## **SAMSUNG**

## **User Manual**

S24D330H S24D332H

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

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

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An administration fee may be charged in the following situations:

- (a) An engineer is called out at your request, but it is found that the product has no defect (i.e., where the user manual has not been read).
- (b) You bring the unit to a repair centre, but it is found that the product has no defect (i.e., where the user manual has not been read).

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

## Table of contents

## Before Using the Product

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

## Preparations

| Parts                                     | 9  |
|-------------------------------------------|----|
| Frontal Buttons                           | 9  |
| Reverse Side                              | 10 |
| Changing Brightness and Contrast settings | 11 |
| Adjusting the Product Tilt                |    |
| Anti-theft Lock                           | 12 |
| Installation                              | 13 |
| Attaching the Stand                       | 13 |
| Removing the Stand                        | 14 |

## Connecting and Using a Source Device

| Pre-connection Checkpoints                 | 15     |
|--------------------------------------------|--------|
| Connecting and Using a PC                  | 15     |
| Connection Using the D-SUB Cable (Analog T | ype)15 |
| Connection Using the HDMI Cable            | 16     |
| Connection Using an HDMI-DVI Cable         | 16     |
| Connecting the Power                       | 16     |
| Correct posture to use the product         | 17     |
| Driver Installation                        | 17     |
| Setting Optimum Resolution                 | 17     |

### Screen Setup

| Brightness              | 18 |
|-------------------------|----|
| Contrast                | 18 |
| Sharpness               | 18 |
| Game Mode               | 19 |
| SAMSUNG MAGIC Bright    | 19 |
| SAMSUNG MAGIC Angle     | 20 |
| SAMSUNG MAGIC Upscale   | 20 |
| mage Size               | 20 |
| HDMI Black Level        | 21 |
| Response Time           | 21 |
| H-Position & V-Position | 21 |
| Coarse                  | 21 |
| Fine                    | 21 |

## Table of contents

## Configuring Tint

| Red        | 22 |
|------------|----|
| Green      | 22 |
| Blue       | 22 |
| Color Tone | 23 |
| Gamma      | 23 |

## Resizing or Relocating the Screen

| Language                          | 24 |
|-----------------------------------|----|
| Menu H-Position & Menu V-Position | 24 |
| Display Time                      | 24 |
| Transparency                      | 24 |

## Setup and Reset

| Reset All        | 25 |
|------------------|----|
| Eco Saving Plus  | 25 |
| Off Timer        | 25 |
| PC/AV Mode       | 26 |
| Key Repeat Time  | 26 |
| Source Detection | 26 |
| INFORMATION      | 26 |

## Installing the Software

| 27 |
|----|
|    |

## Troubleshooting Guide

| Requirements Before Contacting Samsung Customer |    |
|-------------------------------------------------|----|
| Service Center                                  | 28 |
| Testing the Product                             | 28 |
| Checking the Resolution and Frequency           | 28 |
| Check the following.                            | 28 |
| Q & A                                           | 30 |

## Specifications

| General                    | 31 |
|----------------------------|----|
| Standard Signal Mode Table | 32 |

## Appendix

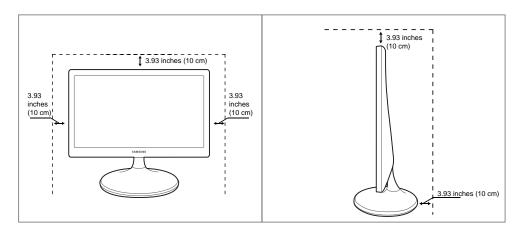
| Responsibility for the Pay Service          |    |
|---------------------------------------------|----|
| Cost to Customers)                          | 37 |
| Not a product defect                        | 37 |
| A Product damage caused by customer's fault | 37 |
| )thers                                      | 37 |

# Chapter 01 Before Using the Product

## Securing the Installation Space

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

The exterior may differ depending on the product.



## Precautions for storage

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

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

## **Safety Precautions**

Warning

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

Caution

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

## Cleaning

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

## **Electricity and Safety**

#### Warning

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

#### Caution

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

#### Installation

#### Warning

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

#### Caution

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

## Operation

#### Warning

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

- Do not insert metallic objects (chopsticks, coins, hairpins, etc) or objects that burn easily (paper, matches, etc) into the product (via the vent or input/output ports, etc).
  - Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.
  - Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.

