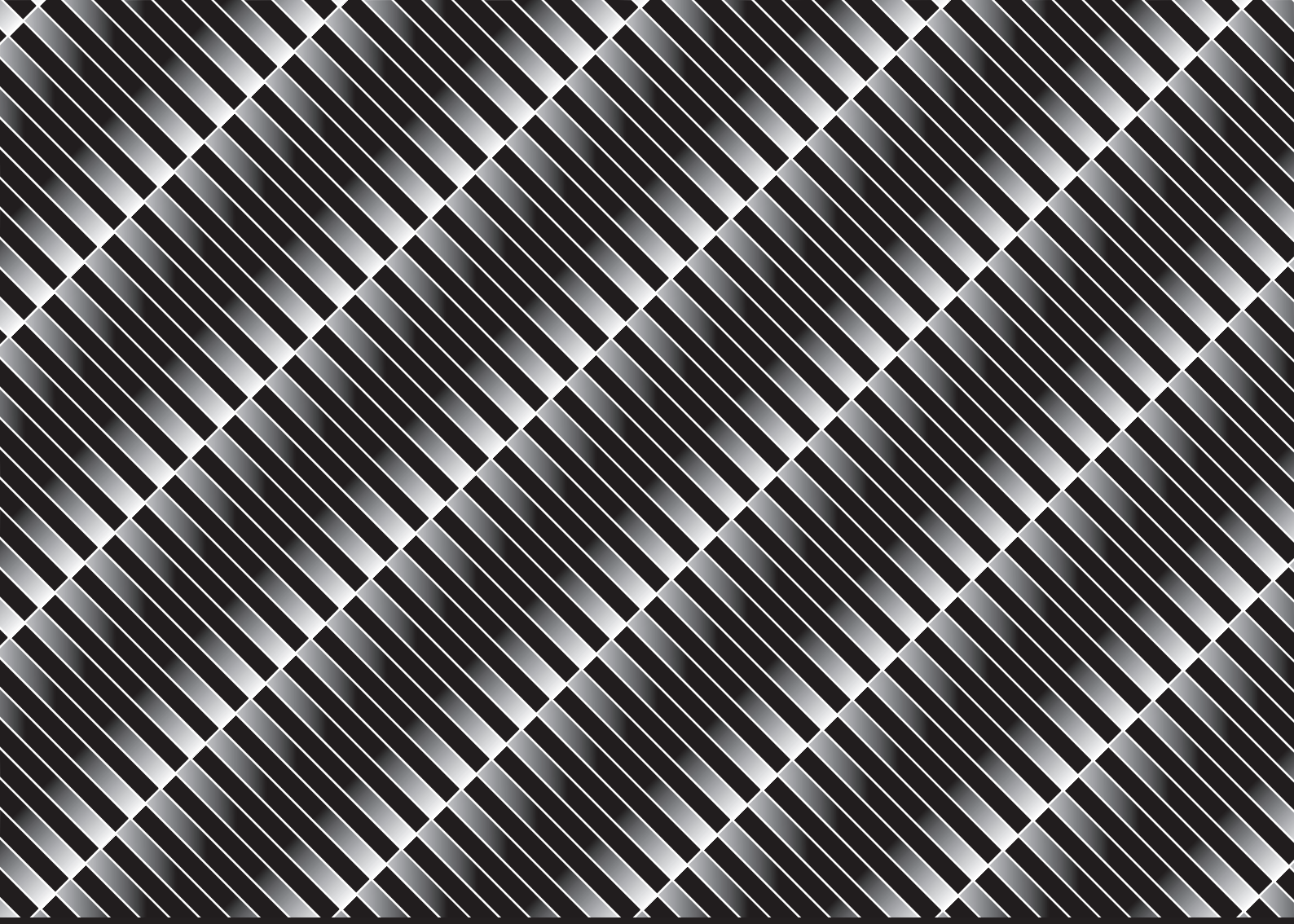


AG neovo

THE DISPLAY CHOICE
OF PROFESSIONALS™

MD-24 & MD-27 LED-Backlit Display

User Manual

www.agneovo.com

TABLE OF CONTENTS

SAFETY INFORMATION

Waste Electrical and Electronic Equipment-WEEE 4
EMC Information 5

PRECAUTIONS

Notice 8
Cautions When Setting Up 8
Cautions When Using 9
Cleaning and Maintenance 10
Notice for the LCD Display 10

CHAPTER 1: PRODUCT DESCRIPTION

1.1 Package Contents 12
1.2 Installation 13
1.2.1 Installing the Stand 13
1.2.2 Adjusting the Viewing Angle and Height 14
1.2.3 Wall Mounting 15
1.3 Control Buttons 16
1.4 Overview 17
1.4.1 Front View 17
1.4.2 Rear View 18

CHAPTER 2: MAKING CONNECTIONS

2.1 Connecting the AC Power 19
2.2 Connecting Input Source Signals 20
2.3 Connecting Audio Devices 21

CHAPTER 3: USING THE LCD DISPLAY

3.1 Turning on the Power 22
3.2 Selecting the Input Source Signal 22
3.3 Adjusting the Volume 23
3.4 Locking the OSD Menu 24
3.5 Using Auto Adjustment Function 24

CHAPTER 4: ON SCREEN DISPLAY MENU

4.1 Using the OSD Menu 25
4.2 OSD Menu Tree 26

CHAPTER 5: ADJUSTING THE LCD DISPLAY

5.1 Luminance Setting 28
5.2 Image Setup Setting 29
5.3 Color Temperature Setting 30
5.4 OSD Setup Setting 31
5.5 Extra Setting 32

CHAPTER 6: APPENDIX

6.1 Warning Messages 33
6.2 Troubleshooting 34
6.3 Transporting the LCD Display 35

TABLE OF CONTENTS

CHAPTER 7: SPECIFICATIONS

7.1 Display Specifications 37

7.2 Display Dimensions 38

SAFETY INFORMATION

Waste Electrical and Electronic Equipment-WEEE

Disposal of Waste Equipment by Users in Private Household in the European Union. This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office your household waste disposal service or the shop where you purchased the product.

EN60601-1-2:2007

Standard	Test Item	Standard
EN60601-1-2:2007	RAD & CON	EN55011(EMI)
	Harmonic	EN61000-3-2
	Flicker	EN61000-3-3
	ESD	IEC 61000-4-2: 2008
	RS	IEC 61000-4-3: 2006+A1:2007+A2:2010
	EFT	IEC 61000-4-4: 2012
	Surge	IEC 61000-4-5: 2005
	CS	IEC 61000-4-6: 2008
	PFM	IEC 61000-4-8: 2009
	DIP	IEC 61000-4-11: 2004

SAFETY INFORMATION

EMC Information

Essential performance of MD-24 and MD-27 is to display images and operate functions normally.

CAUTION

The MD-24 and MD-27 requires special precautions regarding EMC and need to be installed, put into service and used according to the following information.

Do not use any cables other than the cables that provided or specified by us. Using other cables may cause the increase of emission or decrease of immunity.

Do not put any portable and mobile RF communications equipment close to the MD-24 and MD-27. Doing so may affect the MD-24 and MD-27.

The MD-24 and MD-27 should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, the equipment or system should be observed to verify normal operation in the configuration in which it will be used.

Anyone who connects additional equipment to the signal input part or signal output parts, configuring a medical system, responsible that the system complies with the requirements of IEC/ EN60601-1-2.

Guidance and manufacturer's declaration – electromagnetic emissions		
The MD-24 and MD-27 is intended for use in the electromagnetic environment specified below. The customer or the user of the MD-24 and MD-27 should assure that it is used in such an environment. Not Life-supporting Medical Equipment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance**
Harmonic emissions IEC/EN61000-3-2	Class B	The MD-24 and MD-27 is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Voltage fluctuations / flicker emissions IEC/EN61000-3-3	Class B	

SAFETY INFORMATION

Guidance and manufacturer's declaration – electromagnetic immunity			
The MD-24 and MD-27 is intended for use in the electromagnetic environment specified below. The customer or the user of The MD-24 and MD-27 should assure that it is used in such an environment. Not Life-supporting Medical Equipment.			
Immunity test	**IEC/EN60601 test level**	**Compliance level**	**Electromagnetic environment – guidance**
Electrostatic discharge (ESD) IEC/EN61000-4-2	±6kV contact ±8kV air	±6kV contact ±8kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient / burst IEC/EN61000-4-4	±2kV for power supply lines ±1kV for input/output lines	±2kV for power supply lines ±1kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC/EN61000-4-5	±1kV line(s) to line(s) ±2kV line(s) to earth	±1kV line(s) to line(s) ±2kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage fluctuations / flicker emissions IEC/EN61000-3-3	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 sec.	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 sec.	Mains power quality should be that of a typical commercial or hospital environment. If the user of the MD-24 and MD- 27 requires continued operation during power mains interruptions, it is recommended that the MD-24 and MD-27 be powered from an uninterruptible power supply or a battery.
Power frequency (50/60Hz) magnetic field IEC/EN61000-4-8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: UT is the a.c. mains voltage prior to application of the test level.			

Mains power quality should be that of a typical commercial or hospital environment. If the user of the MD-24, MD-27 requires continued operation during power mains interruptions, it is recommended that the MD-24 MD-27 be powered from an uninterruptible power supply or a battery.

ESD declaration statement

There are flicker disturbance on the screen during the test, but auto recover after the test. This permissive loss of performance is specified by the manufacturer, and this phenomena will be put as a clear statement in the User's Manual to avoid misunderstanding.

DIP declaration statement

The EUT power off during the test, but self- recover after the test. This permissive loss of performance is specified by the manufacturer, and this phenomena will be put as a clear statement in the User's Manual to avoid misunderstanding.

