



PA238Q Series LED Monitor

User Guide

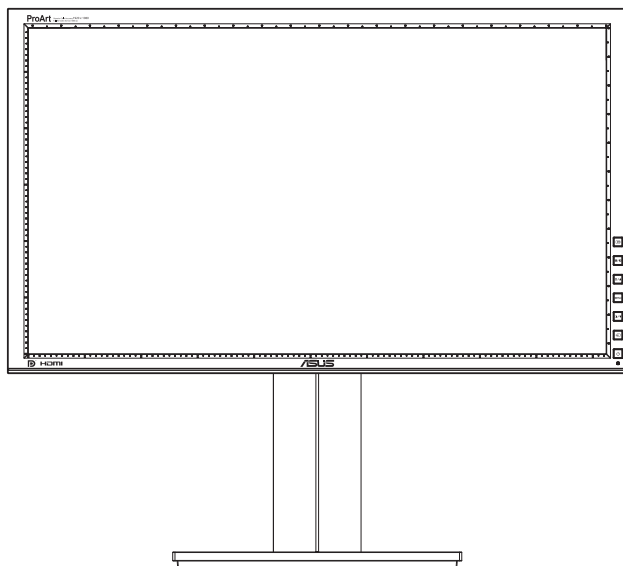


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Notices

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

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 manufacturer's 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 to 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.



As an Energy Star® Partner, our company has determined that this product meets the Energy Star® guidelines for energy efficiency.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

Safety information

- Before setting up the monitor, carefully read all the documentation that came with the package.
- To prevent fire or shock hazard, never expose the monitor to rain or moisture.
- Never try to open the monitor cabinet. The dangerous high voltages inside the monitor may result in serious physical injury.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- Slots and openings on the back or top of the cabinet are provided for ventilation. Do not block these slots. Never place this product near or over a radiator or heat source unless proper ventilation is provided.
- The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
- Use the appropriate power plug which complies with your local power standard.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- Avoid dust, humidity, and temperature extremes. Do not place the monitor in any area where it may become wet. Place the monitor on a stable surface.
- Unplug the unit during a lightning storm or if it will not be used for a long period of time. This will protect the monitor from damage due to power surges.
- Never push objects or spill liquid of any kind into the slots on the monitor cabinet.
- To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100 ~ 240V AC.
- If you encounter technical problems with the monitor, contact a qualified service technician or your retailer.

Care & Cleaning

- Before you lift or reposition your monitor, it is better to disconnect the cables and power cord. Follow the correct lifting techniques when positioning the monitor. When lifting or carrying the monitor, grasp the edges of the monitor. Do not lift the display by the stand or the cord.
- Cleaning. Turn your monitor off and unplug the power cord. Clean the monitor surface with a lint-free, non-abrasive cloth. Stubborn stains may be removed with a cloth dampened with mild cleaner.
- Avoid using a cleaner containing alcohol or acetone. Use a cleaner intended for use with the LCD. Never spray cleaner directly on the screen, as it may drip inside the monitor and cause an electric shock.

The following symptoms are normal with the monitor:

- The screen may flicker during the initial use due to the nature of the fluorescent light. Turn off the Power Switch and turn it on again to make sure that the flicker disappears.
- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- When the same image is displayed for hours, an afterimage of the previous screen may remain after switching the image. The screen will recover slowly or you can turn off the Power Switch for hours.
- When the screen becomes black or flashes, or cannot work anymore, contact your dealer or service center to fix it. Do not repair the screen by yourself!

Conventions used in this guide



WARNING: Information to prevent injury to yourself when trying to complete a task.



CAUTION: Information to prevent damage to the components when trying to complete a task.



IMPORTANT: Information that you **MUST** follow to complete a task.



NOTE: Tips and additional information to aid in completing a task.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. ASUS websites

The ASUS websites worldwide provide updated information on ASUS hardware and software products. Refer to **<http://www.asus.com>**

2. Optional documentation

Your product package may include optional documentation that may have been added by your dealer. These documents are not part of the standard package.

1.1 Welcome!

Thank you for purchasing the ASUS® LED monitor!

