNG MAGIC Bright** is in **Cinema** or **Dynamic Contrast** mode.
- This menu is not available when **Game Mode** is enabled.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

You can customize the angle to suit your preferences.

3.7.1 Configuring SAMSUNG MAGIC Angle

- 1 Press any button on the front of the product to display the Key Guide. Next, press **[MENU]** to display the corresponding menu screen.
- 2 Press **[▲/▼]** to move to **PICTURE** and press **[□/□]** on the product.
- 3 Press **[▲/▼]** to move to **SAMSUNG MAGIC Angle** and press **[□/□]** on the product. The following screen will appear.



- **Off** ①: Select this option to view directly in front of the product.
- **Lean Back Mode 1** ②: Select this option to view from a place slightly lower than the product.
- **Lean Back Mode 2** ③: Select this option to view from a place lower than Lean Back Mode 1.
- **Standing Mode** ④: Select this option to view from a place higher than the product.
- **Side Mode** ⑤: Select this option to view from either side of the product.
- **Group View**: Select this option for more than one viewer to view from places ①, ④, and ⑤.
- **Custom**: **Lean Back Mode 1** will be applied by default if **Custom** is selected.

- 4 Press [▲/▼] to move to the option you want and press [□/⏏].
- 5 The selected option will be applied.

3.8 SAMSUNG MAGIC Upscale

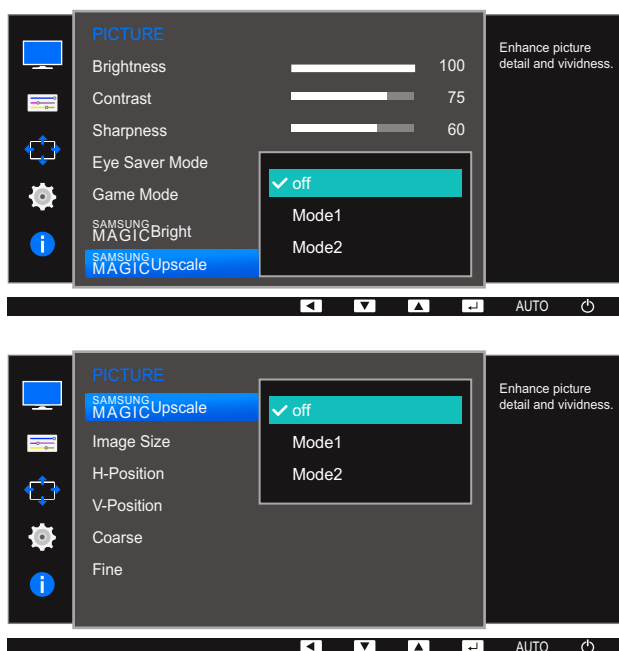
SAMSUNG MAGIC Upscale function can enhance the layers of the picture details and the vividness of the picture.



- The function has more obvious effects on low-resolution pictures.
- This menu is not available when **SAMSUNG MAGIC Bright** is in **Cinema** or **Dynamic Contrast** mode.
- This menu is not available when **Game Mode** is enabled.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

3.8.1 Configuring SAMSUNG MAGIC Upscale

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **PICTURE** and press [□/⊞] on the product.
- 3 Press [▲/▼] to move to **SAMSUNG MAGIC Upscale** and press [□/⊞] on the product. The following screen will appear.



Comparing with **Mode1**, **Mode2** has a stronger effect.

- 4 Press [▲/▼] to move to the option you want and press [□/⊞].
- 5 The selected option will be applied.

3.9 Image Size

Change the picture size.

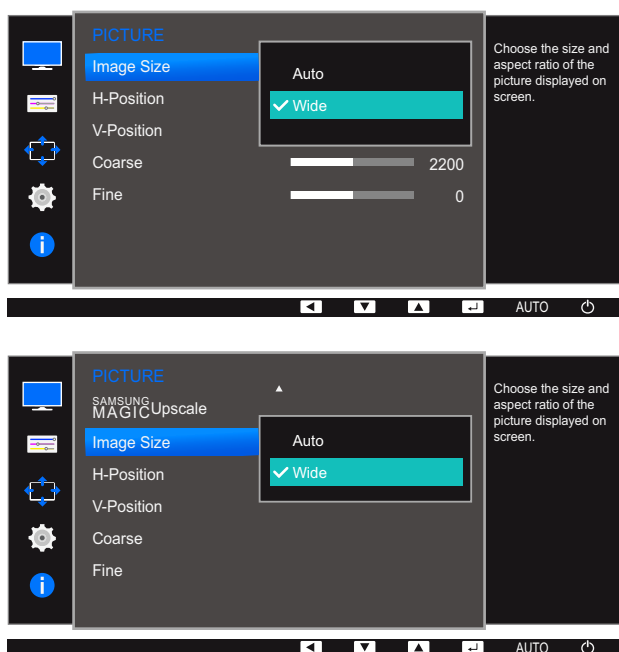


The functions available on the monitor may vary depending on the model. Refer to the actual product.

3.9.1 Changing the Image Size

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **PICTURE** and press [□/⏏] on the product.
- 3 Press [▲/▼] to move to **Image Size** and press [□/⏏] on the product. The following screen will appear.

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.

In **AV** mode (S19E200BR / S19E200BW / S22E200B / S22E200BW / S23E200B / S24E200BL)



- **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.
- **Wide**: Display the picture in full screen regardless of the aspect ratio of the input source.(TBD / TBD / TBD)



Changing the screen size is available when the following conditions are satisfied, except TBD and TBD models.

- A digital output device is connected using the DVI 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 DVI and **PC/AV Mode** is set to **AV**.

4 Press [**▲/▼**] to move to the option you want and press [**□/⏏**].

5 The selected option will be applied.

3.10 H-Position & V-Position

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

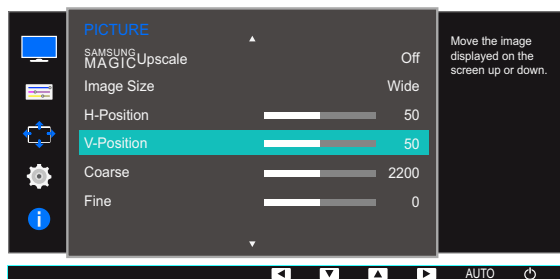
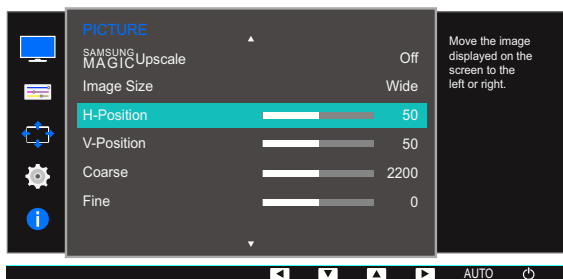
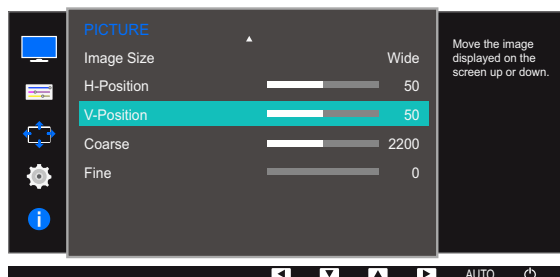
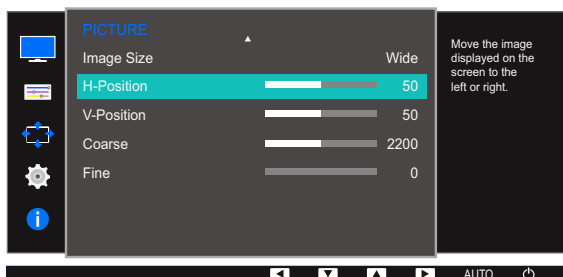
V-Position: Move the screen up or down.



- This menu is available in **Analog** mode.
- This menu is only available when **Image 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.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

3.10.1 Configuring H-Position & V-Position

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **PICTURE** and press [⏏/⏏] on the product.
- 3 Press [▲/▼] to move to **H-Position** or **V-Position**, and press [⏏/⏏]. The following screen will appear.



- 4 Press [▲/▼] to configure **H-Position** or **V-Position**.

3.11 Coarse

Adjust the screen frequency.