SAFETY INFORMATION

Recommended separation distances between portable and mobile RF communications equipment and the MD-24 and MD-27

The MD-24 and MD-27 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the MD-24 and MD-27 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the MD-24 and MD-27 as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	**Separation distance according to frequency of transmitter (m)**		
	150kHz to 80MHz $d = 1.2 \sqrt{P}$	**80MHz to 800MHz** $d = 1.2 \sqrt{P}$	**800MHz to 2.5GHz** $d = 2.3 \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance “d” in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where “P” is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Cable length	
Power Cord : Accessory	1.8m

PRECAUTIONS

PRECAUTIONS

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

Symbols used in this manual

	This icon indicates the existence of a potential hazard that could result in personal injury or damage to the product.		ISO 7010-M002: Follow instructions for use
	This icon indicates important operating and servicing information.		This icon indicates complies with the 93/42/EEC, EN60601-1, EN 60601-1-2 of related European standards.

Notice

- Read this User Manual carefully before using the LCD display and keep it for future reference.
- The product specifications and other information provided in this User Manual are for reference only. All information is subject to change without notice. Updated content can be downloaded from our web site at http://www.agneovo.com.
- To register online, go to http://www.agneovo.com.
- To protect your rights as a consumer, do not remove any stickers from the LCD display. Doing so may affect the determination of the warranty period.

Cautions When Setting Up

	Do not place the LCD display near heat sources, such as a heater, exhaust vent, or in direct sunlight.
	Do not cover or block the ventilation holes in the housing.
	Place the LCD display on a stable area. Do not place the LCD display where it may subject to vibration or shock.
	Place the LCD display in a well-ventilated area.
	Do not place the LCD display outdoors.
	Do not place the LCD display in a dusty or humid environment.
	Do not spill liquid or insert sharp objects into the LCD display through the ventilation holes. Doing so may cause accidental fire, electric shock or damage the LCD display.

PRECAUTIONS

Cautions When Using

Use only the power cord supplied with the LCD display.

The power outlet should be installed near the LCD display and be easily accessible.

If an extension cord is used with the LCD display, ensure that the total current consumption plugged into the power outlet does not exceed the ampere rating.

Do not allow anything to rest on the power cord. Do not place the LCD display where the power cord may be stepped on.

If the LCD display will not be used for an indefinite period of time, unplug the power cord from the power outlet.

To disconnect the power cord, grasp and pull by the plug head. Do not tug on the cord; doing so may cause fire or electric shock.

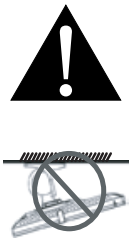
The mains plug or appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable. Always completely disconnect the power cord set from your product whenever you are working or cleaning on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Do not unplug or touch the power cord with wet hands.

WARNING:

Unplug the power cord from the power outlet and refer to qualified service personnel under the following conditions:

- When the power cord is damaged.
- If the LCD display has been dropped or the housing has been damaged.
- If the LCD display emits smoke or a distinct odor.



WARNING:

Ceiling mount or mount on any other horizontal surface overhead are not advisable.

Installation in contravention of the instructions may result in undesirable consequences, particularly hurting people and damaging property. Users who have already mounted the display on the ceiling or any other horizontal surface overhead are strongly advised to contact AG Neovo for consultations and solutions to help ensure a most pleasurable and fulfilling display experience.

PRECAUTIONS

Cleaning and Maintenance

Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth. Keeping to clean your monitor by monthly.

Use a soft cloth to clean the LCD display periodically. The screen surface may be cleaned using a soft clean cloth moistened with 50/50 mixture of water and isopropyl alcohol. Never use strong solvents such as thinner, benzene, or abrasive cleaners, since these will damage the cabinet. As a safety precaution, always unplug the monitor before cleaning it.

Do not rub or tap the surface with sharpor abrasive items such as a pen or screwdriver. This may result in scratching the surface.

Do not attempt to service the LCD display yourself, refer to qualified service personnel. Opening or removing the covers may expose you to dangerous voltage or other risks.

Notice for the LCD Display

In order to maintain the stable luminous performance, it is recommended to use low brightness setting.

Due to the lifespan of the lamp, it is normal that the brightness quality of the LCD display may decrease with time.

When static images are displayed for long periods of time, the image may cause an imprint on the LCD display. This is called image retention or burn-in.

To prevent image retention, do any of the following:

- Set the LCD display to turn off after a few minutes of being idle.
- Use a screen saver that has moving graphics or a blank white image.
- Switch desktop backgrounds regularly.
- Adjust the LCD display to low brightness settings.
- Turn off the LCD display when the system is not in use.

Things to do when the LCD display shows image retention:

- Turn off the LCD display for extended periods of time. It can be several hours or several days.
- Use a screen saver and run it for extended periods of time.
- Use a black and white image and run it for extended periods of time.

PRECAUTIONS

Notice for the LCD Display

The intended use of the MD-24, MD-27 is to serve as a LCD monitor for integration with the hospital system.It is designed for general purpose for adults using at hospital environment,continuous operation. For displaying and viewing of images for reference. The use of this device does not require any direct contact with patients.

Accessory equipment connected to the analog and digital interfaces must be in compliance with the respective nationally harmonized IEC standards (i.e. IEC 60950 for data processing equipment, IEC 60065 for video equipment, IEC 61010-1 for laboratory equipment, and IEC 60601-1 for medical equipment.) Furthermore all configurations shall comply with the system standard IEC 60601-1-1. Everybody who connects additional equipment to the signal input part or signal output part configures a medical system, and is therefore, responsible that the system complies with the requirements of the system standard IEC 60601-1-1. The unit is for exclusive interconnection with IEC 60601-1 certified equipment in the patient environment and IEC 60XXX certified equipment outside of the patient environment. If in doubt, consult the technical services department or your local representative.

Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle marked “Hospital Only” or “Hospital Grade”.

Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your particular country.

The single device output analog signals through ADC element (Analog DigitalConvert) conversion to become a digital signal and the video signal is via Video Decorder conversion. It has become the same digital signal, these signals via Scaler IC as zoom in or out action and digital image processing, then through the cable line transmission LVDS signals to one of the LCD module. The last by the clock controller (Timing Controller, TCON), the clock signal is transmitted to the drive IC on the panel and turn on Backlight for LCD module light source by Scaler control.

WARNING: No protection against the ingress of water : IPX0

WARNING: Do not modify this equipment without authorization of the manufacturer. Installation and OSD adjusting should only be carried by manufacturer trained and authorized personnel.

WARNING: To avoid risk of electric shock, this equipment must only be connected to a supply mains with with protective earth.

CAUTION: This adapter Manufacturer/model is a forming part of the medical device.

♦ Power by class I power supply.

♦ Adapter manufacturer/model:

ADAPTER TECH: ATM065-P120/ATM065T-P120
Input/output: 100-240V~50-60Hz, 12V(⎓) 5A.

EDAC TECH:EM10681G
Input/output: 100-240V~50-60Hz, 12V(⎓) 4.16A.

WARNING: Use suitable mounting apparatus to avoid risk of injury.

WARNING: The equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous: Not AP or APG Category

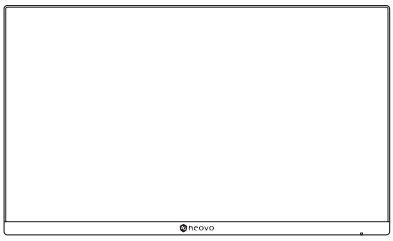
CAUTION: No applied part.

Make sure the user not to contact medical device and the patient at the same time.

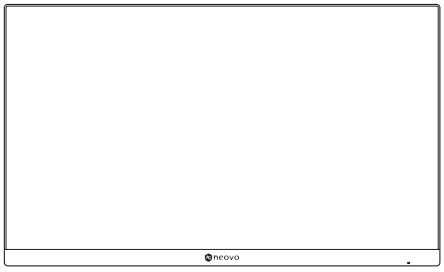
CHAPTER 1: PRODUCT DESCRIPTION

1.1 Package Contents

When unpacking, check if the following items are included in the package. If any of them is missing or damaged, contact your dealer.

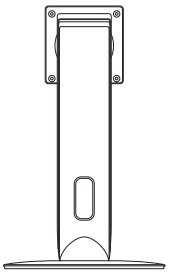


MD-24



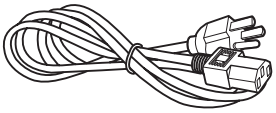
MD-27

LCD display

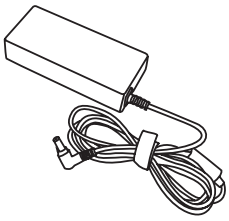


Stand

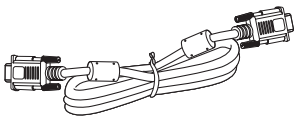
Stand screws



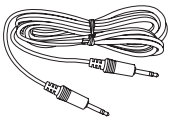
Power cord



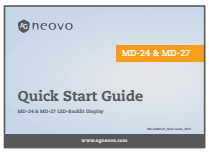
Power adapter



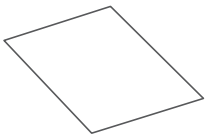
D-Sub (VGA) cable



Audio cable



Quick start guide



Warranty card

Note:

- *Use only the supplied power cord and power adapter.*
- *The above pictures are for reference only. Actual items may vary upon shipment.*

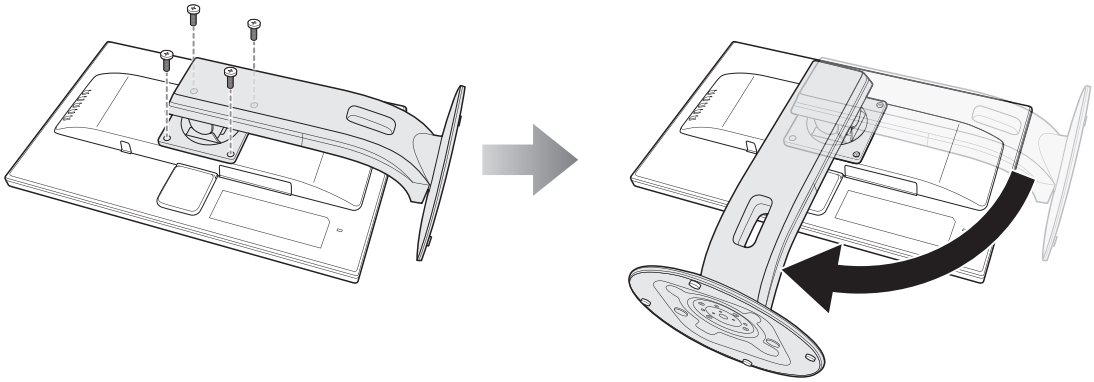
1.2 Installation

1.2.1 Installing the Stand

1. **Place the LCD display with the screen side down on a cushioned surface.**
2. **Attach the stand to the LCD display.**

   a. Align and attach the stand to the rear of the LCD display.

   b. Use the screws to secure the stand.
3. **Rotate the stand 90˚ clockwise. Then set the LCD display up in an upright position.**



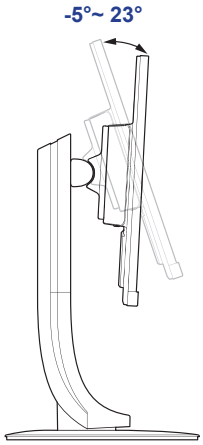
1.2.2 Adjusting the Viewing Angle and Height

For optimal viewing, it is recommended to look at the full face of the screen, then adjust the screen of the LCD display angle and height according to your preference.

