



THE DISPLAY CHOICE
OF PROFESSIONALS™

www.agneovo.com

EM2451 LCD Monitor

User Manual

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SAFETY INFORMATION

Federal Communications Commission (FCC) Notice (U.S. Only)

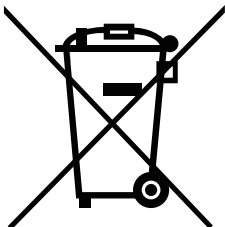


This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

For Private Households in the European Union. To help conserve natural resources and ensure the product is recycled in a manner that protects human health and the environment, we would like to bring your attention to the following:

- The crossed-out dustbin on the device or outer packaging indicates the product is compliant with European WEEE (Waste Electrical and Electronic Equipment) Directive
- Always dispose of the old devices separately from household waste
- Batteries should be removed beforehand and disposed separately to the right collection system
- You are responsible with regard to the deletion of personal data on old devices before disposal
- Private households can hand in their old devices free of charge
- 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

SAFETY INFORMATION

Turkey RoHS

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur.

Ukraine RoHS

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057.

PRECAUTIONS

PRECAUTIONS



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.
	This icon indicates important operating and servicing information.

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 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 be 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.



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.



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



WARNING:

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



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.

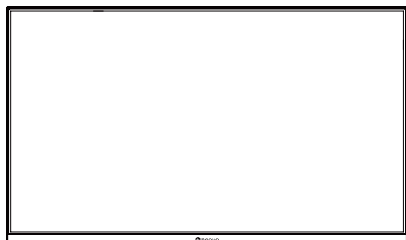
There are millions of micro transistors inside the LCD display. It is normal for a few transistors to be damaged and to produce spots. This is acceptable and is not considered a failure.

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.

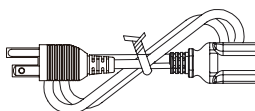
☐ **LCD Display**



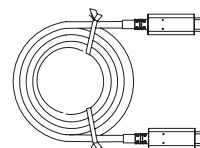
☐ **Quick Start Guide**



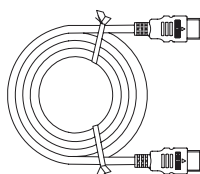
☐ **Power Cord**



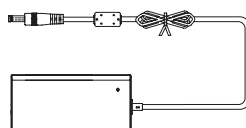
☐ **Type-C Cable**



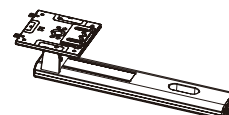
☐ **HDMI Cable**



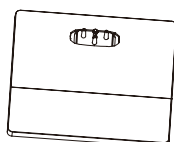
☐ **Adapter**



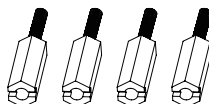
☐ **Stand**



☐ **Base**



☐ **Screw Stud**



☐ **Warranty Card**



Note:

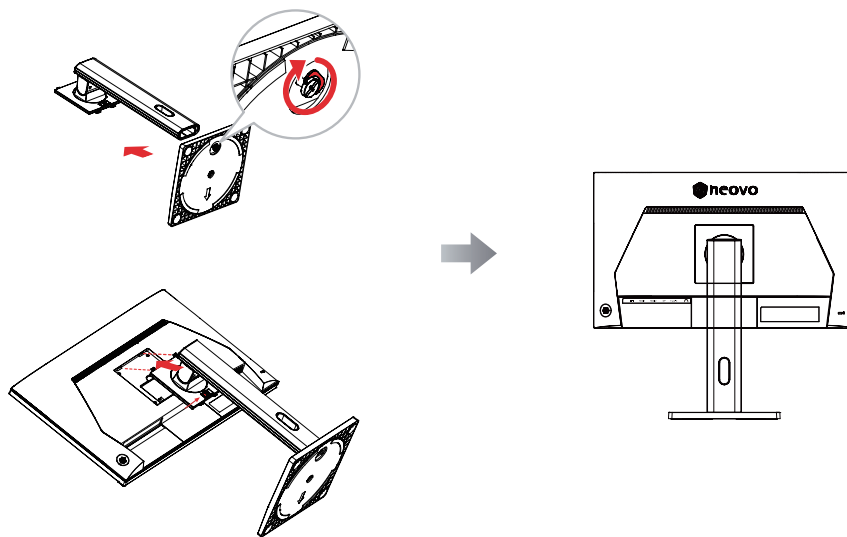
- Use only the supplied power cord.
- The above pictures are for reference only. Actual items may vary upon shipment.