- This menu is available in **Analog** mode only.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

3.11.1 Adjusting Coarse

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **PICTURE** and press [□/⊞] on the product.
- 3 Press [▲/▼] to move to **Coarse** and press [□/⊞] on the product. The following screen will appear.



- 4 Adjust the **Coarse** using the [▲/▼] buttons.

3.12 Fine

Fine-adjust the screen to obtain a vivid picture.



- This menu is available in **Analog** mode only.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

3.12.1 Adjusting Fine

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **PICTURE** and press [□/⊞] on the product.
- 3 Press [▲/▼] to move to **Fine** and press [□/⊞] on the product. The following screen will appear.



- 4 Adjust the **Fine** using the [▲/▼] buttons.

Configuring Tint

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

Adjust the tint of the screen. This menu is not available when **SAMSUNG MAGICBright** is set to **Cinema** or **Dynamic Contrast** mode. This menu is not available when **Game Mode** or **Eye Saver Mode** is enabled.

4.1 Red

Adjust the value of the color red in the picture. (Range: 0~100)

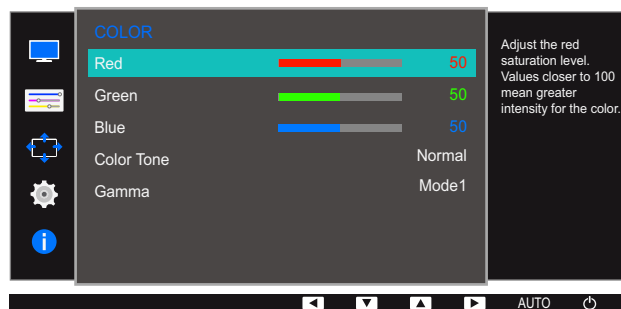
A higher value will increase the intensity of the color.



This menu is not available when **SAMSUNG MAGICBright** is in **Web mode** mode.

4.1.1 Configuring Red

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **COLOR** and press [□/□] on the product.
- 3 Press [▲/▼] to move to **Red** and press [□/□] on the product. The following screen will appear.



- 4 Adjust the **Red** using the [▲/▼] buttons.

4.2 Green

Adjust the value of the color green in the picture. (Range: 0~100)

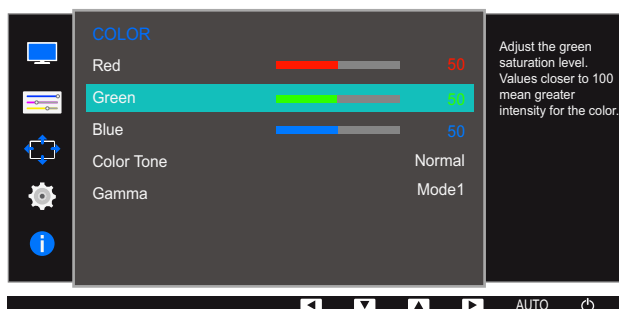
A higher value will increase the intensity of the color.



This menu is not available when **SAMSUNG MAGICBright** is in **Web mode** mode.

4.2.1 Configuring Green

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **COLOR** and press [□/□] on the product.
- 3 Press [▲/▼] to move to **Green** and press [□/□] on the product. The following screen will appear.



- 4 Adjust the **Green** using the [▲/▼] buttons.

4.3 Blue

Adjust the value of the color blue in the picture. (Range: 0~100)

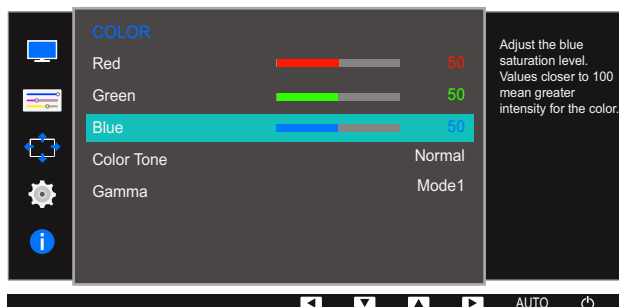
A higher value will increase the intensity of the color.



This menu is not available when **SAMSUNG MAGICBright** is in **Web mode** mode.

4.3.1 Configuring Blue

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **COLOR** and press [□/□] on the product.
- 3 Press [▲/▼] to move to **Blue** and press [□/□] on the product. The following screen will appear.



- 4 Adjust the **Blue** using the [▲/▼] buttons.

4.4 Color Tone

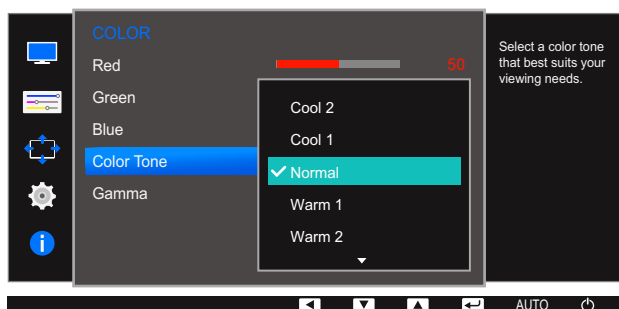
Adjust the general color tone of the picture.



This menu is not available when **SAMSUNG MAGIC Angle** is enabled.

4.4.1 Configuring the Color Tone Settings

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **COLOR** and press [□/⏏] on the product.
- 3 Press [▲/▼] to move to **Color Tone** and press [□/⏏] on the product. The following screen will appear.



- **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 and **PC/AV Mode** is set to **AV**, **Color Tone** has four color temperature settings (**Cool**, **Normal**, **Warm** and **Custom**).

- 4 Press [▲/▼] to move to the option you want and press [□/⏏].
- 5 The selected option will be applied.

4.5 Gamma

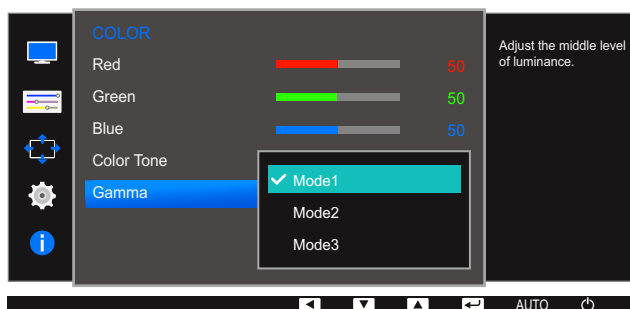
Adjust the mid-range brightness (Gamma) of the picture.



- This menu is not available when **SAMSUNG MAGICBright** is in **Web mode** mode.
- This menu is not available when **SAMSUNG MAGICAngle** is enabled.

4.5.1 Configuring Gamma

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **COLOR** and press [⏏/⏏] on the product.
- 3 Press [▲/▼] to move to **Gamma** and press [⏏/⏏] on the product. The following screen will appear.



- 4 Press [▲/▼] to move to the option you want and press [⏏/⏏].
- 5 The selected option will be applied.

5.1 Language

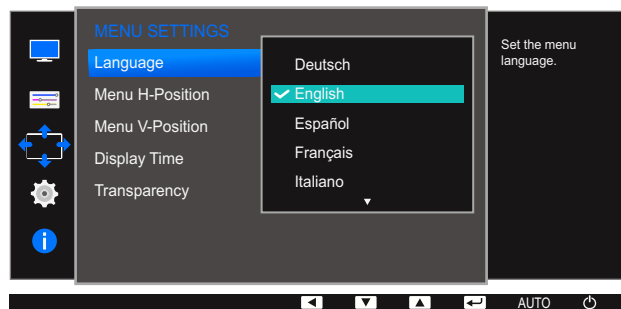
Set the menu language.



- 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.

5.1.1 Changing the Language

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **MENU SETTINGS** and press [□/⏏] on the product.
- 3 Press [▲/▼] to move to **Language** and press [□/⏏] on the product. The following screen will appear.



- 4 Press [▲/▼] to move to the language you want and press [□/⏏].
- 5 The selected option will be applied.