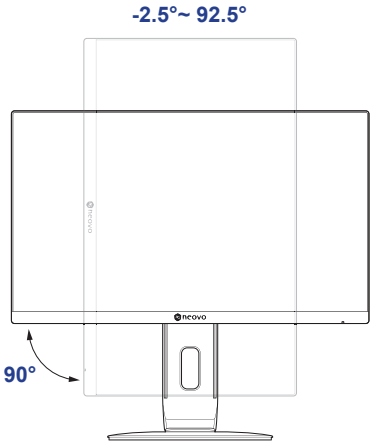
Hold the stand so that the screen does not topple when you make the adjustment.

You are able to adjust the screen angle and height as below:

Tilt angle:

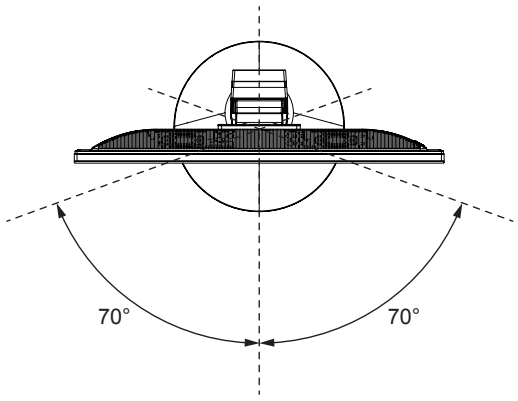


Pivot angle:

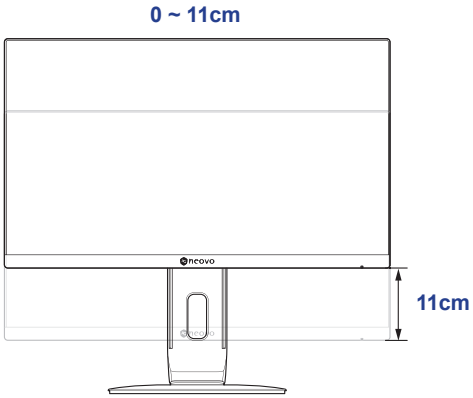


Note: *Before making the adjustment, make sure to adjust the height to the highest position, and then tilt the screen 90°.*

Swivel angle:



Height adjustment:



1.2.3 Wall Mounting

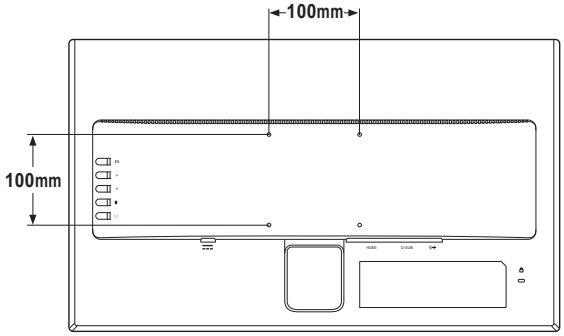
To wall mount the LCD display, do the following steps:

1. **Remove the stand.**

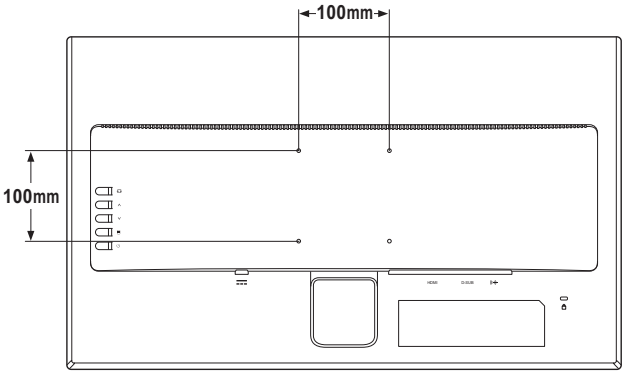
   Please refer to page 35.

2. **Wall mount the LCD display.**

   Screw the mounting bracket to the VESA holes at the rear of the LCD display.



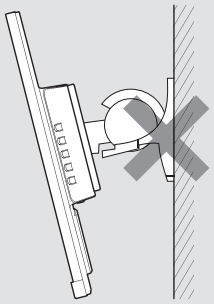
MD-24



MD-27

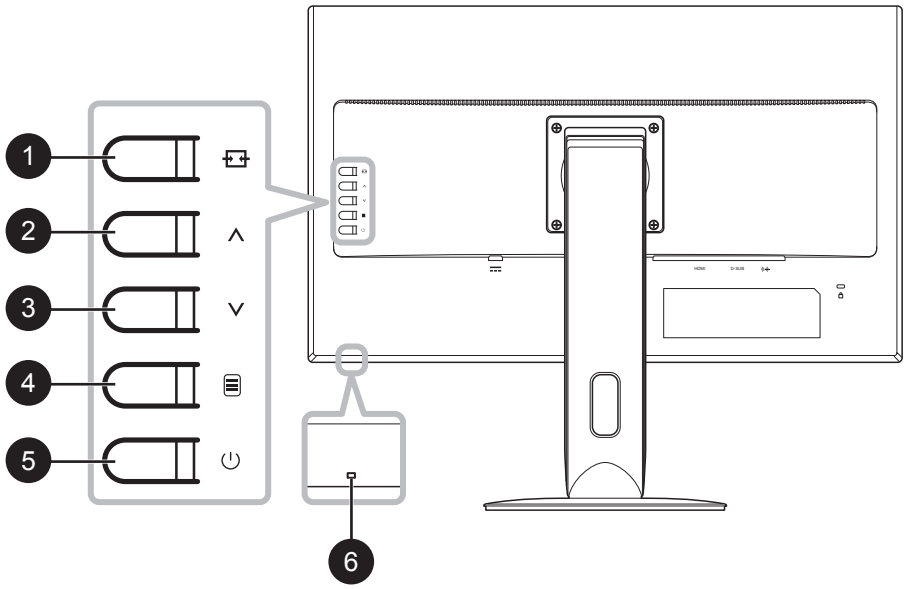
Note: *Take measures to prevent the LCD display from falling down and lessen possible injury and damage to the display in case of earthquakes or other disasters.*

- *Use only the 100 x 100 mm wall mount kit recommended by AG Neovo. All AG Neovo wall mount kits comply with VESA standard.*
- *Secure the LCD display on a solid wall strong enough to bear its weight.*
- *It is suggested to wall mount the LCD display without tilting it facing downward.*



PRODUCT DESCRIPTION

1.3 Control Buttons



1 **[⊡] AUTO/SOURCE/EXIT**

- Call out the ***Source*** quick menu. Then press the ⊡ button repeatedly to switch the input source. Refer to page 22.
- For VGA input signal, press and hold the ⊡ button to perform auto adjustment. Refer to page 24.
- During OSD menu, close the OSD menu or exit a submenu.
- During volume adjustment or Eco mode selection, close the respective quick menu.

2 **[∧] Up**

- Call out the ***Volume*** quick menu. Then press the ∧/∨ button to adjust the volume level. Refer to page 23.
- For HDMI input signal, you can configure the audio input source. Refer to page 23.
- During OSD menu, scroll through the menu options, select an option, and adjust the settings.

3 **[∨] Down**

- Call out the ***Eco Mode*** quick menu. Then press the ∧/∨ button to select the desired setting.
- During OSD menu, scroll through the menu options, select an option, and adjust the settings.

4 **[☰] MENU/ENTER**

- Call out the OSD menu when OSD menu is off.
- During OSD menu, confirm the selection or enter a submenu.

5 **[⏻] Power**

Turn the LCD display on. Press it again to turn the LCD display off. Refer to page 22.

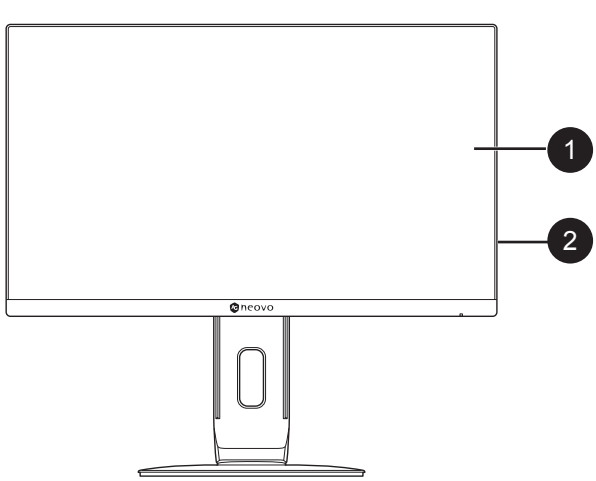
6 **Power indicator**

Indicate the operating status of the LCD display:

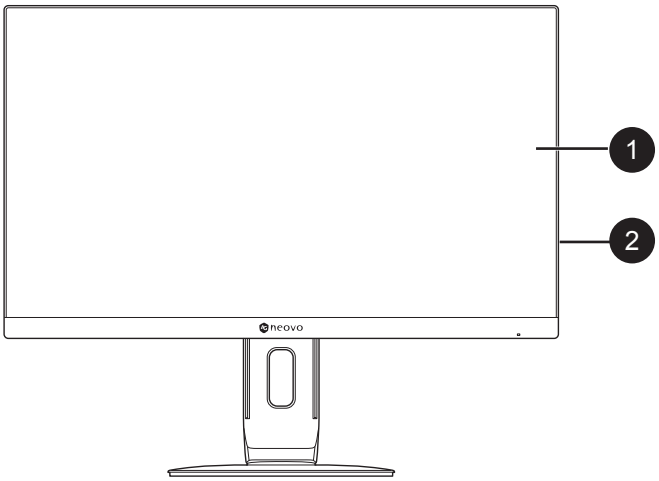
- Lights blue when the LCD display is turned on.
- Blinks blue when the LCD display is in standby mode.
- Lights off when the LCD display is turned off.