#### Caution

- Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.
  - Activate power-saving mode or a moving-picture screen saver if you will not be using the product for an extended period of time.
- Disconnect the power cord from the power socket if you do not plan on using the product for an
  extended period of time (vacation, etc).
  - Dust accumulation combined with heat can cause a fire, electric shock or electric leakage.
- Use the product at the recommended resolution and frequency.
  - Your eyesight may deteriorate.
- Do not put AC/DC adapters together.
- Remove the plastic bag from the AC/DC adapter before you use it.
- Do not let water enter the 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 AC/DC adapter wet when you wash the floor.
- Do not put the AC/DC adapter near to any heating apparatus.
  - Otherwise, a fire may result.
- Keep the AC/DC adapter in a well-ventilated area.
- If you place the AC/DC power adapter so that it is hanging with the cord input facing upwards, water or other foreign substances could enter the Adapter and cause the Adapter to malfunction.

  Make sure to rest the AC/DC power adapter flat on a table or the floor.
- Do not hold the product upside-down or move it by holding the stand.
  - The product may fall and become damaged or cause an injury.
- Looking at the screen too close for an extended period of time can deteriorate your eyesight.
- Do not use humidifiers or stoves around the product.
- Rest your eyes for more than 5 minutes for every 1 hour of product use.

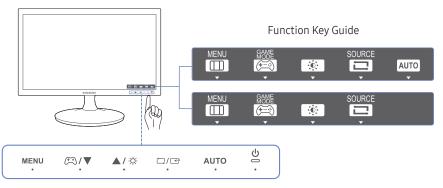
- Do not touch the screen when the product has been turned on for an extended period of time as it
  will become hot.
- Store small accessories out of the reach of children.
- Exercise caution when adjusting the product angle or stand height.
  - Your hand or finger may get stuck and injured.
  - Tilting the product at an excessive angle may cause the product to fall and an injury may result.
- Do not place heavy objects on the product.
  - Product failure or personal injury may result.

## Chapter 02 Preparations

## **Parts**

#### **Frontal Buttons**

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



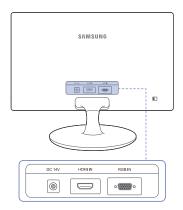
- $\overline{\phantom{a}}$  To activate a button on the product, tap the area on the bottom of the panel.
- Tapping around the button label on the front will not activate the button.

| 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.                                             |
|              | <ul> <li>Disable: To unlock the locked OSD control, press the MENU button for<br/>more than 10 seconds.</li> </ul>                                                                                                                                                                                                      |
|              | If the OSD control is locked, <b>Brightness</b> and <b>Contrast</b> can be adjusted. <b>Game</b> Mode is available. <b>INFORMATION</b> can be viewed.                                                                                                                                                                   |
| €≕€          | Press € to enable or disable Game Mode.  The items below are not available if the Game Mode function is enable.  • PICTURE → Contrast, Sharpness, MAGICBright, MAGICAngel, MAGICUpscale  • COLOR  • SETUP&RESET → Eco Saving Plus                                                                                       |
| <b>▲/</b> ▼  | Move to the upper or lower menu or adjust the value for an option on the OSD menu.                                                                                                                                                                                                                                      |
| <del>\</del> | Use this button to control the brightness and contrast of the screen.                                                                                                                                                                                                                                                   |
| □/ਵ          | Confirm a menu selection.  Pressing the ☐/  button when the OSD menu is not displayed will change the input source (Analog / HDMI). 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. |

| Icons              | Description                                                                                                                                                                     |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | Press the <b>AUTO</b> button to automatically adjust the screen settings.                                                                                                       |
| AUTO               | Changing the resolution in Display Properties will activate the <b>Auto Adjustment</b> function.                                                                                |
|                    | This function is only available in <b>Analog</b> mode.                                                                                                                          |
| ڻ<br>ٺ             | Turn the screen on or off.                                                                                                                                                      |
|                    | When a control button on the product is pressed, the Function 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.                                                                                  |
| Function Key Guide | The Function Key Guide may vary depending on the function or product model.                                                                                                     |
|                    | Refer to the actual product.                                                                                                                                                    |
|                    | The function buttons page shows if <b>Game Mode</b> is enabled. ⊕ : <b>Off</b>                                                                                                  |
|                    | <b>Æ</b> : On                                                                                                                                                                   |