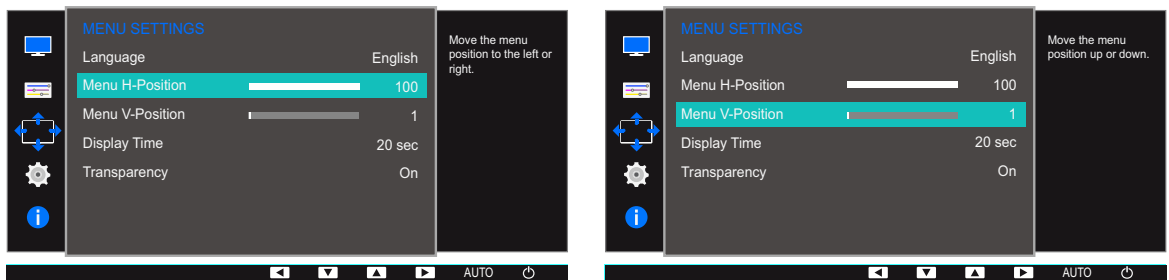
5.2 Menu H-Position & Menu V-Position

Menu H-Position: Move the menu position to the left or right.

Menu V-Position: Move the menu position up or down.

5.2.1 Configuring Menu H-Position & Menu V-Position

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **MENU SETTINGS** and press [□/⇐] on the product.
- 3 Press [▲/▼] to move to **Menu H-Position** or **Menu V-Position**, and press [□/⇐]. The following screen will appear.



- 4 Press [▲/▼] to configure **Menu H-Position** or **Menu V-Position**.

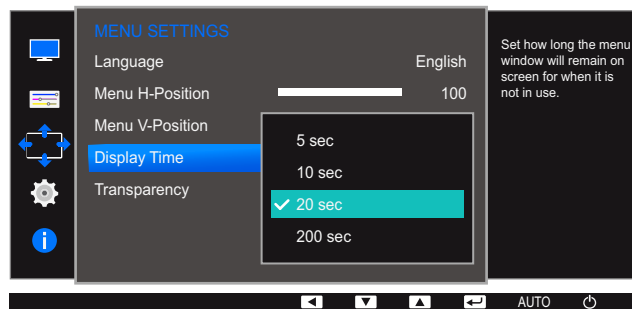
5.3 Display Time

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.

5.3.1 Configuring Display Time

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **MENU SETTINGS** and press [□/⏏] on the product.
- 3 Press [▲/▼] to move to **Display Time** and press [□/⏏] on the product. The following screen will appear.



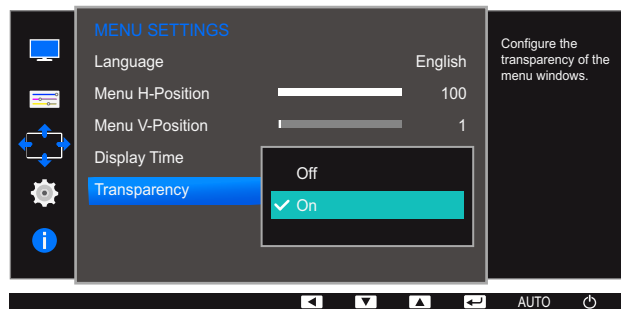
- 4 Press [▲/▼] to move to the option you want and press [□/⏏].
- 5 The selected option will be applied.

5.4 Transparency

Set the transparency for the menu windows:

5.4.1 Changing Transparency

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **MENU SETTINGS** and press [⏏/⏏] on the product.
- 3 Press [▲/▼] to move to **Transparency** and press [⏏/⏏] on the product. The following screen will appear.



- 4 Press [▲/▼] to move to the option you want and press [⏏/⏏].
- 5 The selected option will be applied.

6.1 Reset

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

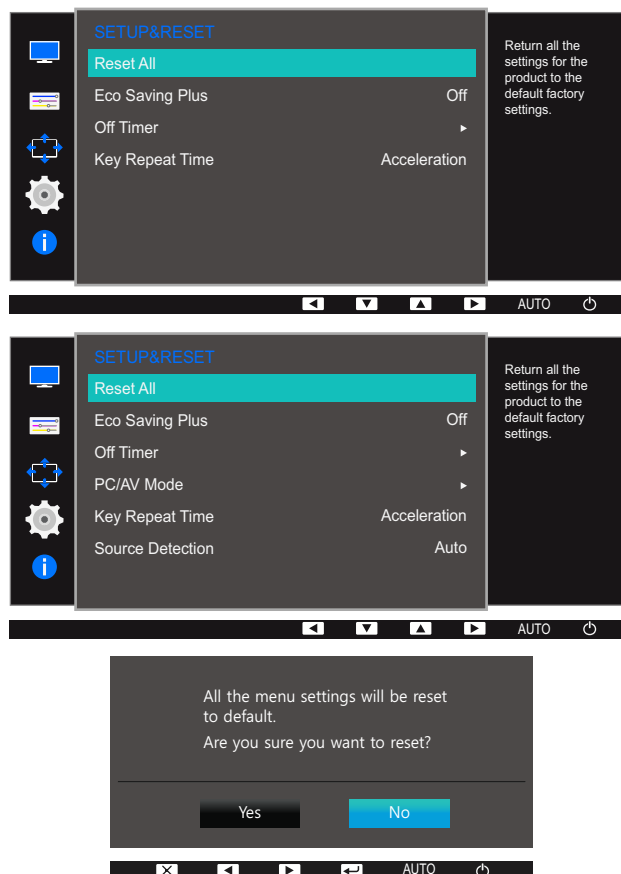


The functions available on the monitor may vary depending on the model. Refer to the actual product.

6.1.1 Initializing Settings (Reset)

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **SETUP&RESET** and press [↩/↪] on the product.
- 3 Press [▲/▼] to move to **Reset** and press [↩/↪] on the product.

The following screen will appear.



- 4 Press [▲/▼] to move to the option you want and press [↩/↪].
- 5 The selected option will be applied.

6.2 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 **SAMSUNG MAGICBright** is in **Dynamic Contrast** mode.
- This menu is not available when **Game Mode** is enabled.
- This menu is not available when **Eye Saver Mode** is enabled.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

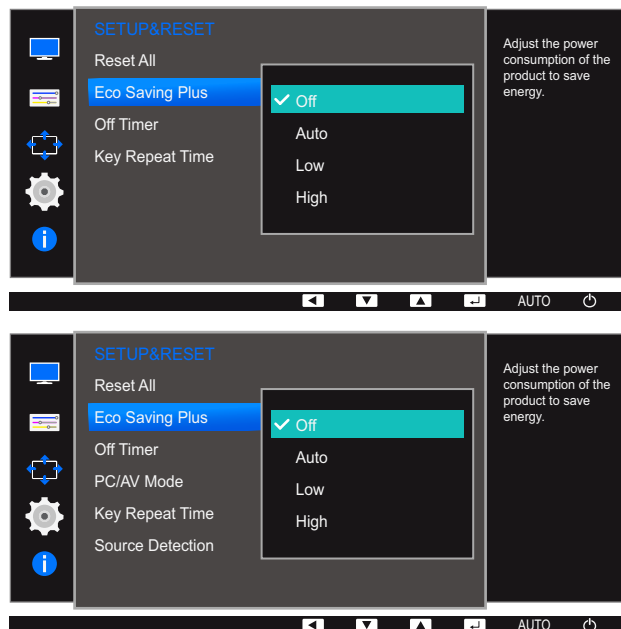
6.2.1 Configuring Eco Saving Plus

- 1 Press any button on the front of the product to display the Key Guide. Next, press **[MENU]** to display the corresponding menu screen.

Next, press the **[⏻]** button.

- 2 Press **[▲/▼]** to move to **SETUP&RESET** and press **[⏻/⏹]** on the product.
- 3 Press **[▲/▼]** to move to **Eco Saving Plus** and press **[⏻/⏹]** on the product.

The following screen will appear.



- **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.
- 4 Move the focus to the desired option by pressing [**^**/**v**] button on the DOME Type JOG Button. Press [**⏻**] button.
 - 5 The selected option will be applied.