The latest widescreen LED monitor from ASUS provides a crisper, broader, and brighter display, plus a host of features that enhance your viewing experience.

With these features, you can enjoy the convenience and delightful visual experience that the monitor brings you!

1.2 Package contents

Check your package for the following items:

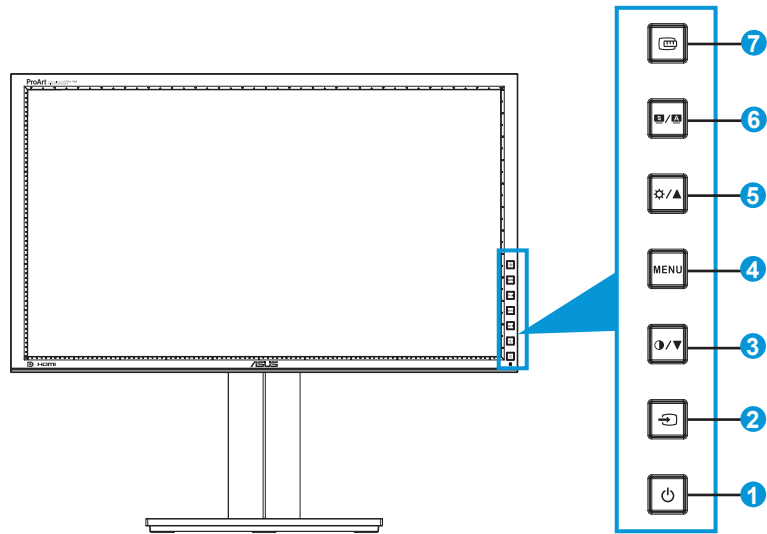
- ✓ LED Monitor
- ✓ Power Cord
- ✓ VGA Cable
- ✓ DVI Cable
- ✓ DisplayPort Cable
- ✓ USB Cable
- ✓ Cable Tie
- ✓ Support CD
- ✓ Quick Start Guide
- ✓ Warranty Card
- ✓ Color Calibration Test Report




If any of the above items is damaged or missing, contact your retailer immediately.


1.3 Monitor introduction

1.3.1 Front view





1.  Power Button/Power Indicator:
- Press this button to turn the monitor on/off.
 - The color definition of the power indicator is shown below.

Status	Description
White	ON
Amber	Standby mode
OFF	OFF

2.  Input Select Button:
- Press this button to select input source.

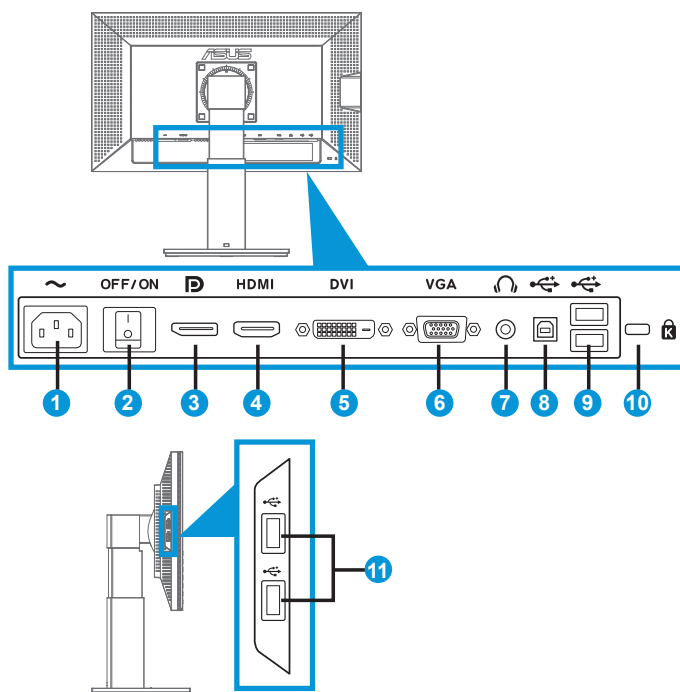


Press  button (Input Select button) to display HDMI/DisplayPort signals after you connect HDMI/DisplayPort cable with the monitor.