PRODUCT DESCRIPTION

1.2 Installation

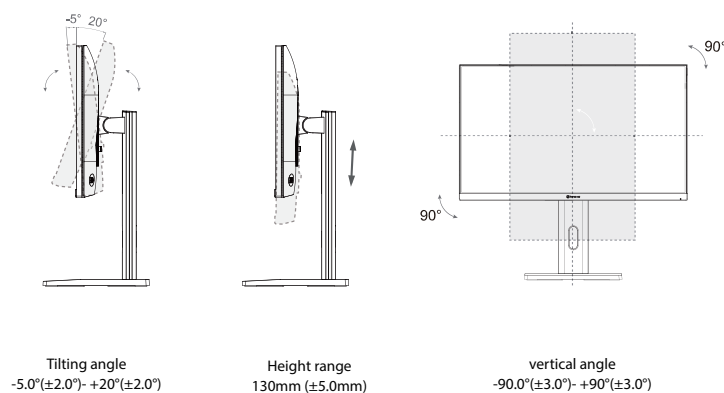
1.2.1 Installing the Stand

1. Take out the stand and base, and lock the stand with the hand screw that comes with the base.
2. Insert the assembled base into the corresponding bayonet of the rear shell, and gently align the tail end perpendicular to the surface of the rear shell, so that the lock of the bracket can be buckled on the quick release button of the rear shell.



1.2.2 Adjusting the Tilt

The screen can be adjusted by inclining forward and backward; however, the specific adjustment depends on the specific model of the device.



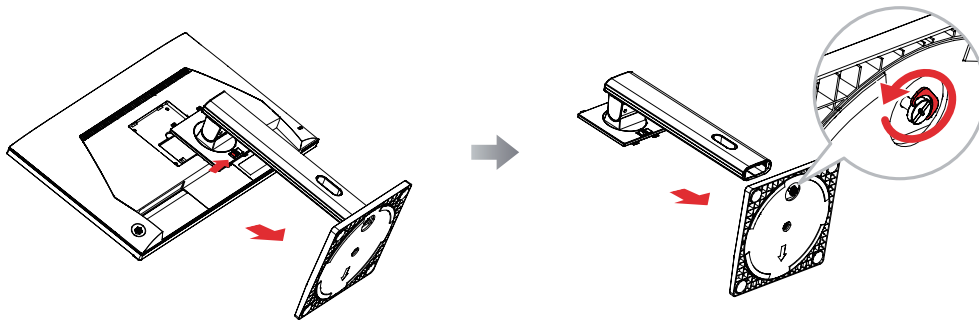
PRODUCT DESCRIPTION

1.2.3 Wall Mounting

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

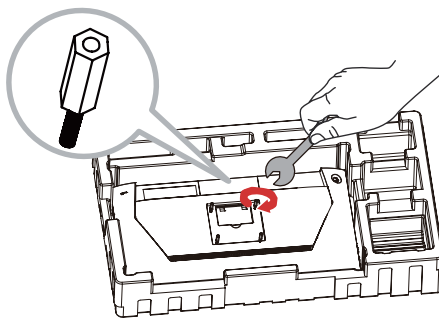
1. Remove the base stand.

- Place the LCD display with the screen side down on a cushioned surface.
- Push the release button and detach the stand from the base mount.

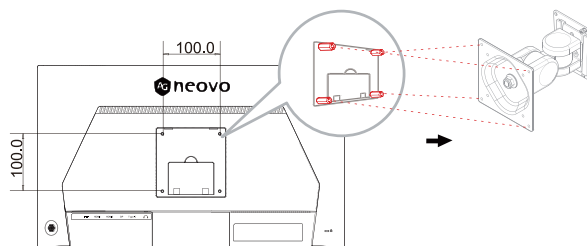


2. Wall mount the LCD display.

- Secure the 4 screw studs to the VESA holes.

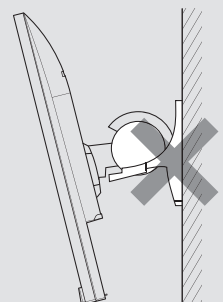


- Screw the mounting bracket to the VESA holes at the rear of the LCD display.



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.

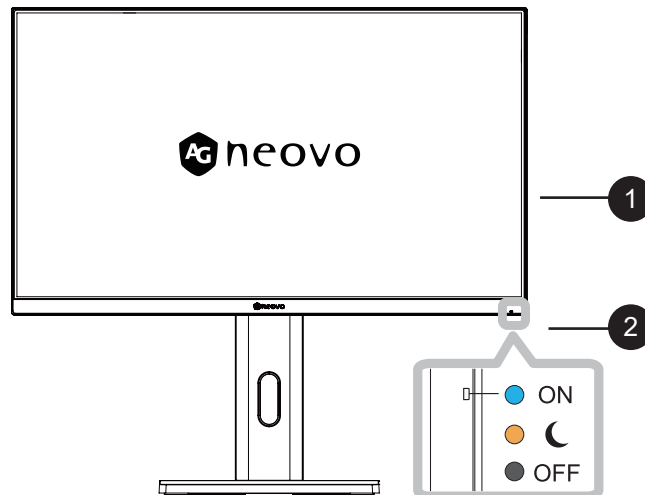
- Use only the 100 x 100 mm wall mount kit recommended by AG Neovo. All AG Neovo wall mount kits comply with VESA standard.
- Secure the LCD display on a solid wall strong enough to bear its weight.
- It is suggested to wall mount the LCD display without tilting it facing downward.