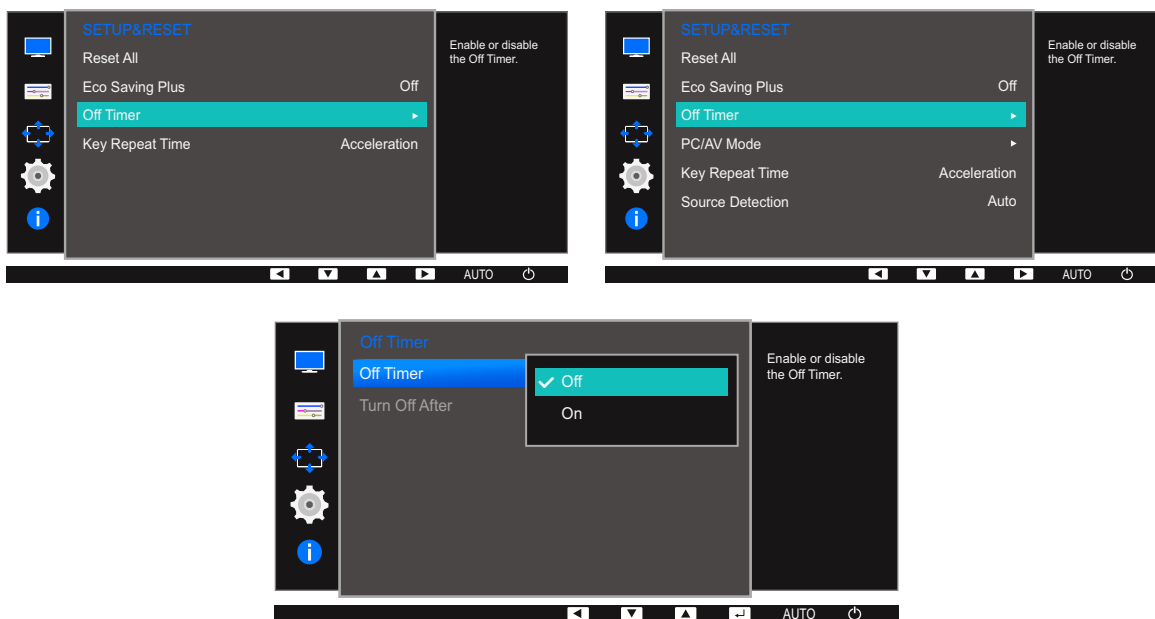
6.3 Off Timer

You can set the product to automatically turn off.

6.3.1 Configuring Off Timer

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **SETUP&RESET** and press [⏏/⏏] on the product.
- 3 Press [▲/▼] to move to **Off Timer** and press [⏏/⏏] on the product.
- 4 Press [▲/▼] to move to **Off Timer** and press [⏏/⏏] on the product.

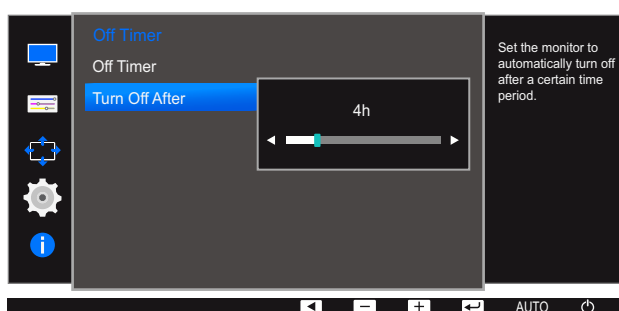
The following screen will appear.



- **Off**: Deactivate the off timer so that the product does not power off automatically.
 - **On**: Activate the off timer so that the product powers off automatically.
- 5 Press [▲/▼] to move to the option you want and press [⏏/⏏].
 - 6 The selected option will be applied.

6.3.2 Configuring Turn Off After

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **SETUP&RESET** and press [⏏/⏏] on the product.
- 3 Press [▲/▼] to move to **Off Timer** and press [⏏/⏏] on the product.
- 4 Press [▲/▼] to move to **Turn Off After** and press [⏏/⏏] on the product. The following screen will appear.



- 5 Press [▲/▼] to configure **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 **MENU** → **SETUP&RESET** and set **Off Timer** to **Off**.

6.4 PC/AV Mode (S19E200BR / S19E200BW / S22E200B / S22E200BW / S23E200B / S24E200BL)

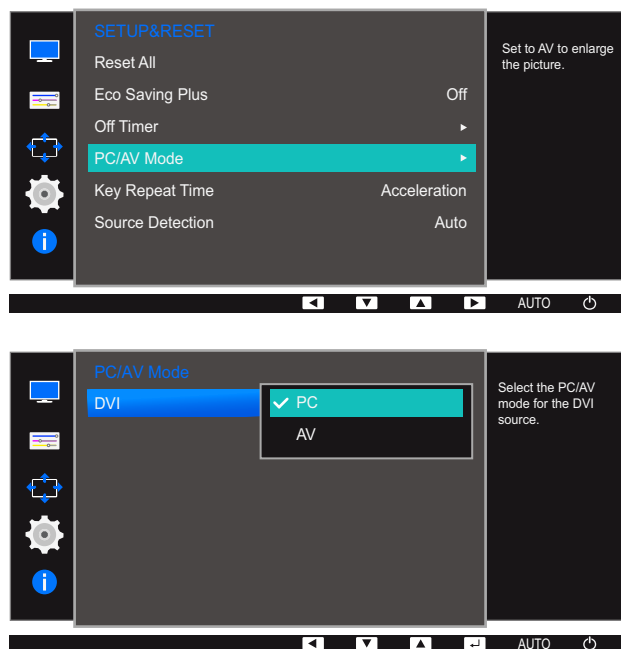
Set **PC/AV Mode** to **AV**. The picture size will be enlarged. This option is useful when you view a movie.



- This function does not support Analog mode.
- Supplied for the wide models only such as 16:9 or 16:10.
- If the monitor (when set to DVI) is in power saving mode or is displaying the message **Check Signal Cable**, press the [MENU] button to display the On Screen Display (OSD).
You can select **PC** or **AV**.
- The functions available on the monitor may vary depending on the model. Refer to the actual product.

6.4.1 Configuring PC/AV Mode

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **SETUP&RESET** and press [⏏/⏏] on the product.
- 3 Press [▲/▼] to move to **PC/AV Mode** and press [⏏/⏏] on the product.
The following screen will appear.



- 4 Press [▲/▼] to move to the option you want and press [⏏/⏏].
- 5 The selected option will be applied.

6.5 Key Repeat Time

Control the response rate of a button when the button is pressed.

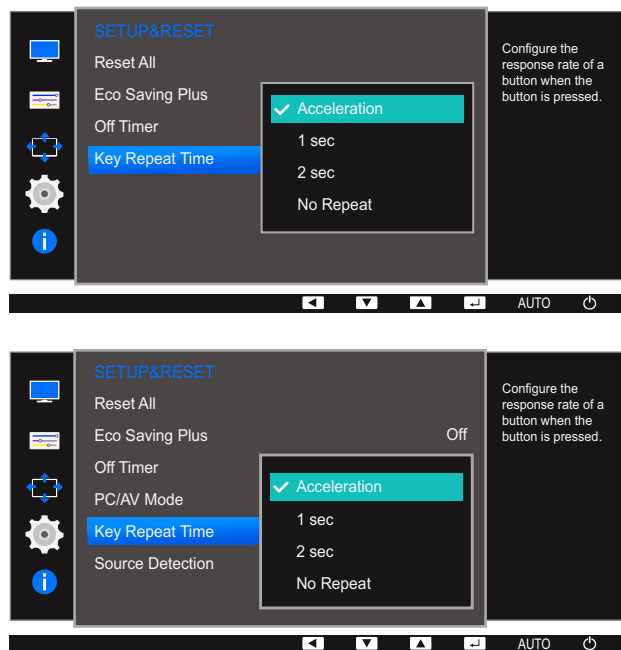


The functions available on the monitor may vary depending on the model. Refer to the actual product.

6.5.1 Configuring Key Repeat Time

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **SETUP&RESET** and press [⏏/⏏] on the product.
- 3 Press [▲/▼] to move to **Key Repeat Time** and press [⏏/⏏] on the product.

The following screen will appear.



- **Acceleration**, **1 sec**, or **2 sec** can be selected. If **No Repeat** is selected, a command responds only once when a button is pressed.
- 4 Press [▲/▼] to move to the option you want and press [⏏/⏏].
 - 5 The selected option will be applied.