3.  Button:
- Press this button to decrease values or to move your selection left/down.
 - Contrast hotkey

4. **MENU Button:**
 - Press this button to turn on the OSD menu, or to enact the selected OSD menu item.
 - Press this button to exit the hotkey OSD menu.
5. **⚙️/▲ Button:**
 - Press this button to increase values or to move your selection right/up.
 - Brightness hotkey
6. **S/A Button:**
 - Press this button to select a desired preset mode.
 - Press this button to exit the OSD menu or to go back to the previous menu when the OSD menu is active.
 - Press this button for 2 ~ 4 seconds to automatically adjust the image to its optimized position, clock, and phase (for VGA mode only).
7. **QuickFit button:**
 - Press this button to activate the QuickFit function designed for alignment.
 - The QuickFit function contains 7 pages of common grid patterns, paper sizes, and photo sizes. (Please refer to 1.3.3 QuickFit Function)

1.3.2 Back view



Rear connectors

1. AC-IN port: This port connects the power cord.
2. Power switch: Press this switch to turn on/off power.
3. DisplayPort. This port is for connection with a DisplayPort compatible device.
4. HDMI port: This port is for connection with an HDMI compatible device.
5. DVI port: This 24-pin port is for PC (Personal Computer) DVI-D digital signal connection.
6. VGA port: This 15-pin port is for PC VGA connection.
7. Earphone jack.
8. USB upstream port: This port is for connection with a USB upstream cable.


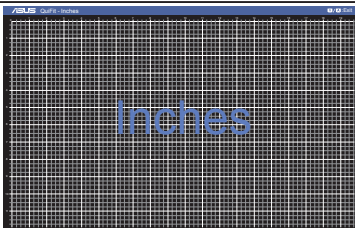

- 9. USB downstream ports: These ports are for connection with USB devices, such as USB keyboard/mouse, USB flash drive, etc.
- 10. Kensington lock slot.
- 11. USB downstream ports: These ports are for connection with USB devices, such as USB keyboard/mouse, USB flash drive, etc.

1.3.3 QuickFit Function

The QuickFit function contains three patterns: (1) Grid (2) Paper size (3) Photo size.

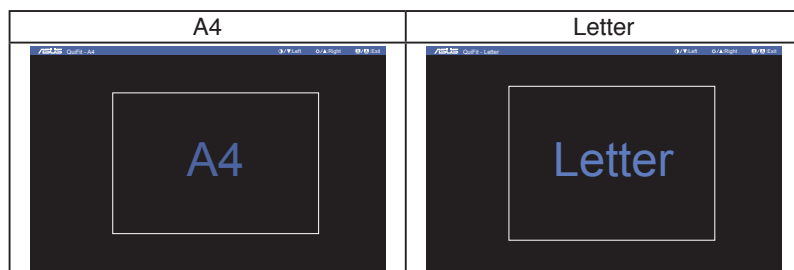
1. Grid patterns

The grid patterns facilitate designers and users to organize content and layout on a page and achieve a consistent look and feel.

Centimeters	Inches
	
Alignment Grid	
	

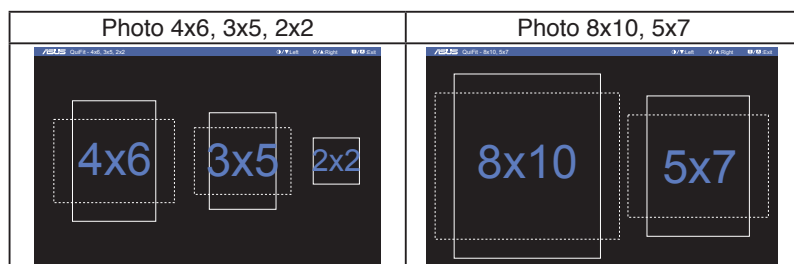
2. Paper size

QuickFit provides numerous commonly used standard paper sizes for users to view their documents in real size on the screen.



3. Photo size

The various real photo sizes displayed in the QuickFit function provides photographers and other users to accurately view and edit their photos in real size on the screen.