1.4 Overview

1.4.1 Front View



MD-24



MD-27

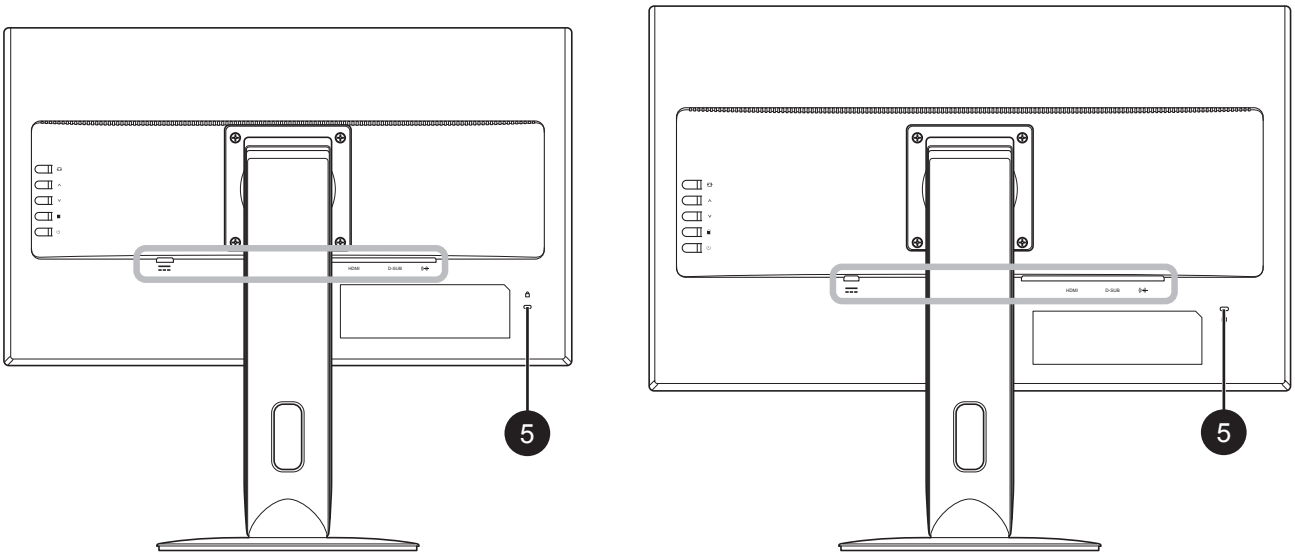
1 **Display screen**

2 **Control buttons**

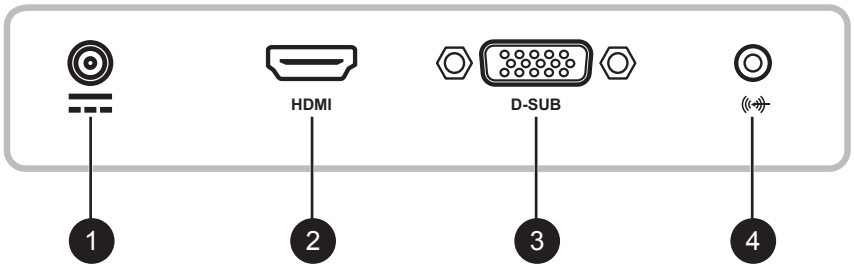
Press the button to perform its function. For more information about each button, refer to page 16.

PRODUCT DESCRIPTION

1.4.2 Rear View



MD-24 MD-27



1 **DC Power Input**

Use to connect the power adapter.

2 **HDMI connector**

Use to connect an HDMI cable for digital input signal.

3 **D-SUB (VGA) connector**

Use to connect a D-Sub (VGA) cable for analogue input signal.

4 **Audio port**

Use to connect an audio cable for audio input.

5 **Kensington lock socket**

Use to physically lock the system to prevent theft.

The locking device is sold separately. To purchase, contact your retailer.

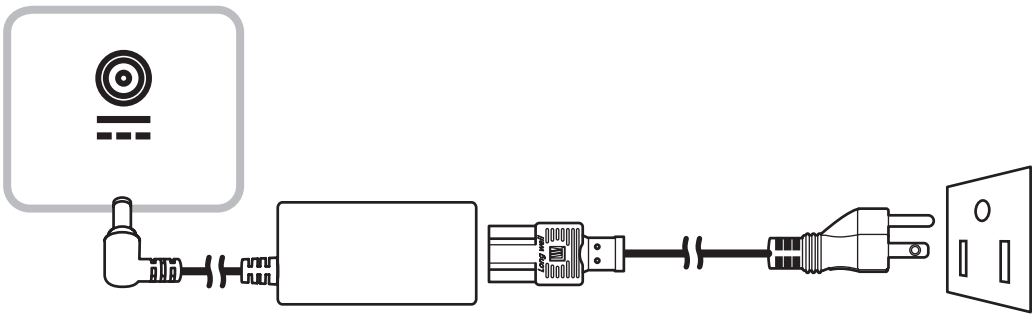
CHAPTER 2: MAKING CONNECTIONS

CAUTION:

Make sure that the LCD display is not connected to the power outlet before making any connections. Connecting cables while the power is ON may cause possible electric shock or personal injury.

2.1 Connecting the AC Power

1. **Connect the power cord to the power adapter.**
2. **Connect the power adapter to the DC power input at the rear of the LCD display.**
3. **Connect the power cord plug to a power outlet or a power supply.**

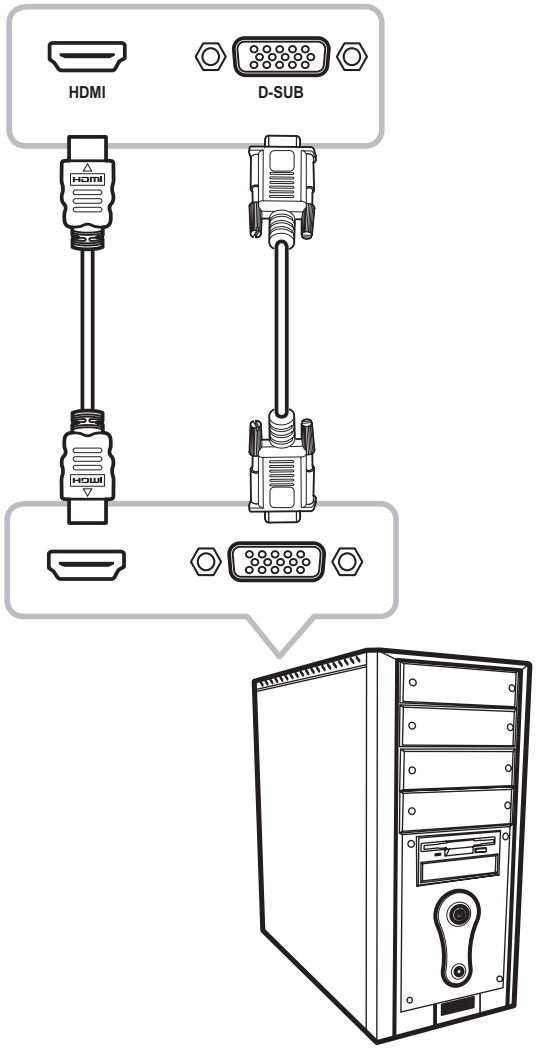


CAUTION:

When unplugging the power cord, hold the power cord by the plug head. Never pull by the cord.

2.2 Connecting Input Source Signals

Input source signals can be connected with either of the following cables:



- **VGA**

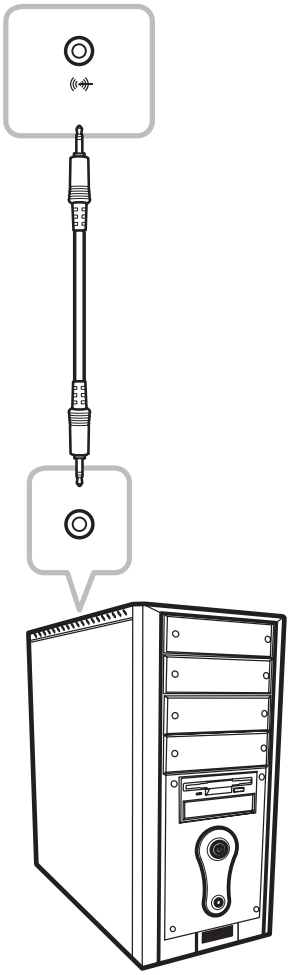
  Connect one end of a D-Sub (VGA) cable to the D-SUB (VGA) connector of the LCD display and the other end to the VGA connector of the computer.

- **HDMI**

  Connect one end of an HDMI cable to the HDMI connector of the LCD display and the other end to the HDMI connector of the computer.