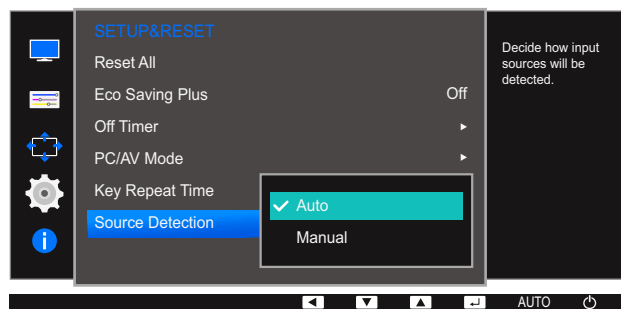
6.6 Source Detection (S19E200BR / S19E200BW / S22E200B / S22E200BW / S23E200B / S24E200BL)

You can activate **Source Detection**.

6.6.1 Configuring Source Detection

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **SETUP&RESET** and press [□/⏏] on the product.
- 3 Press [▲/▼] to move to **Source Detection** and press [□/⏏] on the product.

The following screen will appear.



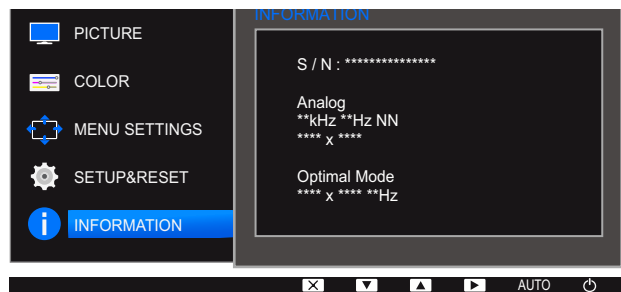
- **Auto:** The input source is automatically recognized.
 - **Manual:** Manually select an input source.
- 4 Press [▲/▼] to move to the option you want and press [□/⏏].
 - 5 The selected option will be applied.

7.1 INFORMATION

View the current input source, frequency and resolution.

7.1.1 Displaying INFORMATION

- 1 Press any button on the front of the product to display the Key Guide. Next, press [MENU] to display the corresponding menu screen.
- 2 Press [▲/▼] to move to **INFORMATION**. The current input source, frequency and resolution will appear.



The displayed menu items may vary depending on the model.

7.2 Configuring Brightness, Contrast and Sharpness from the Initial Screen

Adjust the **Brightness**, **Contrast** and **Sharpness** setting using the [⊙] buttons in the initial screen (where no OSD menu is displayed).



Brightness :

- This menu is not available when **SAMSUNG MAGICBright** is set to **Dynamic Contrast** mode.
- This menu is not available when **Eco Saving Plus** is enabled.
- This menu is not available when **Eye Saver Mode** is enabled.



Contrast :

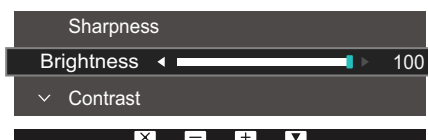
- This option is not available when **SAMSUNG MAGICBright** is in **Cinema** or **Dynamic Contrast** mode.
- This menu is not available when **Game Mode** is enabled.



Sharpness :

- This option is not available when **SAMSUNG MAGICBright** is in **Cinema** or **Dynamic Contrast** mode.
- This menu is not available when **Game Mode** is enabled.

- 1 Press any button on the front of the product (when no menu screen is displayed) to display the Key guide. Next, press [⊙]. The following screen will appear.



- 2 Press the [□/□] button to alternate between the **Brightness**, **Contrast** and **Sharpness** settings.
- 3 Adjust the **Brightness**, **Contrast** and **Sharpness** settings using the [▲/▼] buttons.

8.1 Magic Tune

8.1.1 What is MagicTune?



MagicTune is a software program that helps with monitor adjustments by providing comprehensive descriptions of monitor functions and easy-to-understand guidelines.

You can adjust the product with the mouse and the keyboard without using the operating buttons of the product.

8.1.2 Installing the Software

- 1 Insert the installation CD into the CD-ROM drive.
- 2 Select the MagicTune setup program.
 -  If the pop-up screen for the software installation does not appear on the main screen, find and double-click the MagicTune setup file on the CD-ROM.
- 3 Select the installation language and click [Next].
- 4 Complete the remaining software installation steps according to the instructions displayed on the screen.
 - 
 - The software may not work properly if you do not restart the computer after the installation.
 - The MagicTune 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 (MagicTune™)

The installation of MagicTune™ may be affected by the graphics card, motherboard and the networking environment.

System Requirements

OS

- Windows XP, Windows Vista, Windows 7, Windows 8

8.1.3 Removing the Software

You can only remove MagicTune™ through [Add or Remove Programs] in Windows.

To remove MagicTune™, complete the following steps.

- 1 Click [Start] select [Settings], and select [Control Panel] from the menu.
For Windows XP, click [Start], and select [Control Panel] from the menu.
- 2 Double-click the [Add or Remove Programs] icon in the Control Panel.
- 3 In the [Add/Remove] window, find and select MagicTune™ so that it is highlighted.
- 4 Click [Change or Remove Programs] to remove the software.
- 5 Select [Yes] to start removing MagicTune™.
- 6 Wait until a message box appears informing you that the software has been removed completely.



For technical support, the FAQ (frequently asked questions) or information about the software upgrade for MagicTune™, please visit our website(http://www.samsung.com/us/consumer/learningresources/monitor/magetune/pop_intro.html).

8.2 MultiScreen



MultiScreen enables users to use the monitor by partitioning multiple sections.

8.2.1 Installing the Software

1 Insert the installation CD into the [CD-ROM drive].

2 Select the "MultiScreen" setup program.



If the pop-up screen for the software installation does not appear on the main screen, find and double-click the "MultiScreen" setup file on the [CD-ROM].

3 When the Installation Wizard appears, click [**Next**].

4 Follow the instructions given on the screen to proceed with installation.



- The software may not work properly if you do not restart the computer after the installation.
- The "MultiScreen" 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 (MultiScreen)

The "MultiScreen" installation may be affected by the [Graphics card], [Motherboard] and the [Networking environment].

Operating System

"OS"

- "Windows 2000"
- "Windows XP Home Edition"
- "Windows XP Professional"
- "Windows Vista 32bit"
- "Windows 7 32bit"
- "Windows 8 32bit"



For "MultiScreen", the operating systems "Windows 2000" or later is recommended.

"Hardware"

- At least 32MB of memory
- At least 60MB of free space on the hard disk drive

8.2.2 Removing the Software

Click **[Start]**, select **[Settings]/[Control Panel]**, and then double-click **[Add or Remove Programs]**.

Select "MultiScreen" from the program list and click the **[Add/Delete]** button.

9.1 Requirements Before Contacting Samsung Customer Service Center

9.1.1 Testing the Product



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

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.

9.1.2 Checking the Resolution and Frequency

For a mode that exceeds the supported resolution (refer to "10.7 Standard Signal Mode Table"), the message **Not Optimum Mode** will appear for a short time.

9.1.3 Check the following.

Installation issue (PC mode)

Issues	Solutions
The screen keeps switching on and off.	Check the cable connection between the product and PC, and ensure the connectors are locked. (Refer to "2.3 Connecting and Using a PC")

Screen issue

Issues	Solutions
The power LED is off. The screen will not switch on.	Check that the power cable is connected properly. (Refer to "2.3 Connecting and Using a PC")
The message Check Signal Cable appears.	Check that the cable is properly connected to the product. (Refer to "2.3 Connecting and Using a PC")
	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 (page 84).
The images on the screen look distorted.	Check the cable connection to the product (Refer to "2.3 Connecting and Using a PC")
The screen is not clear. The screen is blurry.	Adjust Coarse (page 47) and Fine (page 48).
	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 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 (page 84) in this manual and the INFORMATION menu on the product.
There are shadows or ghost images left on the screen.	
The screen is too bright. The screen is too dark.	Adjust Brightness (page 34) and Contrast (page 35).
Screen color is inconsistent.	Change the COLOR settings. (Refer to "Configuring Tint")
The colors on the screen have a shadow and are distorted.	Change the COLOR settings. (Refer to "Configuring Tint")
White does not really look white.	Change the COLOR settings. (Refer to "Configuring Tint")

Issues	Solutions
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.

Source device issue

Issues	Solutions
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.



The LED lights on the frame of the product may be seen depending on the user's viewing angle. The light is harmless to people and has no bearing on product features and performance. The product is safe to use.