2.1 Detaching the arm/stand (for VESA wall mount)

The detachable stand of this monitor is specially designed for VESA wall mount.

To detach the arm/stand:

1. Disconnect power and signal cables. Carefully put the front of the monitor face down on a clean table.
2. Use a screwdriver to remove the four screws on the arm (Figure 1), and then detach the arm/stand from the monitor (Figure 2).



- We recommend that you cover the table surface with soft cloth to prevent damage to the monitor.
- Hold the stand of the monitor while removing the screws.

Figure 1

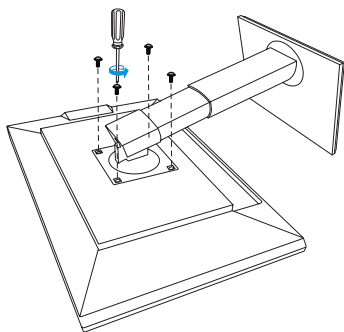
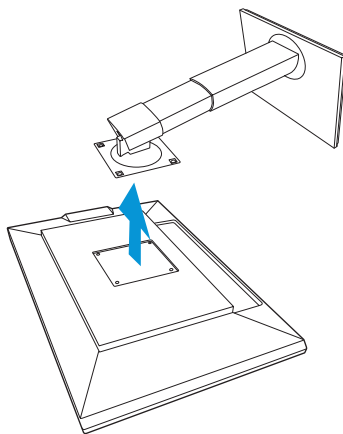


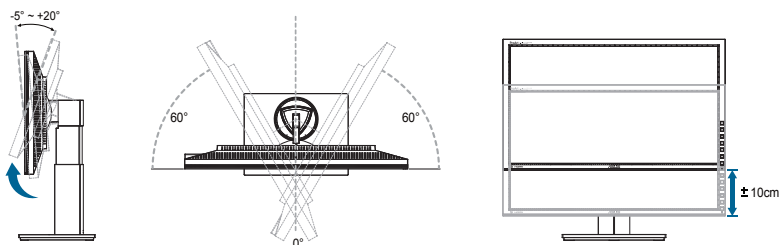
Figure 2



- The VESA wall mount kit (100 x 100 mm) is purchased separately.
- Use only the UL Listed Wall Mount Bracket with minimum weight/load 12.8kg (Screw size: M4 x 12 mm).

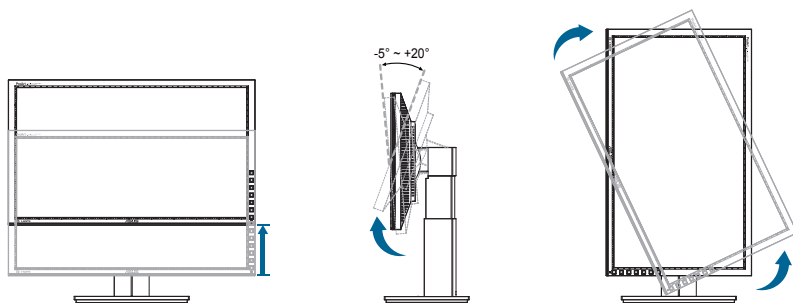
2.2 Adjusting the monitor

- For optimal viewing, we recommend that you look at the full face of the monitor, then adjust the monitor to the angle that is most comfortable for you.
- Hold the stand to prevent the monitor from falling when you change its angle.
- You can adjust the monitor's angle from $+20^{\circ}$ to -5° and it allows 60° swivel adjustment from either left or right. You can also adjust the monitor's height within $\pm 10\text{cm}$.