2.3 Connecting Audio Devices

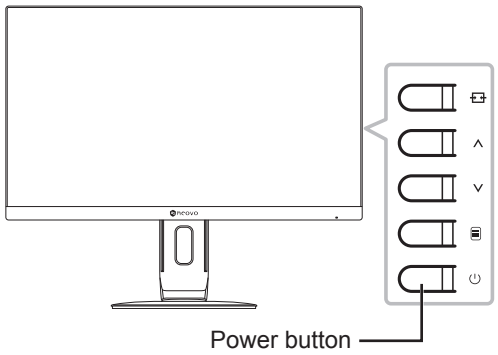
1. **Connect one end of an audio cable to the audio port at the rear of the LCD display.**
2. **Connect the other end of an audio cable to the audio out port of the computer.**



CHAPTER 3: USING THE LCD DISPLAY

3.1 Turning on the Power

1. **Plug the power cord to a power outlet or power supply.**
2. **Press the ⏻ button to turn the LCD display on.**

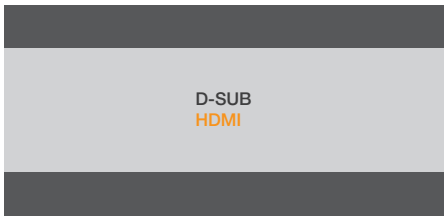


When the LCD display is turned on, press the ⏻ button to turn off the LCD display.

Note: *The LCD display still consumes power as long as the power cord is connected to the power outlet. Disconnect the power cord to completely cut off power.*

3.2 Selecting the Input Source Signal

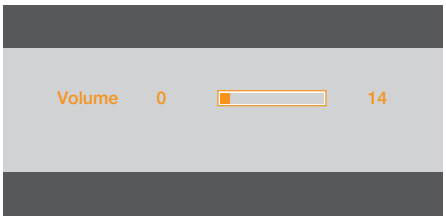
1. **Press the ⇥ button to call out the *Source* quick menu.**



2. **Press the ⇥ button repeatedly to switch the input source.**

3.3 Adjusting the Volume

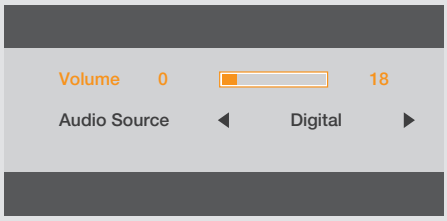
1. **Press the ∧ button to call out the *Volume* quick menu.**



2. **Press the ∧ or ∨ button to adjust the volume.**

Note:

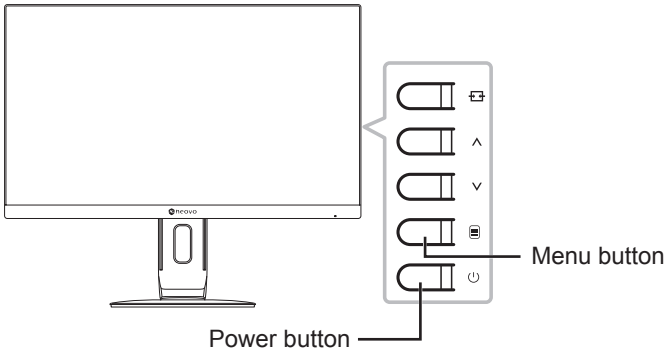
- *During volume or menu setting adjustment, press and hold the ∧/∨ button to change the values continuously.*
- *For HDMI input signal, the **Audio Source** option will appear on the screen when you press the ∧ button.*



*To configure the audio input source, press the ☰ button to select **Audio Source**. Then use the ∧/∨ button to select the desired setting (Line in/Digital).*

3.4 Locking the OSD Menu

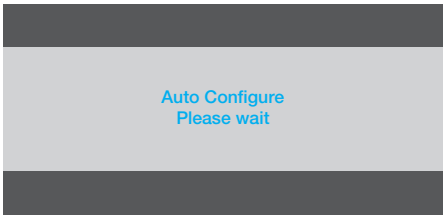
To lock the OSD menu, press and hold the button while the LCD display is off, and then press the button to turn the LCD display on.



To unlock the OSD menu, press and hold the button while the LCD display is off, and then press the button to turn the LCD display on.

3.5 Using Auto Adjustment Function

Press and hold the button to perform auto adjustment. This function automatically tunes the LCD display to its optimal setting, including horizontal position, vertical position, clock, and phase. When auto adjustment is initiated, the below message is displayed on the screen.



When the message disappears, this indicates the auto adjustment is completed.

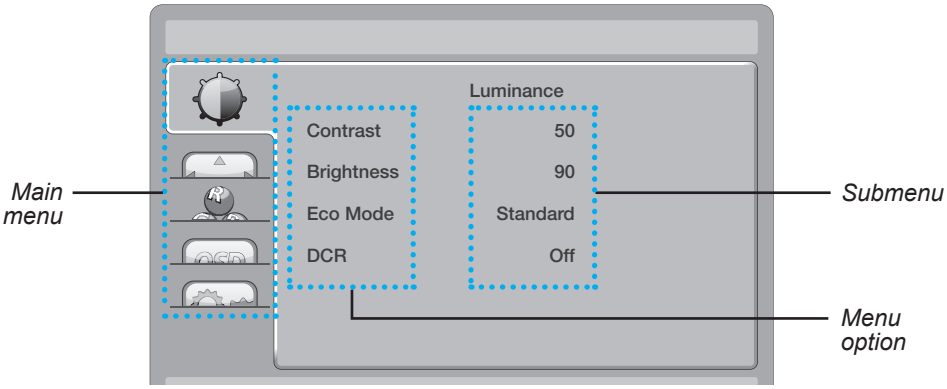
Note:

- *During auto adjustment, the screen will slightly shake for a few seconds.*
- *It is recommended to use the auto adjustment function when using the LCD display for the first time or after a resolution or frequency change.*

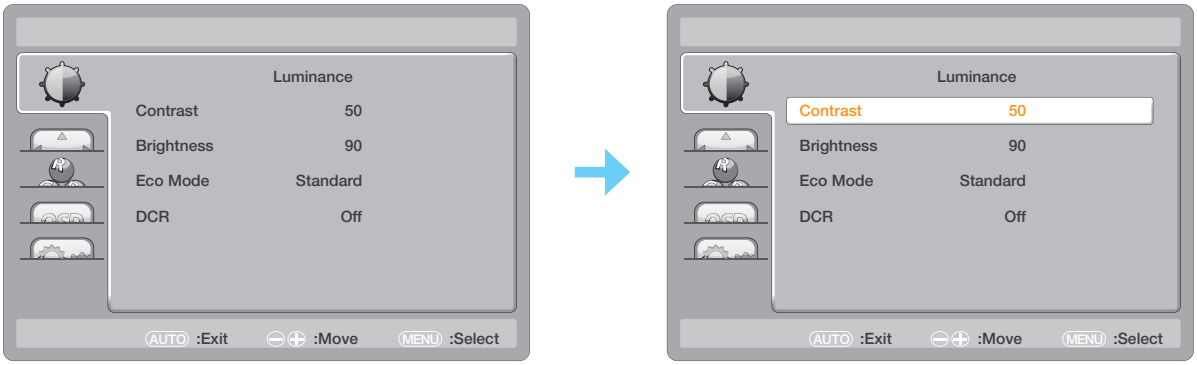
CHAPTER 4: ON SCREEN DISPLAY MENU

4.1 Using the OSD Menu

1. **Press the ☰ button to call out the OSD window.**

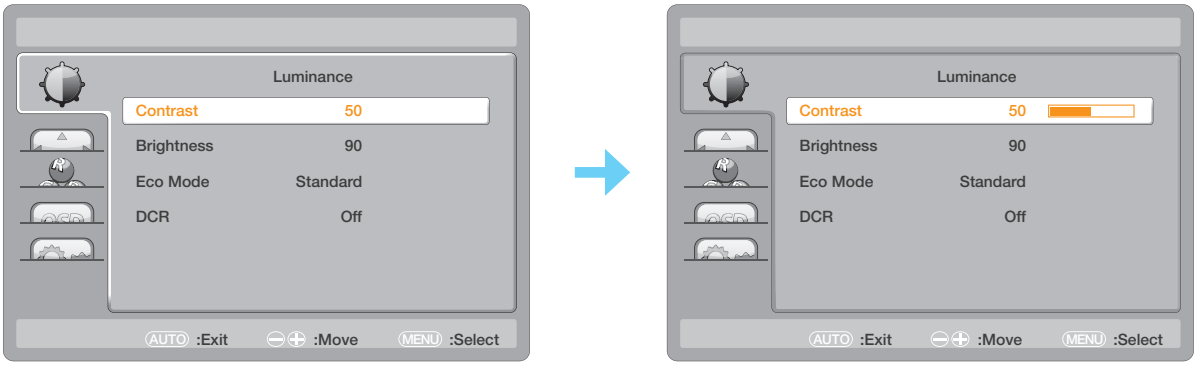


2. **Press the ∧ or ∨ button to select a menu and press the ☰ button to enter the selected menu.**



The selected menu icon appears on the left panel and the text of the selected menu option turns orange.

3. **Press the ∧ or ∨ button to select an option and press the ☰ button to enter its submenu.**



The text of the selected menu option or submenu turns orange.