PRODUCT DESCRIPTION

1.3 Overview

1.3.1 Front View



1 Display screen

2 **Power status indicator:** Indicates the operating status of the display:

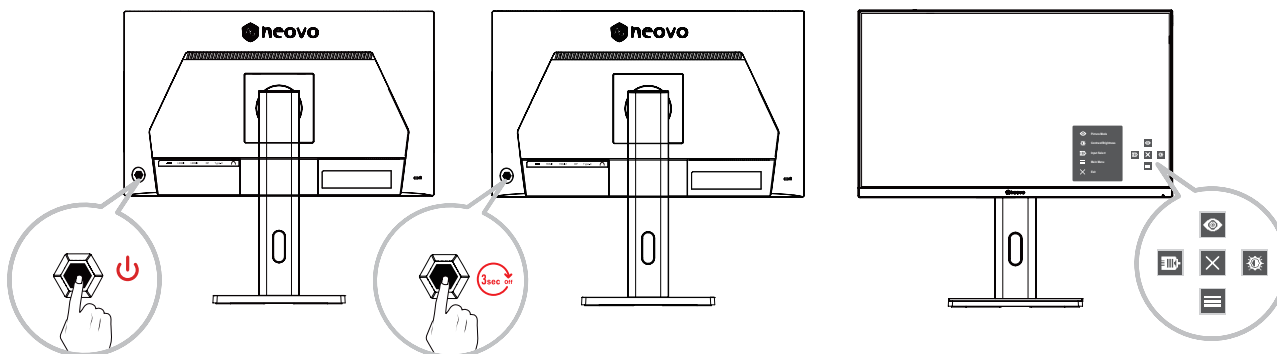
- Lights Blue when the display is turned on.
- Lights amber when the display is in standby mode.
- Lights off when the main power of the display is turned off.

PRODUCT DESCRIPTION

1.3 Overview

1.3.2 Control Buttons

Move the **Arrow Key** ▲ / ▼ / ◀ / ▶ to activate the Quick Menu.



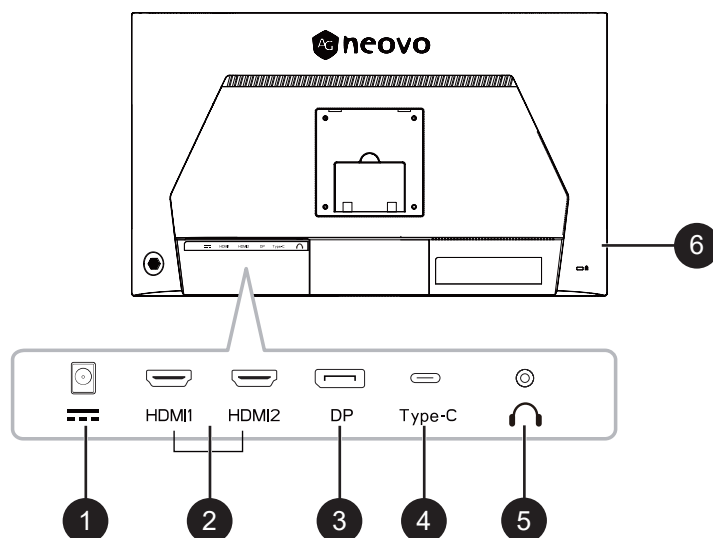
Note:

- ◆ Follow the key guide that appears on the screen to select the option or make adjustments.

Menu	Description
 Picture Mode	Select one of the preset color settings.
 Contrast/Brightness	Adjust the contrast or brightness level.
 Input Source	Select the input source.
 Main Menu	Enter the On-Screen Display (OSD) Menu.
 Exit	Exit the Quick Menu.

PRODUCT DESCRIPTION

1.3.3 Rear View



1

DC IN

Connect the included adapter.

2

HDMI IN

Connect HDMI signals input.

3

DP IN

Connect DisplayPort signals input.

4

Type-C IN

Connect Type-C signals input.

5

Earphone

Connect audio signals output (3.5 mm Stereo Audio Jack).