9.2 Q & A

Question	Answer
How can I change the frequency?	Set the frequency on your graphics card. • Windows XP: Go to Control Panel → Appearance and Themes → Display → Settings → Advanced → Monitor, and adjust Refresh rate under Monitor settings. • Windows ME/2000: Go to Control Panel → Display → Settings → Advanced → Monitor, and adjust Refresh rate under Monitor settings. • Windows Vista: Go to Control Panel → Appearance and Personalization → Personalization → Display Settings → Advanced Settings → Monitor, and adjust Refresh rate under Monitor settings. • Windows 7: Go to Control Panel → Appearance and Personalization → Display → Screen Resolution → Advanced settings → Monitor, and adjust Refresh rate under Monitor settings. • Windows 8: Go to Settings → Control Panel → Appearance and Personalization → Display → Screen Resolution → Advanced settings → Monitor, and adjust Refresh rate under Monitor settings.

Question	Answer
How can I change the resolution?	• Windows XP: Go to Control Panel → Appearance and Themes → Display → Settings, and adjust the resolution. • Windows ME/2000: Go to Control Panel → Display → Settings, and adjust the resolution. • Windows Vista: Go to Control Panel → Appearance and Personalization → Personalize → Display Settings, and adjust the resolution. • Windows 7: Go to Control Panel → Appearance and Personalization → Display → Adjust Resolution, and adjust the resolution. • Windows 8: Go to Settings → Control Panel → Appearance and Personalization → Display → Adjust Resolution, and adjust the resolution.
How do I set power-saving mode?	• Windows XP: Set power-saving mode in Control Panel → Appearance and Themes → Display → Screen Saver Settings or BIOS SETUP on the PC. • Windows ME/2000: Set power-saving mode in Control Panel → Display → Screen Saver Settings or BIOS SETUP on the PC. • Windows Vista: Set power-saving mode in Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings or BIOS SETUP on the PC. • Windows 7: Set power-saving mode in Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings or BIOS SETUP on the PC. • Windows 8: Set power-saving mode in Settings → Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings or BIOS SETUP on the PC.



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



Specifications

10.1 General (S19E200NY / S19E200NW)

Model Name		S19E200NY	S19E200NW
Panel	Size	18.5 Inches (47 cm)	19.0 Inches (48 cm)
	Display area	409.8 mm (H) x 230.4 mm (V) 16.1 Inches (H) x 9.1 Inches (V)	408.24 mm (H) x 255.15 mm (V) 16.1 Inches (H) x 10.0 Inches (V)
	Pixel Pitch	0.300 mm (H) x 0.300 mm (V) 0.011811 Inches (H) x 0.011811 Inches (V)	0.2835 mm (H) x 0.2835 mm (V) 0.011161 Inches (H) x 0.011161 Inches (V)
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.	
Dimensions (W x H x D) / Weight	Without Stand	441.4 x 266.6 x 76.8 mm 17.4 x 10.5 x 3.0 Inches	439.4 x 289.9 x 76.2 mm 17.3 x 11.4 x 3.0 Inches
	With Stand	441.4 x 348.8 x 170 mm / 2.8 kg 17.4 x 13.7 x 6.7 Inches / 6.2 lbs	439.4 x 373.6 x 170 mm / 3.1 kg 17.3 x 14.7 x 6.7 Inches / 6.8 lbs
Environmental considerations	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.

(USA only)

Dispose unwanted electronics through an approved recycler.

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

10.2 General (S19E200BW / S19E200BR)

Model Name		S19E200BW	S19E200BR
Panel	Size	19.0 Inches (48 cm)	19.0 Inches (48 cm)
	Display area	408.24 mm (H) x 255.15 mm (V) 16.1 Inches (H) x 10.0 Inches (V)	376.32 mm (H) x 301.06 mm (V) 14.8 Inches (H) x 11.9 Inches (V)
	Pixel Pitch	0.2835 mm (H) x 0.2835 mm (V) 0.011161 Inches (H) x 0.011161 Inches (V)	0.294 mm (H) x 0.294 mm (V) 0.011575 Inches (H) x 0.011575 Inches (V)
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.	
Dimensions (W x H x D) / Weight	Without Stand	439.4 x 289.9 x 76.2 mm 17.3 x 11.4 x 3.0 Inches	407 x 336 x 77 mm 16.0 x 13.2 x 3.0 Inches
	With Stand	439.4 x 373.6 x 170 mm / 3.1 kg 17.3 x 14.7 x 6.7 Inches / 6.8 lbs	407 x 419 x 170 mm / 3.25 kg 16.0 x 16.5 x 6.7 Inches / 7.2 lbs
Environmental considerations	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.



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10.3 General (S22E200NY / S22E200N)

Model Name		S22E200NY / S22E200N
Panel	Size	21.5 Inches (54 cm)
	Display area	476.64 mm (H) x 268.11 mm (V) 18.8 Inches (H) x 10.6 Inches (V)
	Pixel Pitch	0.24825 mm (H) x 0.24825 mm (V) 0.009774 Inches (H) x 0.009774 Inches (V)
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.
Dimensions (W x H x D) / Weight	Without Stand	504.3 x 301.9 x 77.6 mm 19.9 x 11.9 x 3.1 Inches
	With Stand	504.3 x 385.35 x 185.0 mm / 3.5 kg 19.9 x 15.2 x 7.3 Inches / 7.7 lbs
Environmental considerations	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.



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Specifications

10.4 General (S22E200B / S22E200BW)

Model Name		S22E200B	S22E200BW
Panel	Size	21.5 Inches (54 cm)	22.0 Inches (55 cm)
	Display area	476.64 mm (H) x 268.11 mm (V) 18.8 Inches (H) x 10.6 Inches (V)	473.76 mm (H) x 296.1 mm (V) 18.7 Inches (H) x 11.7 Inches (V)
	Pixel Pitch	0.24825 mm (H) x 0.24825 mm (V) 0.009774 Inches (H) x 0.009774 Inches (V)	0.282 mm (H) x 0.282 mm (V) 0.011102 Inches (H) x 0.011102 Inches (V)
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.	
Dimensions (W x H x D) / Weight	Without Stand	504.3 x 301.9 x 77.6 mm 19.9 x 11.9 x 3.1 Inches	502.4 x 329.8 x 77.4 mm 19.8 x 13.0 x 3.0 Inches
	With Stand	504.3 x 385.35 x 185.0 mm / 3.5 kg 19.9 x 15.2 x 7.3 Inches / 7.7 lbs	502.4 x 413.5 x 185 mm / 3.85 kg 19.8 x 16.3 x 7.3 Inches / 8.5 lbs
Environmental considerations	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.



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10.5 General (S23E200B / S24E200BL)

Model Name		S23E200B	S24E200BL
Panel	Size	23.0 Inches (58 cm)	23.6 Inches (59 cm)
	Display area	509.76 mm (H) x 286.74 mm (V) 20.1 Inches (H) x 11.3 Inches (V)	521.28 mm (H) x 293.22 mm (V) 20.5 Inches (H) x 11.5 Inches (V)
	Pixel Pitch	0.2655 mm (H) x 0.2655 mm (V) 0.010453 Inches (H) x 0.010453 Inches (V)	0.2715 mm (H) x 0.2715 mm (V) 0.010689 Inches (H) x 0.010689 Inches (V)
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.	
Dimensions (W x H x D) / Weight	Without Stand	542.9 x 321.4 x 76.3 mm 21.4 x 12.7 x 3.0 Inches	554.6 x 330.5 x 78.2 mm 21.8 x 13.0 x 3.1 Inches
	With Stand	542.9 x 404.65 x 185 mm / 3.25 kg 21.4 x 15.9 x 7.3 Inches / 7.2 lbs	554.6 x 412.35 x 185 mm / 4.1 kg 21.8 x 16.2 x 7.3 Inches / 9.0 lbs
Environmental considerations	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.