Pivoting the monitor

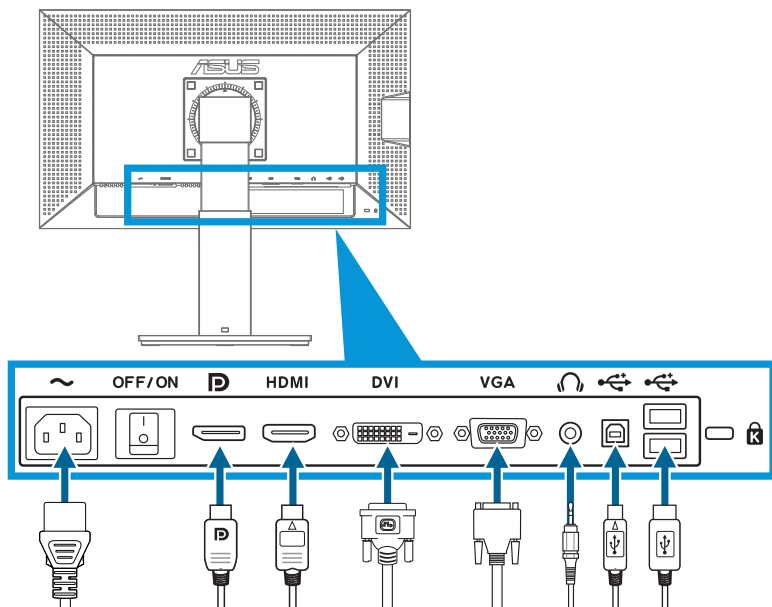
1. Lift the monitor to the highest position.
2. Tilt the monitor to its maximum angle.
3. Pivot the monitor clockwise to the angle you need.



It is normal that the monitor slightly shakes while you adjust the viewing angle.

2.3 Connecting the cables

Connect the cables as the following instructions:



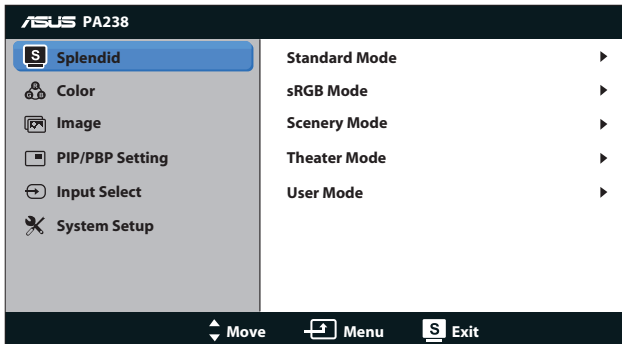
- **To connect the power cord:** Connect one end of the power cord securely to the monitor's AC input port, the other end to a power outlet.
- **To connect the VGA/HDMI/DVI/DisplayPort cable:**
 - a. Plug one end of the VGA/HDMI/DVI/DisplayPort cable to the monitor's VGA/HDMI/DVI/DisplayPort jack.
 - b. Connect the other end of the VGA/HDMI/DVI/DisplayPort cable to your computer's VGA/HDMI/DVI/DisplayPort jack.
 - c. Tighten the two screws to secure the VGA/DVI connector.
- **To use the earphone:** Connect the end with plug type to the monitor's earphone jack when an HDMI or DisplayPort signal is fed.
- **To use the USB ports:** Plug the smaller end (type B) of the USB upstream cable to the monitor's USB upstream port, and the larger end (type A) to your computer's USB port.



When these cables are connected, you can choose the desired signal from the Input Select item in the OSD menu.

3.1 OSD (On-Screen Display) menu

3.1.1 How to reconfigure

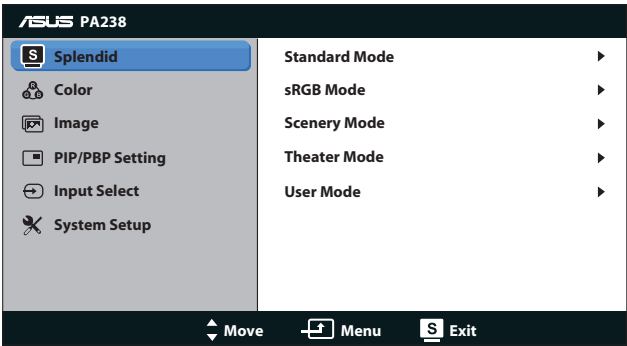


1. Press the [MENU] button to activate the OSD menu.
2. Press [⚙️/▲] or [⏻/▼] to navigate through the functions. Highlight and activate the desired function by pressing [MENU] button. If there is a sub-menu in the function selected, press [⚙️/▲] or [⏻/▼] again to navigate through the sub-menu functions. Highlight and activate the desired sub-menu function by pressing [MENU] button.
3. Press [⚙️/▲] or [⏻/▼] to change the settings of the selected function.
4. To exit the OSD menu, press [S/A] button. Repeat step 2 and step 3 to adjust any other function.