4. **Press the ∧ or ∨ button to adjust the settings.**
5. **To exit the submenu, press the ⮐ button.**
6. **To close the OSD window, press the ⮐ button twice.**

Note: *When settings are modified, all changes are saved when the user does the following:*

- *Proceeds to another menu*
- *Exits the OSD menu*
- *Waits for the OSD menu to disappear*

ON SCREEN DISPLAY MENU

4.2 OSD Menu Tree

Main Menu	Submenu		Reference
Luminance ( )	Contrast		Refer to page 28.
	Brightness		
	Eco Mode	Text	
		Internet	
		Game	
		Movie	
		Sports	
		Standard	
	DCR	Off	
		On	
Image Setup ( )	Clock		Refer to page 29.
	Phase		
	H. Position		
	V. Position		
	Image Ratio	Wide	
		4:3	
Color Temp. ( )	Color Temp.	Warm	Refer to page 30.
		Normal	
		Cool	
		sRGB	
		User	
	Red		
	Green		
	Blue		

ON SCREEN DISPLAY MENU

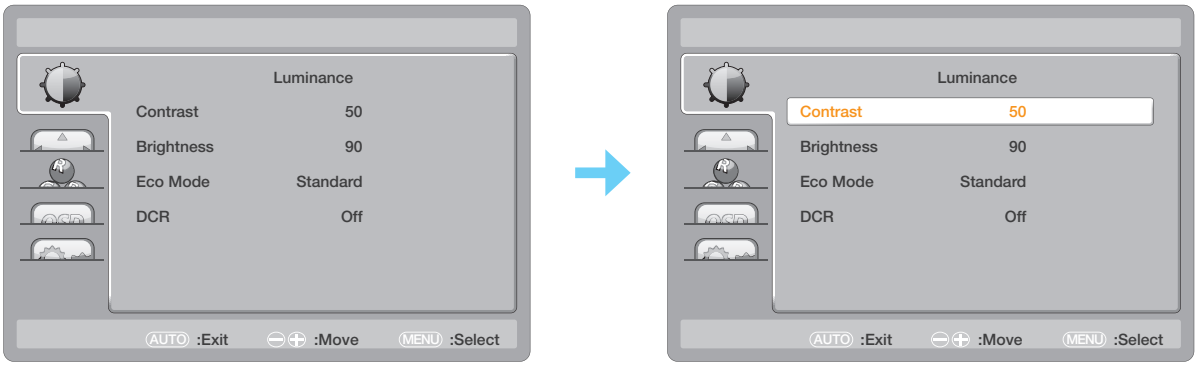
Main Menu	Submenu		Reference
OSD Setup (OSD)	H. Position		Refer to page 31.
	V. Position		
	Timeout		
	Language	English	
		Spanish	
		French	
		Portuguese	
		Russian	
		Simplified Chinese	
		Traditional Chinese	
		Korean	
Extra	Input Select	Auto	Refer to page 32.
		HDMI	
		D-SUB	
	DDC/CI	On	
		Off	
	Reset	Yes	
		No	
	Information		

Note: *Availability of some menu items depend on the input source signal and current setting. If the menu is not available, it is disabled and grayed out.*

CHAPTER 5: ADJUSTING THE LCD DISPLAY

5.1 Luminance Setting

1. **Press the button to call out the OSD window.**
2. **Press the ∧ or ∨ button to select and press the button to enter the Luminance menu.**



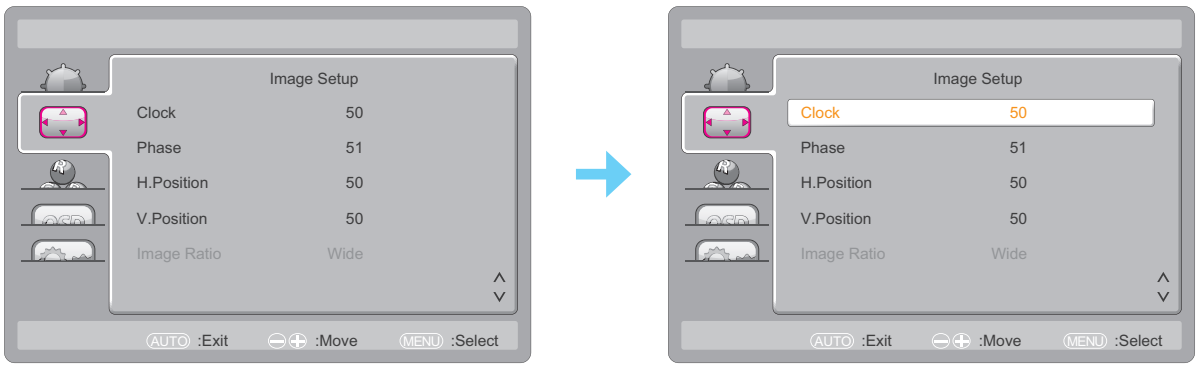
3. **Press the ∧ or ∨ button to select an option and press the button to enter its submenu.**

Item	Function	Operation	Range
Contrast	Adjusts the difference between the black level and the white level.	Press the ∧ or ∨ button to adjust the value.	0 to 100
Brightness	Adjusts the luminance of the screen image.		
Eco Mode	Chooses a predefined picture setting.	Press the ∧ or ∨ button to select the setting.	Text Internet Game Movie Sports Standard
DCR (Dynamic Contrast Ratio)	Activates DCR. This feature provides automatic adjustment of picture brightness and contrast at high speed and dynamic contrast range, such as when watching movies. DCR is suitable for indoor viewing.		On Off

ADJUSTING THE LCD DISPLAY

5.2 Image Setup Setting

1. **Press the button to call out the OSD window.**
2. **Press the ∧ or ∨ button to select and press the button to enter the Image Setup menu.**



3. **Press the ∧ or ∨ button to select an option and press the button to enter its submenu.**

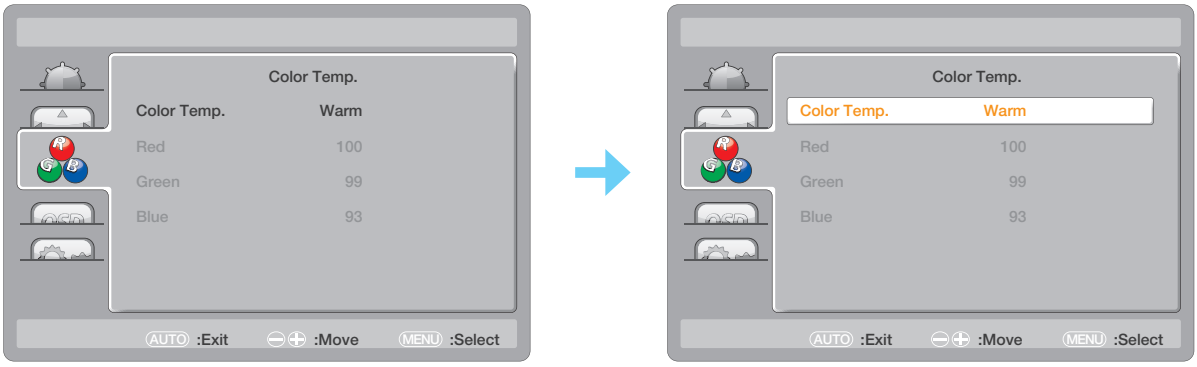
Item	Function	Operation	Range
Clock	Adjusts the frequency timing to synchronise with the video signal. **Note:** *This menu option is only available if the input source is VGA.*	Press the ∧ or ∨ button to adjust the value.	0 to 100
Phase	Adjusts the phase timing to synchronise with the video signal. **Note:** *This menu option is only available if the input source is VGA.*		
H. Position (Horizontal Position)	Moves the screen image to the left or right. **Note:** *This menu option is only available if the input source is VGA.*		
V. Position (Vertical Position)	Moves the screen image up or down. **Note:** *This menu option is only available if the input source is VGA.*		
Image Ratio	Selects the aspect ratio of the screen image.	Press the ∧ or ∨ button to select the setting.	Wide 4:3
OVER DRIVER*	Enhances the monitor response time.	Press the ∧ or ∨ button on the control panel or the remote control to select the setting.	ON OFF

*may vary by models

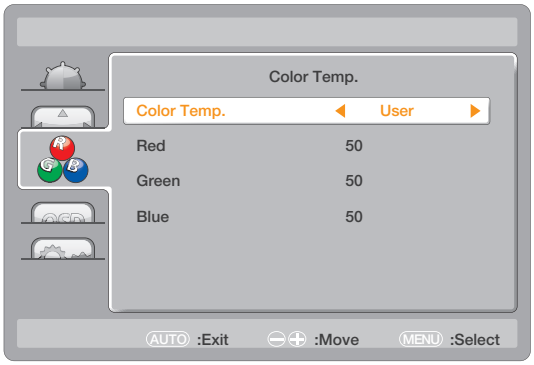
ADJUSTING THE LCD DISPLAY

5.3 Color Temperature Setting

1. **Press the ☰ button to call out the OSD window.**
2. **Press the ∧ or ∨ button to select and press the ☰ button to enter the Color Temp. menu.**



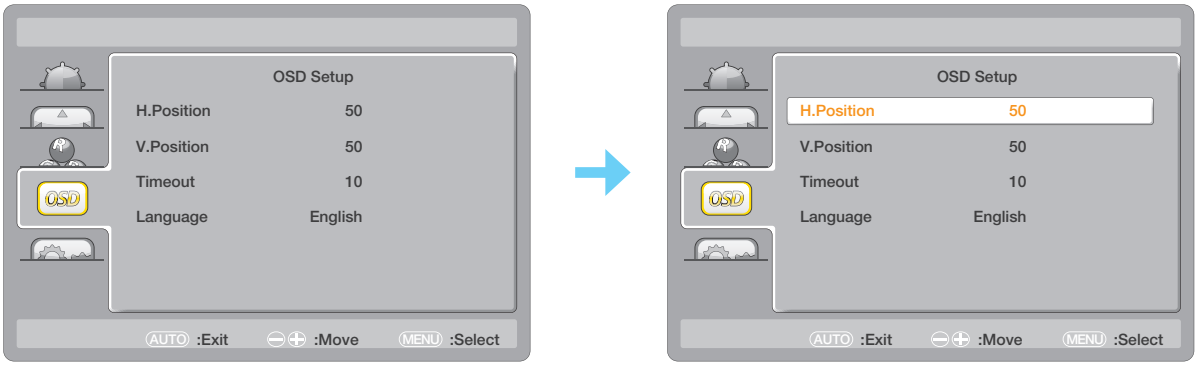
3. **Press the ∧ or ∨ button to select an option and press the ☰ button to enter its submenu.**

Item	Function	Operation	Range
Color Temp. (Color Temperature)	Provides several color adjustment settings.	Press the ◀ or ▶ button to select the setting.	Warm Normal Cool sRGB User
	If the **Color Temp.** setting is set to **User**, you can customize the color temperature by adjusting the red, green, or blue setting according to your preference.  a. Select **User** and press the ☰ button. b. Press the ∧ or ∨ button to select the color you want to adjust. Then press the ☰ button to enter its submenu. c. Press the ∧ or ∨ button to adjust the value (0 ~ 100).		