## Reverse Side

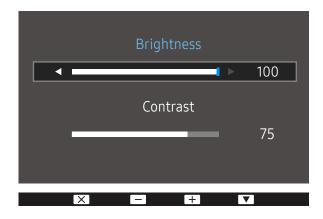
The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.



| Port |         | Description                                                        |
|------|---------|--------------------------------------------------------------------|
|      | DC 14V  | Connects to the AC/DC adapter.                                     |
|      | HDMI IN | Connects to a source device using an HDMI cable or HDMI-DVI cable. |
| -    | RGB IN  | Connect to a PC using the D-SUB cable.                             |

## **Changing Brightness and Contrast settings**

Adjust the Brightness and Contrast setting using the  $\stackrel{\checkmark}{x}$  buttons in the initial screen (where no OSD menu is displayed).



The displayed image may differ depending on the model.

#### Brightness

This menu is not available when MAGICBright is set to Dynamic Contrast mode.

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

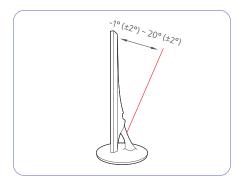
#### Contrast

 $\overline{\phantom{a}}$  This menu is not available when  ${}^{\text{SAMSUNG}}_{\text{MAGIC}}$ Bright is in Cinema or Dynamic Contrast mode.

This menu is not available when **Game Mode** is enabled.

## 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.



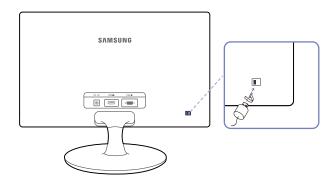
- You can adjust the product tilt.
- Hold the lower part of the product and adjust the tilt carefully.

The default brightness can vary depending on the region.

#### Anti-theft Lock

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

## To lock an anti-theft locking device:

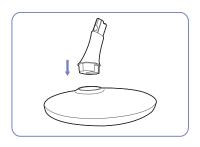


- 1 Fix the cable of your anti-theft locking device to a heavy object such as a desk.
- 2 Put one end of the cable through the loop on the other end.
- 3 Insert the locking device into the anti-theft lock slot at the back of the product.
- 4 Lock the locking device.
  - An anti-theft locking device can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

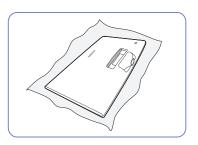
## Installation

## 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 neck into the stand base in the direction shown in the figure.



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.

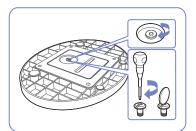


Check that the stand neck is firmly connected.

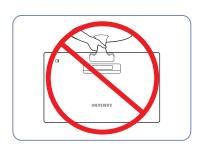


Hold the main body of the product with your hand as shown by the figure.

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



Tightly fasten the connecting screw at the bottom of the stand base.



#### - Caution

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

The exterior may differ depending on the product.

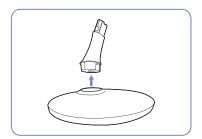
## Removing the Stand

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

— 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.



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

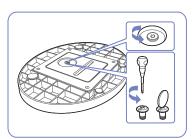


While holding the stand neck with one hand, pound the other fisted hand down onto the top of the stand base in the direction of the arrow to detach the stand base.



- Caution

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



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

# Chapter 03 Connecting and Using a Source Device

## **Pre-connection Checkpoints**

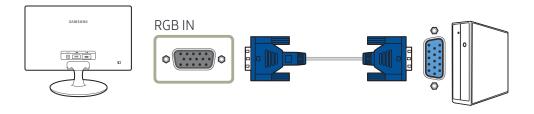
- Before connecting a source device, read the user manual provided with it.
   The number and locations of ports on source devices may differ from device to device.
- Do not connect the power cable before connecting all other cables.
   Ensure you connect a source device first before connecting the power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

## Connecting and Using a PC

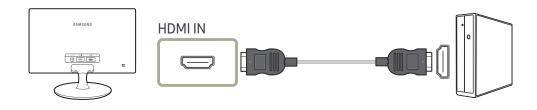
Select a connection method suitable for your PC.