6

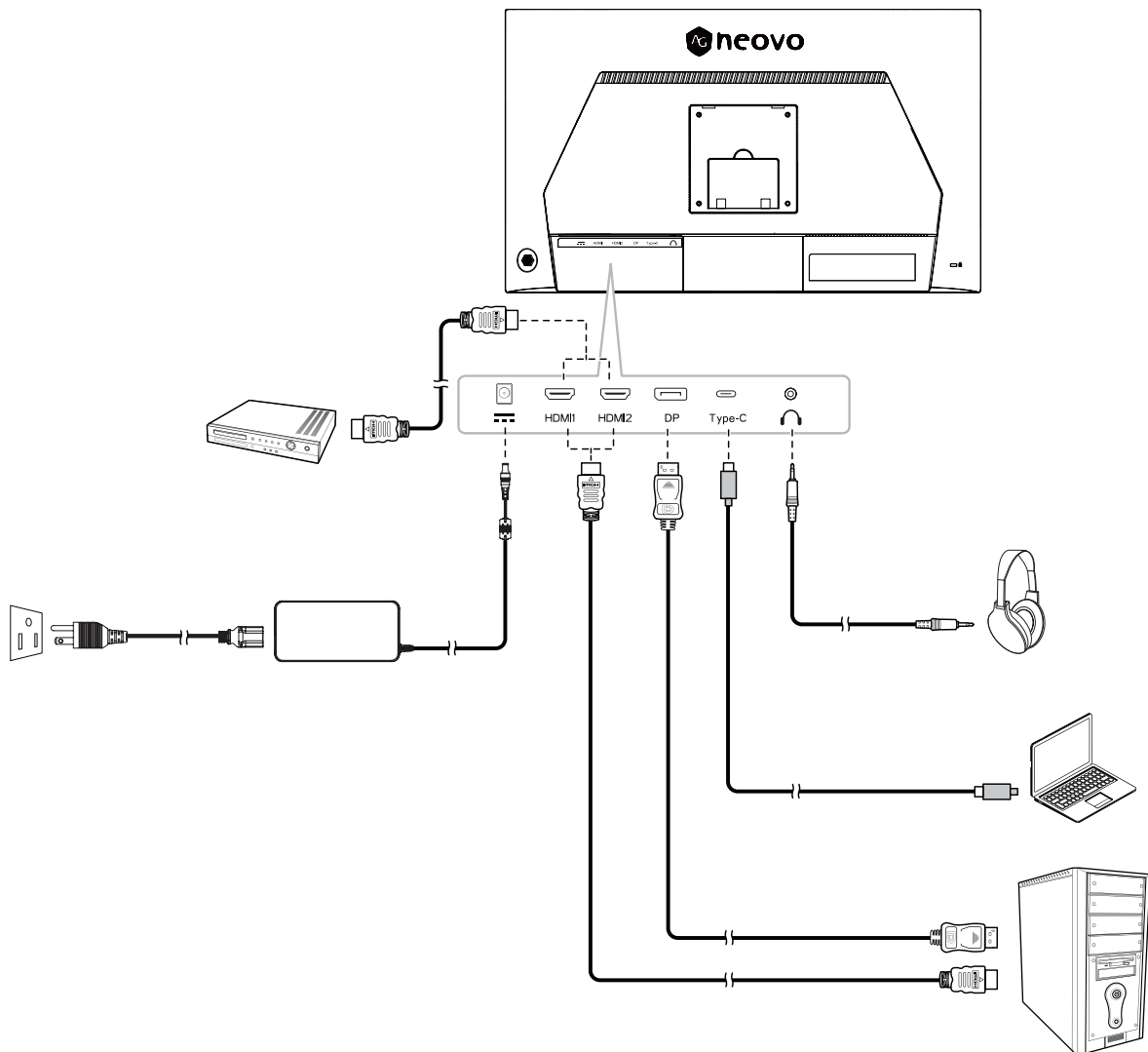
Kensington lock socket

Use to physically lock the system to prevent theft.

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

CHAPTER 2: MAKING CONNECTIONS

2.1 Making Connections



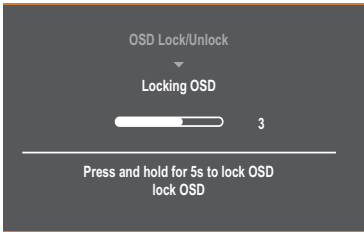
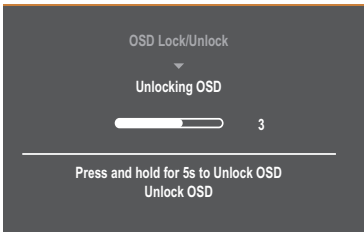
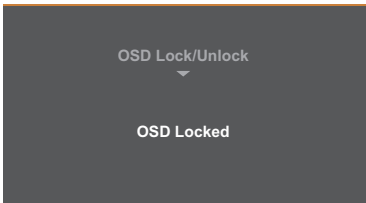
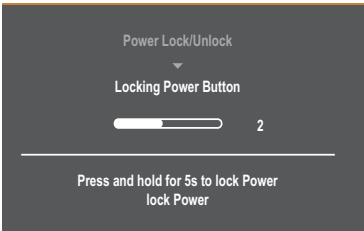
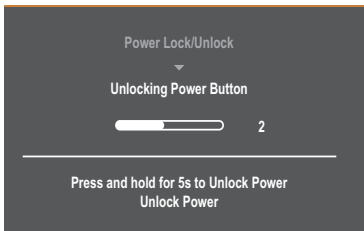
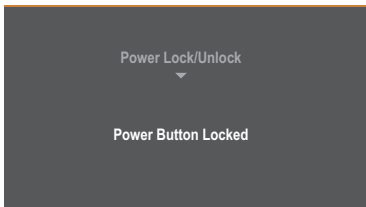
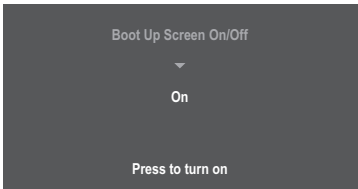
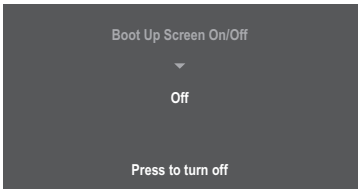
CHAPTER 2: MAKING CONNECTIONS