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10.6 PowerSaver

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

PowerSaver	Normal operation mode	Energy Star Power Consumption	Power saving mode	Power off (Power button)
Power Indicator	On	On	Blinking	Off
Power Consumption (S19E200NY)	Typical 19 W	Typical 13 W	Less than 0.1 W	Less than 0.1 W
Power Consumption (S19E200BR)	Typical 19 W	Typical 16 W	Less than 0.1 W	Less than 0.1 W
Power Consumption (S19E200NW)	Typical 19 W	Typical 15 W	Less than 0.1 W	Less than 0.1 W
Power Consumption (S19E200BW)	Typical 19 W	Typical 15 W	Less than 0.1 W	Less than 0.1 W
Power Consumption (S22E200NY)	Typical 24 W	Typical 21 W	Less than 0.1 W	Less than 0.1 W
Power Consumption (S22E200N)	Typical 24 W	Typical 21 W	Less than 0.1 W	Less than 0.1 W
Power Consumption (S22E200B)	Typical 24 W	Typical 21 W	Less than 0.1 W	Less than 0.1 W
Power Consumption (S22E200BW)	Typical 24 W	Typical 19 W	Less than 0.1 W	Less than 0.1 W



Specifications

PowerSaver	Normal operation mode	Energy Star Power Consumption	Power saving mode	Power off (Power button)
Power Consumption (S23E200B)	Typical 25 W	Typical 22 W	Less than 0.1 W	Less than 0.1 W
Power Consumption (S24E200BL)	Typical 25 W	Typical 22 W	Less than 0.1 W	Less than 0.1 W



- The displayed power consumption level can vary in different operating conditions or when settings are changed. (**E200** Model Power saving mode / Power off (Power button) : Less than 0.1 watts (Analog Input Condition), Max 0.25watts)
- ENERGY STAR® is a US registered mark of the United States Environmental Protection Agency. Energy Star power is measured with the test method in the current Energy Star® Standard.
- To reduce the power consumption to 0 watts, turn off the power switch on the back of the product or disconnect the power cable. Be sure to disconnect the power cable when you will not be using the product for an extended period of time. To reduce the power consumption to 0 watts when the power switch is not available, disconnect the power cable.

10.7 Standard Signal Mode Table



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

Model Name	Synchronization		Resolution	
	Horizontal Frequency	Vertical Frequency	Optimum Resolution	Maximum Resolution
S19E200NY	30 – 81 kHz	56 – 75 Hz	1366 x 768 @ 60 Hz	1366 x 768 @ 60 Hz
S19E200NW / S19E200BW	30 – 81 kHz	56 – 75 Hz	1440 x 900 @ 60 Hz	1440 x 900 @ 75 Hz
S19E200BR	30 – 81 kHz	56 – 75 Hz	1280 x 1024 @ 60 Hz	1280 x 1024 @ 75 Hz
S22E200BW	30 – 81 kHz	56 – 75 Hz	1680 x 1050 @ 60 Hz	1680 x 1050 @ 60 Hz
S22E200NY / S22E200N / S22E200B / S23E200B / S24E200BL	30 – 81 kHz	56 – 75 Hz	1920 x 1080 @ 60 Hz	1920 x 1080 @ 60 Hz

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.



Specifications

S19E200NY

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
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, 1366 x 768	47.712	59.790	85.500	+/+



Specifications

S19E200NW

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	31.469	59.940	25.175	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
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, 1440 x 900	55.935	59.887	106.500	-/+
VESA, 1440 x 900	70.635	74.984	136.750	-/+



Specifications

S19E200BW

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	31.469	59.940	25.175	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
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, 1440 x 900	55.935	59.887	106.500	-/+
VESA, 1440 x 900	70.635	74.984	136.750	-/+



Specifications

S19E200BR

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	31.469	59.940	25.175	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
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 960	60.000	60.000	108.000	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+



Specifications

S22E200NY

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



Specifications

S22E200N

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



Specifications

S22E200B

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



Specifications

S22E200BW

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



Specifications

S23E200B

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

S24E200BL

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



- 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.

Contact SAMSUNG WORLD WIDE



If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

NORTH AMERICA		
U.S.A	1-800-SAMSUNG (726-7864)	http://www.samsung.com/us/support
CANADA	1-800-SAMSUNG (726-7864)	http://www.samsung.com/ca/support (English) http://www.samsung.com/ca_fr/support (French)
LATIN AMERICA		
ARGENTINE	0800-555-SAMSUNG (0800-555-7267)	http://www.samsung.com/ar/support
BOLIVIA	800-10-7260	http://www.samsung.com/cl/support
BRAZIL	0800-124-421 (Demais cidades e regiões) 4004-0000 (Capitais e grandes centros)	http://www.samsung.com/br/support
CHILE	800-SAMSUNG (726-7864)	http://www.samsung.com/cl/support
COLOMBIA	Bogotá 600 12 72 Gratis desde cualquier parte del país 01 8000 112 112 ó desde su celular #SAM(726)	http://www.samsung.com/co/support
COSTA RICA	0-800-507-7267 00-800-1-SAMSUNG (726-7864)	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
DOMINICAN REPUBLIC	1-800-751-2676	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
ECUADOR	1-800-10-7267 1-800-SAMSUNG (72-6786)	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)

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LATIN AMERICA		
EL SALVADOR	800-6225 800-0726-7864	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
GUATEMALA	1-800-299-0013 1-800-299-0033	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
HONDURAS	800-2791-9267 800-2791-9111	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
JAMAICA	1-800-234-7267 1-800-SAMSUNG (726-7864)	http://www.samsung.com/latin_en/support (English)
MEXICO	01-800-SAMSUNG (726-7864)	http://www.samsung.com/mx/support
NICARAGUA	001-800-5077267	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
PANAMA	800-7267 800-0101	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
PARAGUAY	009-800-542-0001	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
PERU	0800-777-08	http://www.samsung.com/pe/support
PUERTO RICO	1-800-682-3180	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
TRINIDAD & TOBAGO	1-800-SAMSUNG (726-7864)	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)

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URUGUAY	000-405-437-33	http://www.samsung.com/latin/support (Spanish) http://www.samsung.com/latin_en/support (English)
VENEZUELA	0-800-SAMSUNG (726-7864)	http://www.samsung.com/ve/support

EUROPE		
AUSTRIA	0800-SAMSUNG (0800-7267864)	http://www.samsung.com/at/support
BELGIUM	02-201-24-18	http://www.samsung.com/be/support (Dutch) http://www.samsung.com/be_fr/support (French)
BOSNIA	055 233 999	http://www.samsung.com/support
BULGARIA	800 111 31, Безплатна телефонна линия	http://www.samsung.com/bg/support
CROATIA	072 726 786	http://www.samsung.com/hr/support
CYPRUS	8009 4000 only from landline, toll free	http://www.samsung.com/gr/support
CZECH	800 - SAMSUNG (800-726786)	http://www.samsung.com/cz/support
DENMARK	70 70 19 70	http://www.samsung.com/dk/support
EIRE	0818 717100	http://www.samsung.com/ie/support
ESTONIA	800-7267	http://www.samsung.com/ee/support
FINLAND	030-6227 515	http://www.samsung.com/fi/support
FRANCE	01 48 63 00 00	http://www.samsung.com/fr/support
GERMANY	0180 6 SAMSUNG bzw. 0180 6 7267864* (*0,20 €/Anruf aus dem dt. Festnetz, aus dem Mobilfunk max. 0,60 €/Anruf)	http://www.samsung.com/de/support

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GREECE	80111-SAMSUNG (80111 726 7864) only from land line (+30) 210 6897691 from mobile and land line	http://www.samsung.com/gr/support
HUNGARY	0680SAMSUNG (0680-726-786) 0680PREMIUM (0680-773-648)	http://www.samsung.com/hu/support
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LATVIA	8000-7267	http://www.samsung.com/lv/support
LITHUANIA	8-800-77777	http://www.samsung.com/lt/support
LUXEMBURG	261 03 710	http://www.samsung.com/support
MONTENEGRO	020 405 888	http://www.samsung.com/support
NETHERLANDS	0900-SAMSUNG (0900-7267864) (€ 0,10/Min)	http://www.samsung.com/nl/support
NORWAY	815 56480	http://www.samsung.com/no/support
POLAND	801-172-678* lub +48 22 607-93-33 * * (koszt połączenia według taryfy operatora)	http://www.samsung.com/pl/support
PORTUGAL	808 20 7267	http://www.samsung.com/pt/support
ROMANIA	08008 726 78 64 (08008 SAMSUNG) Apel GRATUIT	http://www.samsung.com/ro/support
SERBIA	011 321 6899	http://www.samsung.com/rs/support
SLOVAKIA	0800 - SAMSUNG (0800-726 786)	http://www.samsung.com/sk/support
SLOVENIA	080 697 267 (brezplačna številka) 090 726 786 (0,39 EUR/min) klicni center vam je na voljo od ponedeljka do petka od 9. do 18. ure.	http://www.samsung.com/si
SPAIN	0034902172678	http://www.samsung.com/es/support