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

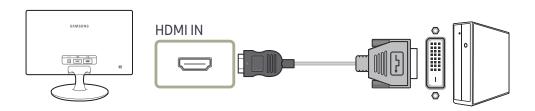
## Connection Using the D-SUB Cable (Analog Type)



## Connection Using the HDMI Cable

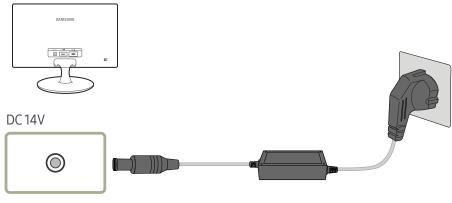


## Connection Using an HDMI-DVI Cable



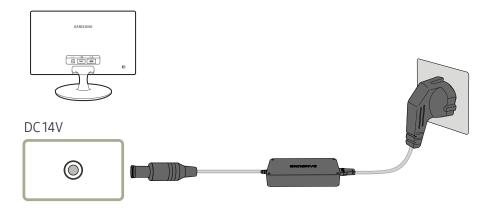
## Connecting the Power

### Power connection using integrated AC/DC adapter



The input voltage is switched automatically.

### Power connection using detachable AC/DC adapter



The input voltage is switched automatically.

## Correct posture to use the product



Use the product in the correct posture as follows:

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

## **Driver Installation**

## **Setting Optimum Resolution**

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

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

If the optimum resolution is not selected, the message will appear up to three times for a specified time even when the product is turned off and on again.

The optimum resolution can also be selected in **Control Panel** on your PC.

You can set the optimum resolution and frequency for this product by installing the corresponding drivers.

To install the latest version of the product driver, download it from the Samsung Electronics website at http://www.samsung.com.

## Chapter 04 Screen Setup

Configure the screen settings such as brightness.

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

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

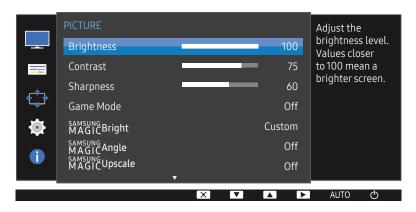
## **Brightness**

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 MAGICBright is set to Dynamic Contrast mode.

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



The displayed image may differ depending on the model.

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

## **Sharpness**

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

A higher value will make the outline of objects clearer.

- This option is not available when MAGICBright is in Cinema or Dynamic Contrast mode.
- This menu is not available when MAGICUpscale is in Mode1 or Mode2 mode.
- This menu is not available when **Game Mode** is enabled.

## 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.

When the monitor turns off, enters power-saving mode or changes input sources, Game Mode turns Off even if it is set to On.

## **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 enabled.
- This menu is not available when **Game Mode** is enabled.
- This menu is not available when MAGICAngle is enabled.

You can customize the brightness to suit your preferences.

#### In PC mode

- Custom: Customize the contrast and brightness as required.
- 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.

#### In AV mode

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

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

If you want to keep **Game Mode** enabled all the time, select **Always On**.

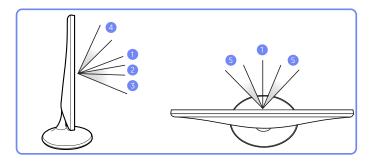
## **SAMSUNG MAGIC Angle**

SMAGRICAngle allows you to configure the settings to obtain the optimum picture quality according to your viewing angle.

This menu is not available when MAGICBright is set to Cinema or Dynamic Contrast mode.

This menu is not available when **Game Mode** is enabled.

You can customize the angle to suit your preferences.



- 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.

## SAMSUNG MAGIC Upscale

SAMSUNG 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 MAGICBright is set to Cinema or Dynamic Contrast mode.
- This menu is not available when **Game Mode** is enabled.
- Off / Mode1 / Mode2
- Comparing with Mode1, Mode2 has a stronger effect.

## **Image Size**

Change the picture size.

#### 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

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

### **HDMI Black Level**

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

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

This function is only available in **HDMI** mode.

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

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

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

## **Response Time**

Accelerate the panel response rate to make video appear more vivid and natural.