- When charging connected device via USB Type-C Connector, check if the device is equipped with a USB Type-C Connector that supports charging function via USB PD (Power Delivery).
- The connected device can be charged via USB Type-C connector even when the monitor is in standby mode.
- The USB power delivery is up to 65W. If the connected device required more than 65W for operation or for boot up (when the battery is drained), use the original power adapter that came with the device.
- If a separately purchased USB Type-C Cable is used, make sure the cable is certified by USB-IF and is full-feature with power delivery and video/audio/data transfer functions.
- Compatibility with all connected devices is not guaranteed due to different user environments.

CHAPTER 3: ON SCREEN DISPLAY MENU

Hot Keys

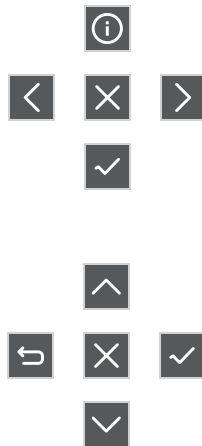
When the On-Screen Display (OSD) Menu is off, you can quickly access special functions by using the **Arrow Key**.

Key	Description
◀	Press and hold the key to lock/unlock the OSD Menu. When the menu appears on the screen, continue holding the key for 5 seconds to lock/unlock the OSD Menu.   If the OSD Menu is locked, the below message will appear on the screen: 
▶	Press and hold the key to lock/unlock the Power button. When the menu appears on the screen, continue holding the key for 5 seconds to lock/unlock the Power button.   If the Power button is locked, the below message will appear on the screen: 
▲	Press and hold the key for 5 seconds to display/hide the AG Neovo boot up screen when the display is turned on/off.  

CHAPTER 3: ON SCREEN DISPLAY MENU

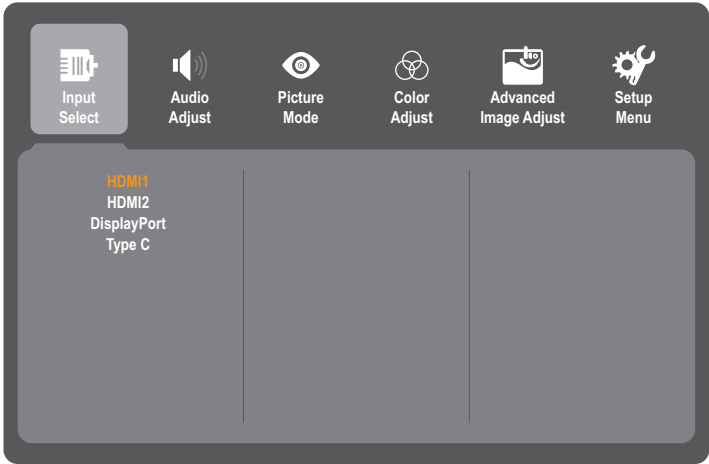
3.1 Configuring the Settings

Arrow Key Operations

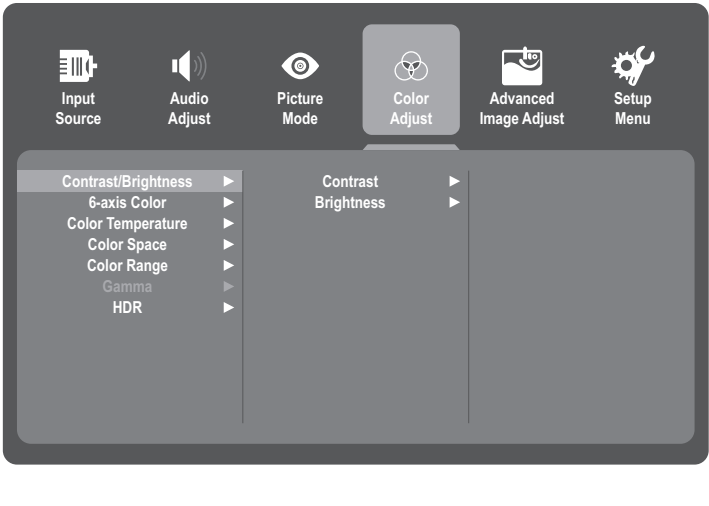


Button	Button
Information	Up
Enter	Down
Return	Left
Exit	Right

1. Move the **Arrow Key** ▲ / ▼ / ◀ / ▶ to display the Quick Menu. Then press the **Key** to display the On-Screen Display (OSD) Menu.