ADJUSTING THE LCD DISPLAY

5.4 OSD Setup Setting

1. **Press the ☰ button to call out the OSD window.**
2. **Press the ∧ or ∨ button to select OSD and press the ☰ button to enter the OSD Setup menu.**



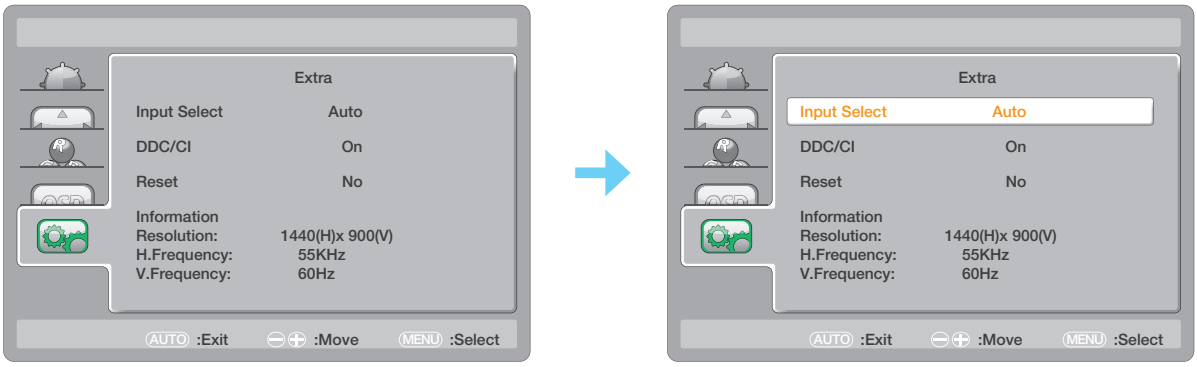
3. **Press the ∧ or ∨ button to select an option and press the ☰ button to enter its submenu.**

Item	Function	Operation	Range
H. Position (Horizontal Position)	Moves the OSD window to the left or right of the screen.	Press the ∧ or ∨ button to adjust the value.	0 to 100 (increment by 5)
V. Position (Vertical Position)	Moves the OSD window up or down the screen.		
Timeout	Sets the length of time (in seconds) the OSD screen is displayed. When the time elapses, the OSD screen is automatically inactivated.		5 to 100 (increment by 5)
Language	Choose the language used for OSD menus.	Press the ∧ or ∨ button to select the setting.	English Spanish French Portuguese Russian Simplified Chinese Traditional Chinese Korean

ADJUSTING THE LCD DISPLAY

5.5 Extra Setting

1. **Press the button to call out the OSD window.**
2. **Press the ∧ or ∨ button to select and press the button to enter the Extra menu.**



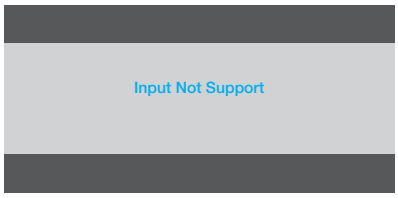
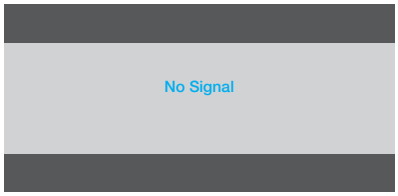
3. **Press the ∧ or ∨ button to select an option and press the button to enter its submenu.**

Item	Function	Operation	Range
Input Select	Switches the input source when two input signals are connected.	Press the ∧ or ∨ button to select the setting.	Auto HDMI D-SUB
DDC/CI	Activates the DDC/CI protocol to allow users to configure the monitor by a software using a VGA cable.		On Off
Reset	Resets all your customized settings to the factory defaults.		Yes No
Information	Displays the information of the input source such as Resolution, Horizontal Frequency, and Vertical Frequency.	-	-

CHAPTER 6: APPENDIX

6.1 Warning Messages

When any of these warning messages appear, check the following items.

Warning Message	Cause	Solution
	The resolution or the refresh rate of the graphics card of the computer is set too high.	√ Change the resolution or the refresh rate of the graphics card.
	The LCD display cannot detect the input source signal.	√ Check if the input source is turned ON. √ Check if the signal cable is properly connected. √ Check if any pin inside the cable connector is twisted or broken.

APPENDIX

6.2 Troubleshooting

Problems	Possible Cause and Solution
No picture. • LED indicator is OFF.	• Check if the LCD display is turned ON. • Check if the power adapter is properly connected to the LCD display. • Check if the power cord is plugged into the power outlet.
• LED indicator is blue.	• Check if the computer is turned ON. • Check if the computer is in standby mode, move the mouse or press any key to wake up the computer.
Image position is incorrect.	• For VGA input, adjust the **H. Position** and **V. Position** settings in **Image Setup** ( ) menu (refer to page 29).
The displayed texts are blurry.	• For VGA input, do the following: √ Press and hold the button to auto-adjust the display (refer to page 24). √ Adjust the **Clock** and **Phase** settings in **Image Setup** ( ) menu (refer to page 29).
Red, blue, green, white dots appear on the screen.	• There are millions of micro transistors inside the LCD display. It is normal for a few transistors to be damaged and to produce spots. This is acceptable and is not considered a failure.
No audio output.	• Check if the volume is set to 0 (refer to page 23). • For VGA input, check the audio setting of the computer.
Dew formed on the LCD display.	• This normally happens when the LCD display is moved from a cold room to a hot room temperature. Do not turn ON the LCD display, wait for the dew condensation to disappear.
Faint shadows from a static image appear on the screen.	• Turn off the LCD display for extended periods of time. • Use a screen saver or a black and white image and run it for extended periods of time.

APPENDIX

6.3 Transporting the LCD Display

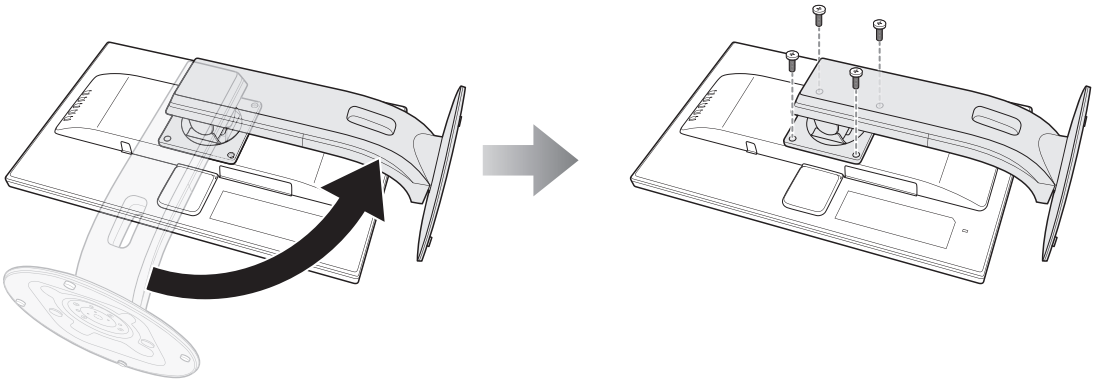
To transport the LCD display for repair or shipment, place the display in its original packaging box.

1. **Remove the stand.**

   a. Place the LCD display with the screen side down on a cushioned surface.

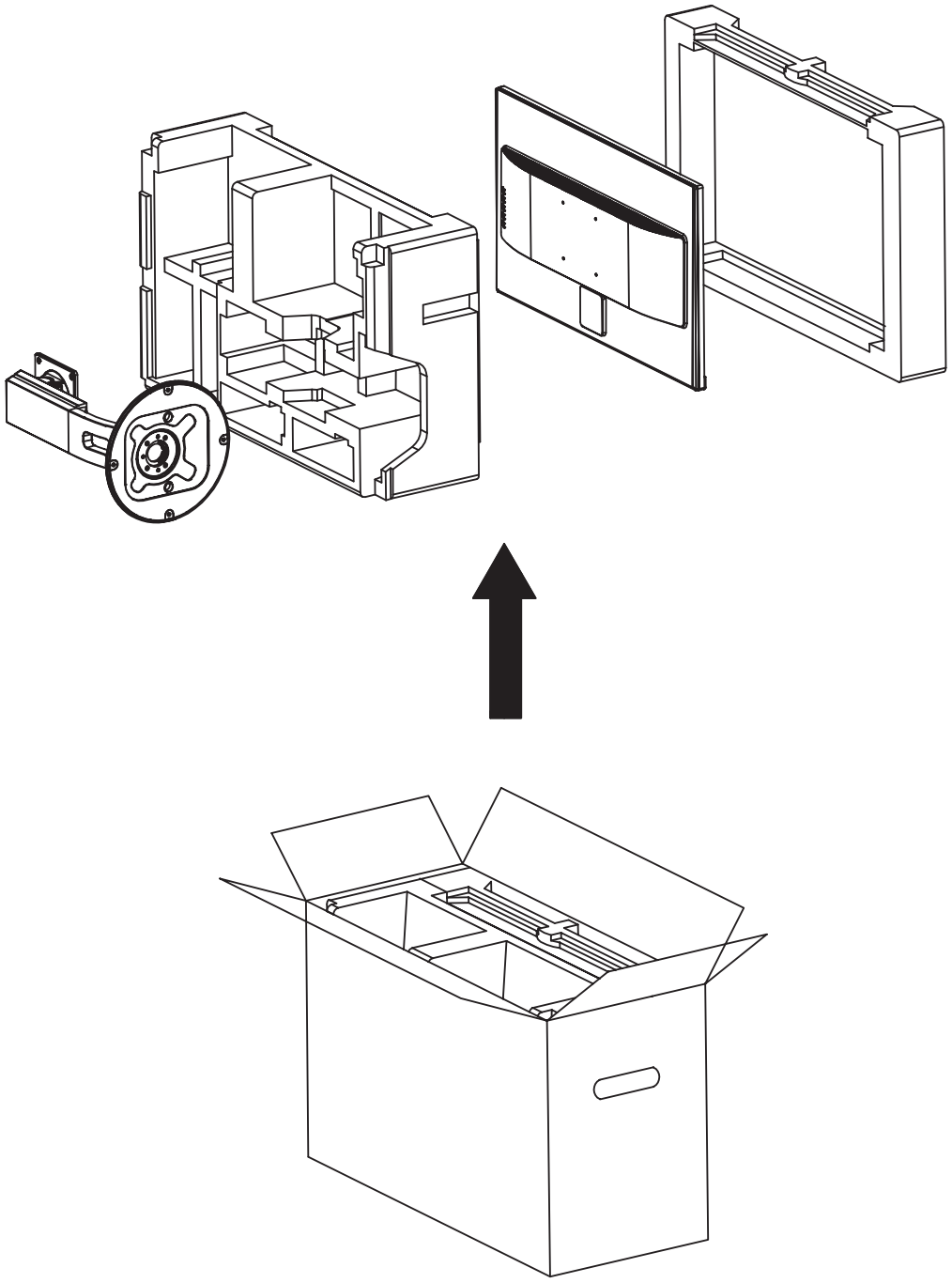
   b. Rotate the stand 90˚ counter-clockwise. Then remove the screws securing the stand to the LCD display.

   c. Remove the stand.