It is best to set **Response Time** to **Standard** or **Faster** when you are not viewing a movie.

## 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 only.

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.

### Coarse

Adjust the screen frequency.

This menu is available in **Analog** mode only.

## Fine

Fine-adjust the screen to obtain a vivid picture.

This menu is available in **Analog** mode only.

## Chapter 05 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 Magnetian is in Cinema or Dynamic Contrast mode. This menu is not available when Game Mode is enabled.

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

## Red

Adjust the value of the color red in the picture. (Range: 0~100) A higher value will increase the intensity of the color.



The displayed image may differ depending on the model.

## Green

Adjust the value of the color green in the picture. (Range:  $0\sim100$ ) A higher value will increase the intensity of the color.

## Blue

Adjust the value of the color blue in the picture. (Range: 0~100) A higher value will increase the intensity of the color.

## **Color Tone**

Adjust the general color tone of the picture.

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

## Gamma

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

- This menu is not available when MAGICAngle is enabled.
- This menu is not available when MAGICBright is in Cinema or Dynamic Contrast mode.
- This menu is not available when **Game Mode** is enabled.
- Mode1 / Mode2 / Mode3

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).

# Chapter 06 Resizing or Relocating the Screen

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

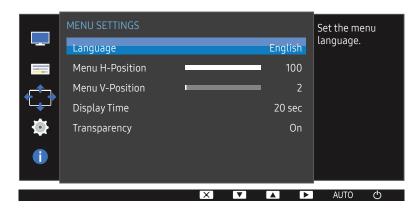
The functions available may vary depending on the product model. Refer to the actual product.

## Language

#### Set the menu language.

A change to the language setting will only be applied to the onscreen menu display.

— It will not be applied to other functions on your PC.



The displayed image may differ depending on the model.

## 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.

## **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.

## Transparency

Set the transparency for the menu windows.

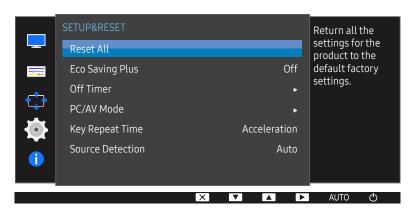
## Chapter 07 Setup and Reset

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

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

### Reset All

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



The displayed image may differ depending on the model.

## **Eco Saving Plus**

Reduce energy consumption compared to consumption at the maximum brightness level.

This option is not available when MAGICBright is in Dynamic Contrast mode.

This menu is not available when **Game Mode** is enabled.

- Off: Deactivate the Eco Saving Plus function.
- Auto: The power consumption will automatically be reduced by about 10 % over the current setting.

(The reduction of power consumption depends on the customer screen brightness condition.)

- Low: Saves up to 25 % energy compared to the maximum brightness.
- High: Saves up to 50 % energy compared to the maximum brightness.

## **Off Timer**

Off Timer: Turn on Off Timer mode.

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

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

For products for the market in some regions, the **Off Timer** is set to automatically activate 4 hours after the product powers on. This is done in accordance with power supply regulations. If you do not want the timer to activate, go to **MENU**  $\rightarrow$  **SETUP&RESET** and set **Off Timer** to **Off**.

## PC/AV Mode

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

This option is useful when you view a movie.

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

## **Key Repeat Time**

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

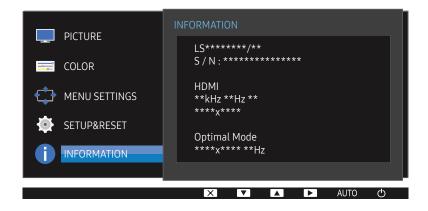
Acceleration, 1 sec, or 2 sec can be selected. If No Repeat is selected, a command responds only once when a button is pressed.

## **Source Detection**

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

## **INFORMATION**

View the current input source, frequency and resolution.



The displayed image may differ depending on the model.