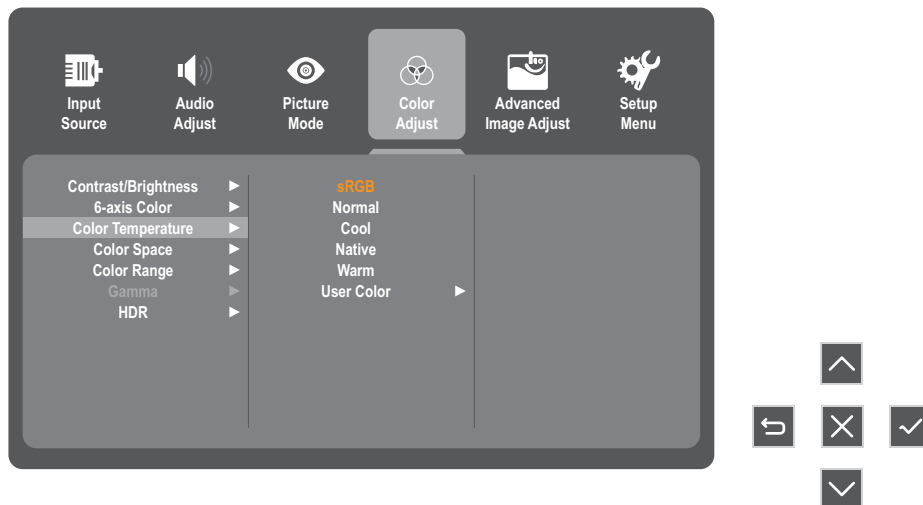


2. Move the **Arrow Key** ◀ or ▶ to select the main menu. Then press the **Key** to enter the selected menu.



CHAPTER 3: ON SCREEN DISPLAY MENU

3. Move the **Arrow Key** ▲ or ▼ to select the desired menu option. Then press the  **Key** to enter the sub-menu.



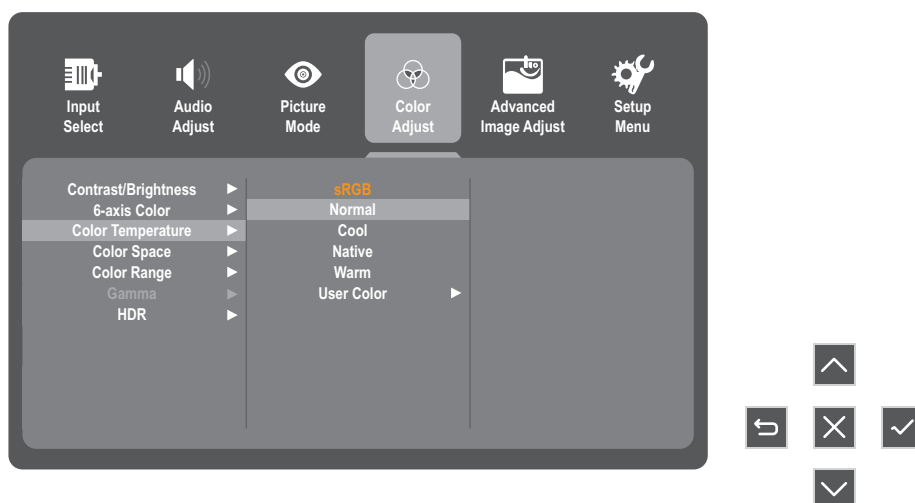
4. Move the **Arrow Key** ▲ or ▼ to adjust/select the setting. Then press the  **Key** to confirm. Or move the Arrow Key ◀ or ▶ to make adjustments.



Note:

- ◆ Certain menu option adjustments do not require the user to press the **Arrow Key** to confirm the selection. Follow the key guide to select the option or make adjustments.

5. Follow the  **Key** guide to return to the previous screen.



CHAPTER 3: ON SCREEN DISPLAY MENU

3.2 OSD Menu Tree

Main Menu	Submenu	Third menu	Description
Input Select	HDMI1		Signal source switching, HDMI1/HDMI2/DisplayPort/Type-C
	HDMI2		
	DisplayPort		
	Type C		
Audio Adjust	Volume	(-/+) 0-100/1	Volume control
	Mute	On	Mute switch selection
		Off	
Picture Mode	Standard		Scenario mode selection, different scenario modes have different color combinations. Such as brightness, contrast, color temperature, low blue light, black level, clarity, etc.
	Movie		
	Web		
	Text		
	MAC		
	Mono		
Color Adjust	Contrast/Brightness	Contrast	Contrast setting, in grayscale terms, the higher the contrast, the saturation of the brightness level
		Brightness	Brightness settings, backlight brightness control.
	6-axis Color	Hue	Chromaticity: The range and quality of colors that a monitor can display
		Saturation	Saturation: The purity of colors, the purer the purity, the higher the saturation, and the higher the saturation, the brighter the colors in the image
	Color Temperature	sRGB	Color temperature: used to describe the color characteristics of a light source. The higher the color temperature value, the bluer the color of the light source; The lower the color temperature value, the redder the color of the light source
		Normal (7500k)	
		Cool (9300k)	
		Native (6500k)	
		Warm (5500k)	
	Color Space	User Color	User mode, RGB is the proportion of user-defined RGB
		Auto	Automatically select signal color format
		RGB Mode	Set the signal format to RGB mode
	Color Range	YUV Mode	Set the signal format to YUV mode
		Auto	Automatic selection of signal range
		Full Range	Set the signal range to 0-255
		Limited Range	Set the signal range to 16-235
	Gamma	1.8	The relationship between the input value and the brightness of the display output affects the distribution of tones from highlights to shadows on the original
		2.2	
		2.4	
	HDR	Auto	The HDR function switch
		Off	