2. **Put the LCD display inside its original plastic. Then place the LCD display with the screen side down on the foam cushion.**
3. **Put all other contents on their designated area (if necessary).**
4. **Close and tape the box.**

APPENDIX



Note:

- *It is recommended to use the original packaging box.*
- *When repacking, carefully place the LCD display in its box and protect the glass panel from touching any object.*

CHAPTER 7: SPECIFICATIONS

7.1 Display Specifications

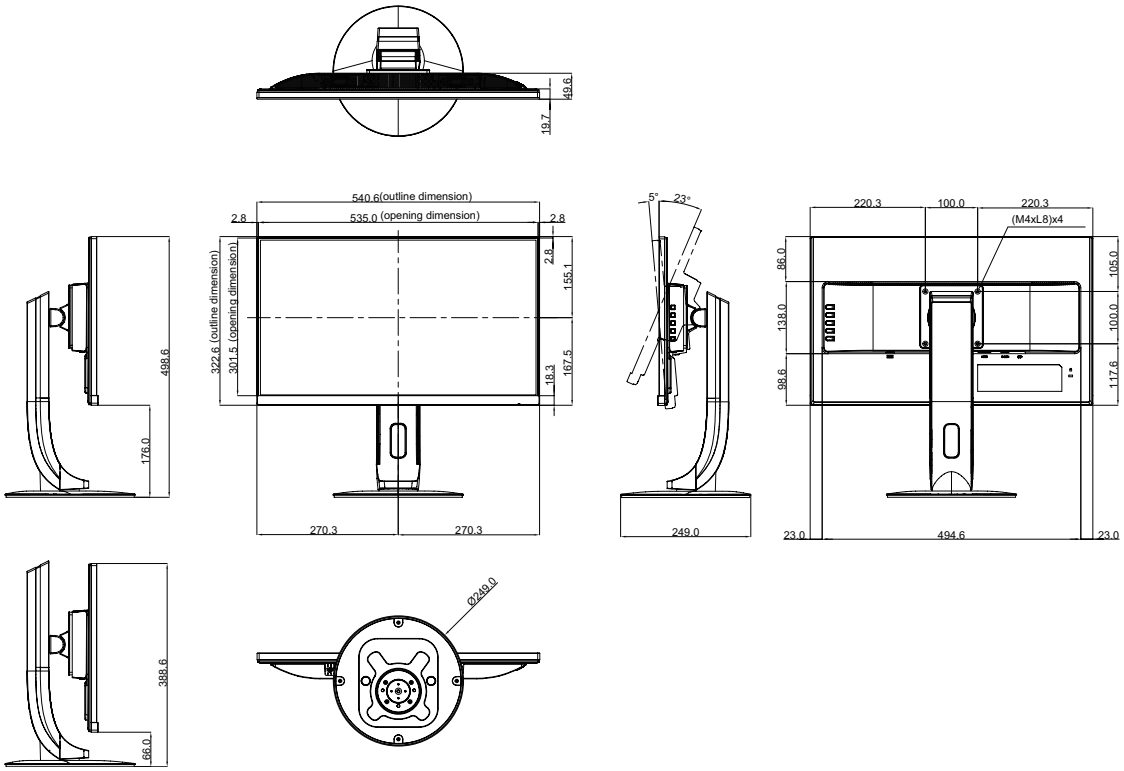
		MD-24	MD-27
Panel	Panel Type	LED-Backlit TFT LCD (IPS Technology)	LED-Backlit TFT LCD (VA Technology)
	Panel Size	23.8”	27.0”
	Max. Resolution	FHD 1920 x 1080	FHD 1920 x 1080
	Pixel Pitch	0.275 mm	0.311 mm
	Brightness	250 cd/m^2	300 cd/m^2
	Contrast Ratio	1000:1	1000:1
	Viewing Angle (H/V)	178°/178°	178°/178°
	Display Colour	16.7M	16.7M
	Response Time	5 ms	5 ms
Frequency (H/V)	H Freq.	30 kHz-85 kHz	30 kHz-85 kHz
	V Freq.	45 Hz-76 Hz	45 Hz-76 Hz
Input	VGA	15-Pin D-Sub x 1	15-Pin D-Sub x 1
	HDMI	1.4 x 1	1.4 x 1
Audio	Audio In	Stereo Audio Jack (3.5 mm) x 1	Stereo Audio Jack (3.5 mm) x 1
	Internal Speakers	2W x 2	2W x 2
Power	Power Supply	External	External
	Power Requirements	DC 12V, 2.5A	DC 12V, 2.5A
	On Mode	< 22W (On)	< 25W (On)
	Stand-by Mode	< 0.5W	< 0.5W
	Off Mode	< 0.5W	< 0.5W
Operating Conditions	Temperature	0°C-40°C (32°F-104°F)	0°C-40°C (32°F-104°F)
	Humidity	10%-85% (non-condensing)	10%-85% (non-condensing)
Storage Conditions	Temperature	-25°C-55°C (-13°F-131°F)	-25°C-55°C (-13°F-131°F)
	Humidity	5%-93% (non-condensing)	5%-93% (non-condensing)
Mounting	VESA FPMPMI	Yes (100 x 100 mm)	Yes (100 x 100 mm)
Stand	Tilt	-5° to 23°	-5° to 23°
	Pivot	-2.5° to 92.5°	-2.5° to 92.5°
	Swivel	± 70°	± 70°
	Height Adjustment	0-110 mm	0-110 mm
Security	Kensington Security Slot	Yes	Yes
Dimensions	Product with Base (W x H x D)	540.6 x 498.6 x 249.0 mm (21.3” x 19.6” x 9.8”)	611.9 x 518.7 x 249.0 mm (24.1” x 20.4” x 9.8”)
	Packaging (W x H x D)	632.0 x 417.0 x 282.0 mm (24.9” x 16.4” x 11.1”)	715.0 x 450.0 x 305.0 mm (28.1” x 17.7” x 12.0”)
Weight	Product with Base	5.7 kg (12.5 lb)	6.6 kg (14.5 lb)
	Packaging	7.8 kg (17.1 lb)	8.9 kg (19.6 lb)

Note:

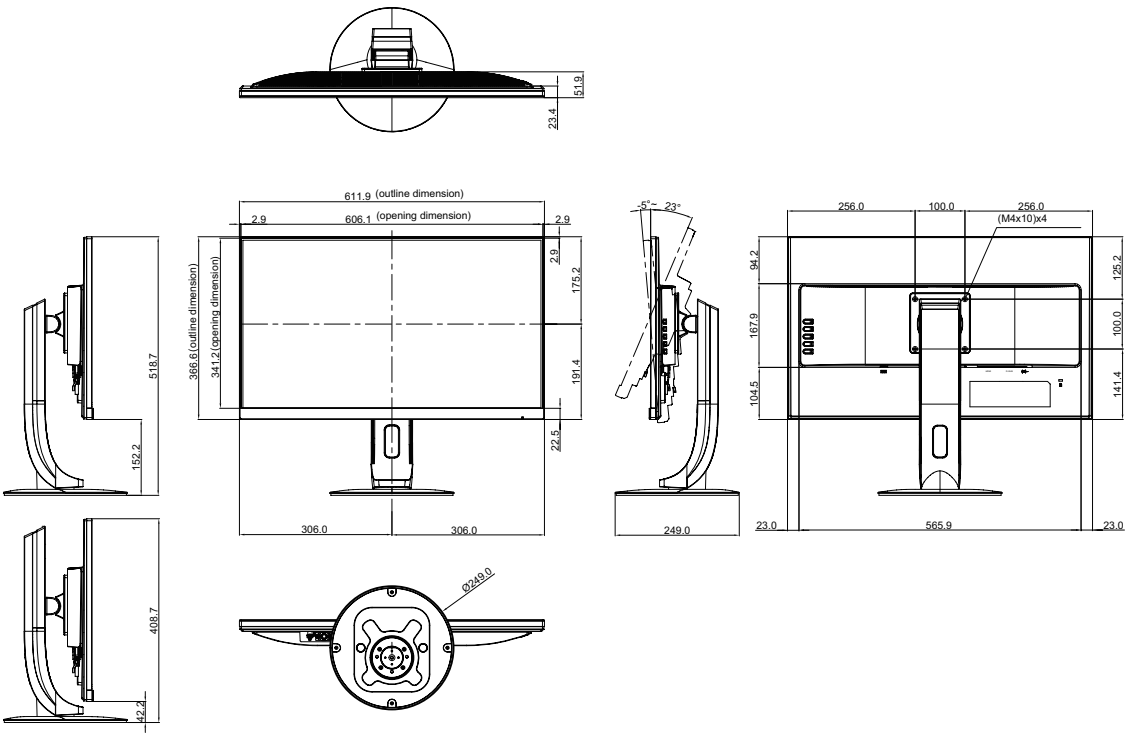
- All specifications are subject to change without prior notice.

7.2 Display Dimensions

MD-24



MD-27



AG Neovo

Company Address: 5F-1, No. 3-1, Park Street, Nangang District, Taipei, 11503, Taiwan.

Copyright © 2018 AG Neovo. All rights reserved.