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SWEDEN	0771 726 7864 (0771-SAMSUNG)	http://www.samsung.com/se/support
SWITZERLAND	0800 726 78 64 (0800-SAMSUNG)	http://www.samsung.com/ch/support (German) http://www.samsung.com/ch_fr/support (French)
UK	0330 SAMSUNG (7267864)	http://www.samsung.com/uk/support

CIS		
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AZERBAIJAN	0-88-555-55-55	http://www.samsung.com/support
BELARUS	810-800-500-55-500	http://www.samsung.com/support
GEORGIA	0-800-555-555	http://www.samsung.com/support
KAZAKHSTAN	8-10-800-500-55-500 (GSM: 7799, VIP care 7700)	http://www.samsung.com/support
KYRGYZSTAN	00-800-500-55-500	http://www.samsung.com/kz_ru/support
MOLDOVA	0-800-614-40	http://www.samsung.com/support
MONGOLIA	+7-495-363-17-00	http://www.samsung.com/support
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TAJIKISTAN	8-10-800-500-55-500	http://www.samsung.com/support
UKRAINE	0-800-502-000	http://www.samsung.com/ua/support (Ukrainian) http://www.samsung.com/ua_ru/support (Russian)
UZBEKISTAN	8-10-800-500-55-500 (GSM: 7799)	http://www.samsung.com/support

CHINA		
CHINA	400-810-5858	http://www.samsung.com/cn/support

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CHINA		
HONG KONG	(852) 3698 4698	http://www.samsung.com/hk/support (Chinese) http://www.samsung.com/hk_en/support (English)
MACAU	0800 333	http://www.samsung.com/support

S.E.A		
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INDONESIA	021-56997777 08001128888	http://www.samsung.com/id/support
JAPAN	0120-363-905	http://www.samsung.com/jp/support
MALAYSIA	1800-88-9999 603-77137477 (Overseas contact)	http://www.samsung.com/my/support
MYANMAR	+95-01-2399-888	http://www.samsung.com/support
NEW ZEALAND	0800 726 786	http://www.samsung.com/nz/support
PHILIPPINES	1-800-10-7267864 [PLDT] 1-800-8-7267864 [Globe landline and Mobile] 02-4222111 [Other landline]	http://www.samsung.com/ph/support
SINGAPORE	1800-SAMSUNG (726-7864)	http://www.samsung.com/sg/support
TAIWAN	0800-329999	http://www.samsung.com/tw/support
THAILAND	0-2689-3232, 1800-29-3232	http://www.samsung.com/th/support
VIETNAM	1800 588 889	http://www.samsung.com/vn/support

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BANGLADESH	09612300300	http://www.samsung.com/in/support
INDIA	1800 3000 8282 - Toll Free 1800 266 8282 - Toll Free	http://www.samsung.com/in/support
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MENA		
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BAHRAIN	8000-GSAM (8000-4726)	http://www.samsung.com/ae/support (English) http://www.samsung.com/ae_ar/support (Arabic)
EGYPT	08000-7267864 16580	http://www.samsung.com/eg/support
IRAN	021-8255 [CE]	http://www.samsung.com/iran/support
JORDAN	0800-22273 06 5777444	http://www.samsung.com/Levant/support (English)
KUWAIT	183-CALL (183-2255)	http://www.samsung.com/ae/support (English) http://www.samsung.com/ae_ar/support (Arabic)
MOROCCO	080 100 22 55	http://www.samsung.com/n_africa/support
OMAN	800-SAMSUNG (800 - 726 7864)	http://www.samsung.com/ae/support (English) http://www.samsung.com/ae_ar/support (Arabic)
PAKISTAN	0800-Samsung (72678)	http://www.samsung.com/pk/support
QATAR	800-CALL (800-2255)	http://www.samsung.com/ae/support (English) http://www.samsung.com/ae_ar/support (Arabic)
SAUDI ARABIA	8002474357	http://www.samsung.com/sa/support http://www.samsung.com/sa_en/support (English)
SYRIA	18252273	http://www.samsung.com/Levant/support (English)
TUNISIA	80-1000-12	http://www.samsung.com/n_africa/support

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MENA		
TURKEY	444 77 11	http://www.samsung.com/tr/support
U.A.E	800-SAMSUNG (800 - 726 7864)	http://www.samsung.com/ae/support (English) http://www.samsung.com/ae_ar/support (Arabic)

AFRICA		
BOTSWANA	8007260000	http://www.samsung.com/support
BURUNDI	200	http://www.samsung.com/support
CAMEROON	7095-0077	http://www.samsung.com/africa_fr/support
COTE D'IVOIRE	8000 0077	http://www.samsung.com/africa_fr/support
DRC	499999	http://www.samsung.com/support
GHANA	0800-10077 0302-200077	http://www.samsung.com/africa_en/support
KENYA	0800 545 545	http://www.samsung.com/support
MAURITIUS	23052574020	http://www.samsung.com/support
MOZAMBIQUE	847267864 / 827267864	http://www.samsung.com/support
NAMIBIA	08 197 267 864	http://www.samsung.com/support
NIGERIA	0800-726-7864	http://www.samsung.com/africa_en/support
REUNION	262508869	http://www.samsung.com/support
RWANDA	9999	http://www.samsung.com/support
SENEGAL	800-00-0077	http://www.samsung.com/africa_fr/support
SOUTH AFRICA	0860 SAMSUNG (726 7864)	http://www.samsung.com/support
SUDAN	1969	http://www.samsung.com/support
TANZANIA	0800 755 755 / 0685 889 900	http://www.samsung.com/support
UGANDA	0800 300 300	http://www.samsung.com/support
ZAMBIA	0211 350370	http://www.samsung.com/support

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.

Correct Disposal

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)



(Applicable in countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Terminology

OSD (On Screen Display)

On screen display (OSD) allows you to customize on-screen settings to optimize the picture quality as required. You can change the screen brightness, tint, size and many other settings using menus displayed on the screen.

Gamma

The Gamma menu adjusts the grey scale that represents middle tones on the screen. Adjusting the brightness brightens the whole screen, but adjusting Gamma only brightens the medium brightness.

Grey scale

Scale refers to levels of color intensity that show variations of color change from darker areas to brighter areas on the screen. Changes to the screen brightness are expressed with black and white variation, and grey scale refers to the medium area between black and white. Changing the grey scale through Gamma adjustment will change the medium brightness on the screen.

Scanning rate

Scanning rate, or refresh rate, refers to the frequency of screen refreshes. Screen data is transmitted as it refreshes to display an image, although the refreshing is invisible to the naked eye. The number of screen refreshes is called scanning rate and is measured in Hz. A scanning rate of 60Hz means that the screen refreshes 60 times per second. The screen scanning rate depends on the performance of the graphics cards in your PC and monitor.

Horizontal Frequency

Characters or images displayed on the monitor screen consist of numerous dots (pixels). Pixels are transmitted in horizontal lines, which are then arranged vertically to create an image. The horizontal frequency is measured in kHz and represents how many times horizontal lines per second are transmitted and displayed on the monitor screen. A horizontal frequency of 85 means that the horizontal lines that make up an image are transmitted 85000 times per second. The horizontal frequency is indicated in 85kHz.

Vertical Frequency

One image is made of numerous horizontal lines. The vertical frequency is measured in Hz and represents how many images can be created per second by those horizontal lines. A vertical frequency of 60 means that an image is transmitted 60 times per second. The vertical frequency is also called "refresh rate" and affects screen flicker.

Resolution

Resolution is the number of horizontal pixels and vertical pixels that form a screen. It represents the level of display detail.

A higher resolution displays a greater amount of information on the screen and is suitable for performing multiple tasks at the same time.

E.g. A resolution of 1920 x 1080 consists of 1920 horizontal pixels (horizontal resolution) and 1080 vertical lines (vertical resolution).

Plug & Play

The Plug & Play feature allows the automatic exchange of information between a monitor and PC to produce an optimum display environment.

The monitor uses VESA DDC (international standard) to execute Plug & Play.

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