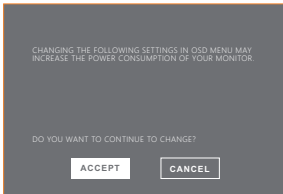
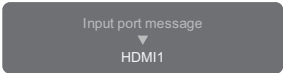
ON SCREEN DISPLAY MENU

Manual Image Adjust	Sharpness	(-/+) 0-100/25	Clarity adjustment to make the font clearer
	Blue Light Filter	(-/+) 0-100/1	The software has low blue light, mainly for adjusting the color of the B-gun.
	Aspect Ratio	1:1	Set the aspect ratio of the monitor
		4:3	
		Full Screen	
	Overscan	On	The over scan setting is mainly aimed at HDMI signals in DVD format, with noise function at the boundaries. There are few mainstream DVDs nowadays, and this situation is rare
		Off	
	Black Level	(-/+ , 0~100)/10	Black level expansion, in grayscale terms, shows significant changes in the dark areas.
Setup Menu	Advanced DCR	(-/+ , 0/25/50/75/100)	Dynamic backlight, after turning on DCR, the brightness of the white field will be higher, and the brightness of the black field will be lower. The speed of brightness change varies at different levels. The higher the level, the faster the brightness changes. The degree of brightness change is the same at different levels
	Response Time	Standard	The response speed of the input signal, that is, the reaction time of the liquid crystal from dark to bright or from bright to dark
		Advanced	
		Ultra Fast	
	Language	English/Français/Deutsch/ Español/Italiano/Finnish/ Svenska/Русский/Türkçe/ Češka/ 日本語 / 한국어 / 繁體中文 / 簡體中文	Select the OSD language.
	Resolution Notice	On	Best resolution prompt box setting
		Off	
	Information	Resolution: H. Frequency: V. Frequency: Pixel Clock: Model Number:	Current Timing Information
	OSD Size	Small	Set the size of the OSD menu
		Native	
	OSD Timer	(-/+) 5/15/30/60	OSD display time
	OSD Transparency	On	Is the OSD background color transparent
		Off	
	LED Indicator	On	Button indicator light switch
		Off	
	Standby	On	Automatic shutdown
		Off	
	Sleep	30 Minutes	How many minutes does the monitor enter a shutdown state after no actual operation
		45 Minutes	
		60 Minutes	
		120 Minutes	
		Off	
	ECO Mode	Standard	Energy efficiency mode selection
		High	
		Low	
	Auto Source Detect	On	Automatic signal recognition
		Off	
	DDC/CI	On	DDC/CI communication protocol switch
		Off	
	OSD Reset		OSD parameter reset

CHAPTER 4: APPENDIX

4.1 Warning Messages

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

Warning Message	Cause	Solution
	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.
	This warning message box will only show when the menu feature setting is changed for the first time.	• Press the ACCEPT button to continue the setting changes, or press the CANCEL button to disable the setting changes. • Note: The operation may vary from different product models.
	It will pop up after switching the signal	Select the switch signal and then disappear
	At best resolution (3840×2160 on current models). PC switch resolution (cut to other resolution such as 640 x 480) in about 10s	Change the resolution of the graphics card
	Out of range of display resolution or refresh rate will pop up	Change the resolution of the graphics card

APPENDIX

4.2 Troubleshooting

Problems	Possible Cause and Solution
The power indicator light is not on	• Check if the power is on. • Check if the power cord is connected.
Impossible plug-and-play	• Check if the function of plug-and-play of the device is compatible with PC. • Check if the display card is compatible with the plug-and-play function. • Check if the signal line 15 pin d joint bent
Flickering picture or picture with ripples	• There may be electrical appliances or equipment with electronic disturbance.
The power indicator light is on (flickering), but the monitor has no pictures.	• Check if the PC power is on. • Check if the PC display card is inserted properly. • Check if the signal cable of the monitor is correctly connected with the PC. • Check the signal cable plug of the monitor and make sure every pin has no bending. • Observe the indicator light by pressing the Caps Lock key on the PC keyboard and check if the PC is working.
Picture with color difference (white looks not white)	• Adjust RGB color or reselect color temperature.
USB Type-C port does not supply power	• Check that the connected device is compliant with the USB-C specification. The USB Type-C port supports an output of 65W..
PIP mode does not work	• The main and sub input source signals are not compatible to be • displayed together in PIP mode.