# Chapter 08 Installing the Software

## **Easy Setting Box**



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

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

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

#### Restrictions and Problems with the Installation

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

#### **System Requirements**

| OS                          | Hardware                                           |
|-----------------------------|----------------------------------------------------|
| Windows XP 32Bit/64Bit      | At least 32MB of memory                            |
| • Windows Vista 32Bit/64Bit | At least 60MB of free space on the hard disk drive |
| • Windows 7 32Bit/64Bit     |                                                    |
| • Windows 8 32Bit/64Bit     |                                                    |
| • Windows 8.1 32Bit/64Bit   |                                                    |
| • Windows 10 32Bit/64Bit    |                                                    |

# Chapter 09 Troubleshooting Guide

## Requirements Before Contacting Samsung Customer Service Center

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

## Testing the Product

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

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

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

## Checking the Resolution and Frequency

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

## Check the following.

#### Installation issue (PC mode)

The screen keeps switching on and off.

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

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

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

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

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

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

#### Screen issue

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

Check that the power cable is connected properly.

The message Check Signal Cable appears.

Check that the cable is properly connected to the product.

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

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

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

#### Not Optimum Mode is displayed.

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

Change the maximum resolution and frequency to suit the product performance, referring to Standard Signal Mode Table (P.32).

The images on the screen look distorted.

Check the cable connection to the product.

The screen is not clear. The screen is blurry.

Adjust Coarse and Fine.

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

Set the resolution and frequency to the recommended level.

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

Check that the resolution and frequency for the PC are within the range of resolution and frequency compatible with the product. Next, if required, change the settings, referring to Standard Signal Mode Table (P.32) in this manual and the INFORMATION menu on the product.

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

Adjust Brightness and Contrast.

Screen color is inconsistent.

Change the **COLOR** settings.

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

Change the **COLOR** settings.

White does not really look white.

Change the **COLOR** settings.

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

The product is operating in power-saving mode.

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

#### Text is blurry.

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

Video playback is choppy.

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

Try playing the file on another video player.

#### Source device issue

A beeping sound is heard when my PC is booting.

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

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.

## Q & A

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

#### How can I change the frequency?

Set the frequency on your graphics card.

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

#### How can I change the resolution?

- Windows 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(Windows 8.1): Go to Settings → Control Panel → Appearance and Personalization → Display → Adjust Resolution, and adjust the resolution.
- Windows 10: Go to Settings  $\rightarrow$  System  $\rightarrow$  Display  $\rightarrow$  Advanced display settings, 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 → Power options or BIOS SETUP on the PC.
- Windows ME/2000: Set power-saving mode in Control Panel → Display → Screen Saver Settings → Power options or BIOS SETUP on the PC.
- Windows Vista: Set power-saving mode in Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings → Power options or BIOS SETUP on the PC.
- Windows 7: Set power-saving mode in Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings → Power options or BIOS SETUP on the PC.
- Windows 8(Windows 8.1): Set power-saving mode in Settings → Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings → Power options or BIOS SETUP on the PC.
- Windows 10: Set power-saving mode in Settings → Personalization → Lock screen → Screen timeout settings → Power & sleep or BIOS SETUP on the PC.

# Chapter 10 Specifications

## General

| Model Name               | S24D330H                                                                                               | S24D332H             |  |
|--------------------------|--------------------------------------------------------------------------------------------------------|----------------------|--|
| Size                     | 24 Class (24 Inches / 61 c                                                                             | cm)                  |  |
| Display area             | 531.36 mm (H) x 298.89                                                                                 | mm (V)               |  |
|                          | 20.92 Inches (H) x 11.77 II                                                                            | nches (V)            |  |
| Pixel Pitch              | 0.27675 mm (H) x 0.2767                                                                                | 5 mm (V)             |  |
|                          | 0.01090 Inches (H) x 0.010                                                                             | 090 Inches (V)       |  |
| Maximum Pixel Clock      | 148.5 MHz                                                                                              | 148.5 MHz (D-SUB)    |  |
|                          |                                                                                                        | 174.5 MHz (HDMI)     |  |
| Power Supply             | AC100-240V~ 50/60Hz                                                                                    |                      |  |
|                          | Based on the AC voltage of the adapter. For the DC voltage of the product, refer to the product label. |                      |  |
| Signal connectors        | D-SUB, HDMI                                                                                            |                      |  |
| Environmental conditions | Operating                                                                                              |                      |  |
|                          | Temperature: 50 °F – 104                                                                               | 4 °F (10 °C – 40 °C) |  |
|                          | Humidity: 10% – 80%, n                                                                                 | on-condensing        |  |
|                          | Storage                                                                                                |                      |  |
|                          | Temperature: -4 °F − 113                                                                               | °F (-20 °C – 45 °C)  |  |
|                          | Humidity: 5% – 95%, no                                                                                 | n-condensing         |  |

— Plug-and-Play

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

— Panel Dots (Pixels)

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

- The above specifications are subject to change without notice to improve quality.
- This device is a Class B digital apparatus.
- For detailed device specifications, visit the Samsung Electronics website.