APPENDIX

4.3 Supported Resolutions

Item	Resolution	Horizontal	Bandwidth
		Frequency (kHz)	Frequency (Hz)
1	640×480	31.469	60
2	640×480	35.000	67
3	640×480	37.861	72
4	640×480	37.500	75
5	720×400	31.469	70
6	720×480	15.734	60
7	720×576	15.625	50
8	800×600	35.156	56
9	800×600	37.879	60
10	800×600	48.077	72
11	800×600	46.875	75
12	1024×768	48.363	60
13	1024×768	56.476	70
14	1024×768	60.023	75
15	1280×720	45.000	60
16	1280×720	37.070	50
17	1280×1024	63.981	60
18	1280×1024	79.976	75
19	1366×768	47.820	60
20	1440×900	55.469	60
21	1600×900	55.540	60
22	1680×050	65.200	60
23	1920×1080	33.716	30
24	1920×1080	56.250	50
25	1920×1080	67.500	60
26	2560×1440	88.786	60
27	3840×2160	67.500	30
28	3840×2160	112.500	50
29	3840×2160	135.000	60

CHAPTER 5: SPECIFICATIONS

5.1 Monitor Specifications

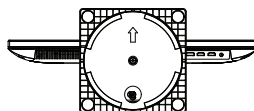
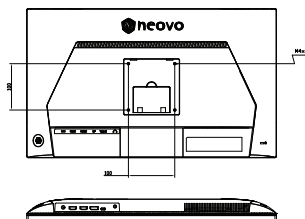
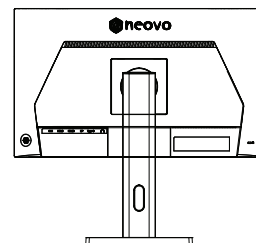
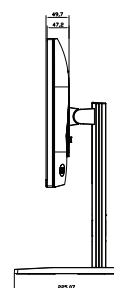
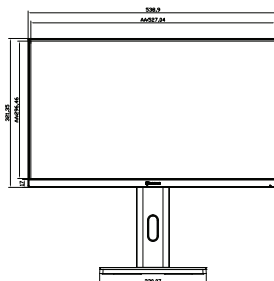
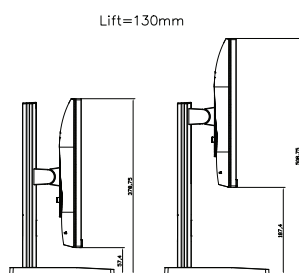
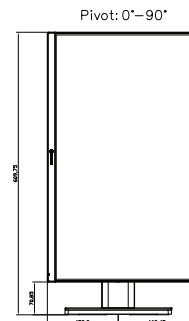
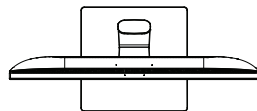
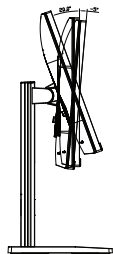
EM2451		
Panel	Panel Type	LED-Backlit TFT LCD (IPS Technology)
	Panel Size	23.8"
	Max. Resolution	UHD 3840 x 2160
	Pixel Pitch	0.137 mm
	Brightness	350 cd/m ²
	Contrast Ratio	80,000,000:1 (DCR)
	Viewing Angle (H/V)	178°/178°
	Display Colour	1.07B
	Response Time	5 ms
	Surface Treatment	Anti-Glare Treatment (Haze 25%) , 3H Hard Coating
Frequency (H/V)	H Freq.	15 kHz ~ 160 kHz
	V Freq.	40 Hz ~ 75 Hz
Input	DisplayPort	1.4 x 1
	HDMI	2.1 x 2
	Type-C	x 1 (PD 65W)
Audio	Earphone	Stereo Audio Jack (3.5 mm)
	Internal Speakers	2W x 2
Power	Power Supply	External
	Power Requirements	DC 24V, 5A
	On Mode	20W (On)
	Stand-by Mode	< 0.5W
	Off Mode	< 0.3W
Operating Conditions	Temperature	0°C-40°C (32°F-104°F)
	Humidity	10%-90% (non-condensing)
Storage Conditions	Temperature	-20°C-60°C (-4°F-140°F)
	Humidity	5%-90% (non-condensing)
Mounting	VESA FPMPI	Yes (100 x 100 mm)
Stand	Tilt	-5° ~ 20°
	Pivot	0° to 90°
	Height Adjustment	0-130 mm
Security	Kensington Security Slot	Yes
Dimensions	Bezel Width	2.0 mm (Top/Left/Right) 17.0 mm (Bottom)
	Product with Base (W x H x D)	538.9 x 508.8 x 225.1 mm (21.2" x 20.0" x 8.9")
	Product w/o Base (W x H x D)	538.9 x 321.4 x 49.7 mm (21.2" x 12.7" x 2.0")
	Packaging (W x H x D)	768.0 x 468.0 x 138.0 mm (30.2" x 18.4" x 5.4")
Weight	Product w/o Base	3.2 kg (7.1 lb)
	Product with Base	5.0 kg (11.0 lb)
	Packaging	7.1 kg (15.7 lb)

Note:

- ◆ All specifications are subject to change without prior notice.

SPECIFICATIONS

5.2 Monitor Dimensions



AG Neovo

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

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