#### (USA only)

Dispose unwanted electronics through an approved recycler. To find the nearest recycling location, go to our website: www.samsung.com/recyclingdirect or call, (877) 278 - 0799

## Standard Signal Mode Table

| Model Name      |                      | S24D330H            |
|-----------------|----------------------|---------------------|
| Synchronization | Horizontal Frequency | 30 – 81 kHz         |
|                 | Vertical Frequency   | 56 – 75 Hz          |
| Resolution      | Optimum Resolution   | 1920 x 1080 @ 60 Hz |
|                 | Maximum Resolution   | 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.

| 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            | +/+                 |

| Resolution          | Horizontal Frequency (kHz) | Vertical Frequency (Hz) | Pixel Clock (MHz) | Sync Polarity (H/V) |
|---------------------|----------------------------|-------------------------|-------------------|---------------------|
| 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 RB | 60.000                     | 60.000                  | 108.000           | +/+                 |
| VESA,1680 x1050     | 65.290                     | 59.954                  | 146.250           | -/+                 |
| VESA, 1920 x 1080   | 67.500                     | 60.000                  | 148.500           | +/+                 |

<sup>—</sup> Horizontal Frequency

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

#### Vertical Frequency

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

This product can be set to only one resolution for each screen size to obtain the optimum picture quality due to the nature of the panel. Using a resolution other than the specified resolution may degrade the picture quality.

To avoid this, it is recommended that you select the optimum resolution specified for your product.

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

| Model Name      |                      | S24D332H                    |  |
|-----------------|----------------------|-----------------------------|--|
| Synchronization | Horizontal Frequency | 30 – 81 kHz                 |  |
|                 | Vertical Frequency   | 56 – 75 Hz                  |  |
| Resolution      | Optimum Resolution   | 1920 x 1080 @ 60 Hz (D-SUB) |  |
|                 |                      | 1920 x 1080 @ 75 Hz (HDMI)  |  |
|                 | Maximum Resolution   | 1920 x 1080 @ 60 Hz (D-SUB) |  |
|                 |                      | 1920 x 1080 @ 75 Hz (HDMI)  |  |

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.

#### D-SUB

| 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            | -/-                 |
|                  |                            |                         |                   |                     |

| Resolution          | Horizontal Frequency (kHz) | Vertical Frequency (Hz) | Pixel Clock (MHz) | Sync Polarity (H/V) |
|---------------------|----------------------------|-------------------------|-------------------|---------------------|
| 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           | -/+                 |
| /ESA, 1600 x 900 RB | 60.000                     | 60.000                  | 108.000           | +/+                 |
| VESA, 1680 x 1050   | 65.290                     | 59.954                  | 146.250           | -/+                 |
| VESA, 1920 x 1080   | 67.500                     | 60.000                  | 148.500           | +/+                 |

#### HDMI

| 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            | +/+                 |

| Resolution           | Horizontal Frequency (kHz) | Vertical Frequency (Hz) | Pixel Clock (MHz) | Sync Polarity (H/V) |
|----------------------|----------------------------|-------------------------|-------------------|---------------------|
| 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           | -/+                 |
| /ESA,1600 x 900 RB   | 60.000                     | 60.000                  | 108.000           | +/+                 |
| VESA, 1680 x 1050    | 65.290                     | 59.954                  | 146.250           | -/+                 |
| VESA, 1920 x 1080    | 67.500                     | 60.000                  | 148.500           | +/+                 |
| VESA, 1920 x 1080    | 83.894                     | 74.973                  | 174.500           | +/-                 |
| Harizantal Fraguency |                            |                         |                   |                     |

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 is measured in kHz.

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.

Vertical Frequency

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

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

# Chapter 11 Appendix

## Responsibility for the Pay Service (Cost to Customers)

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

## Not a product defect

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

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