3.1.2 OSD Function Introduction

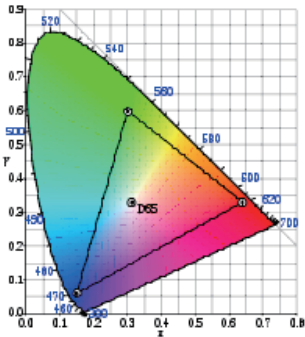
1. Splendid

This function contains five sub-functions you can select for your preference. Each mode has the Reset selection, allowing you to maintain your setting or return to the preset mode.



- **Standard Mode:** The best choice for document editing with SILENDID™ Video Enhancement.
- **sRGB Mode:** Compatible with sRGB color space. sRGB mode is the best choice for document editing.

Color Space	White Point		Primaries					
	Xw	Yw	Xr	Yr	Xg	Yg	Xb	Yb
sRGB	0.3127	0.329	0.64	0.33	0.3	0.6	0.15	0.06



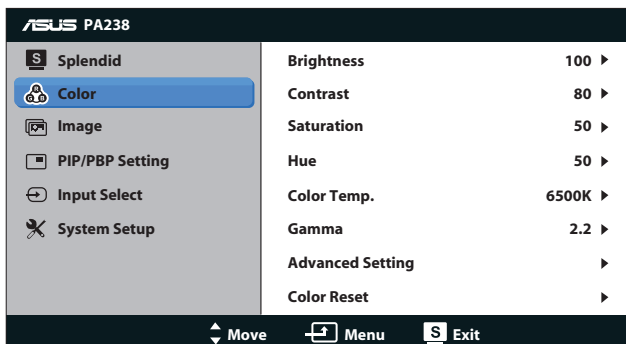
- **Scenery Mode:** The best choice for scenery photo display with SILENDID™ Video Enhancement.
- **Theater Mode:** The best choice for movies with SILENDID™ Video Enhancement.

- **User Mode:** More items are adjustable in the Color menu.

Function		Standard Mode	sRGB Mode	Scenery Mode	Theater Mode	User Mode
Brightness		Yes	Yes	Yes	Yes	Yes
Contrast		Yes	No	Yes	Yes	Yes
Saturation		No	No	Yes	Yes	Yes
Hue		No	No	No	No	Yes
Color Temperature		Yes	No	Yes	Yes	Yes
Gamma		Yes	No	No	No	Yes
Advanced Setting	Six-axis Hue	No	No	No	No	Yes
	Six-axis Saturation	No	No	No	No	Yes
	Gain	No	No	No	No	Yes
	Offset	No	No	No	No	Yes

2. Color

Set a desired color setting from this menu.

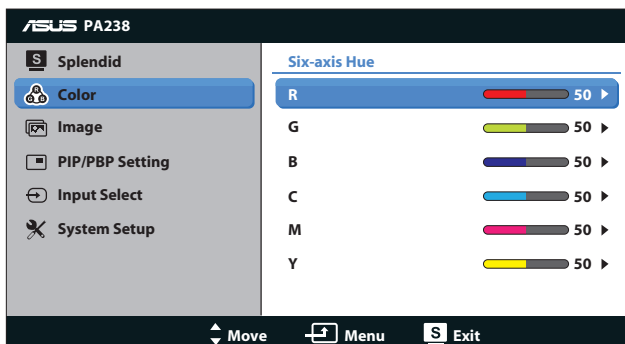


- **Brightness:** The adjusting range is from 0 to 100. The button is a hotkey to activate this function.
- **Contrast:** The adjusting range is from 0 to 100. The button is a hotkey to activate this function.
- **Saturation:** The adjusting range is from 0 to 100.
- **Hue:** Shift the image color between green and purple.
- **Color Temp.:** Contain four color modes: 9300K, 6500K, 5500K, and 5000K.

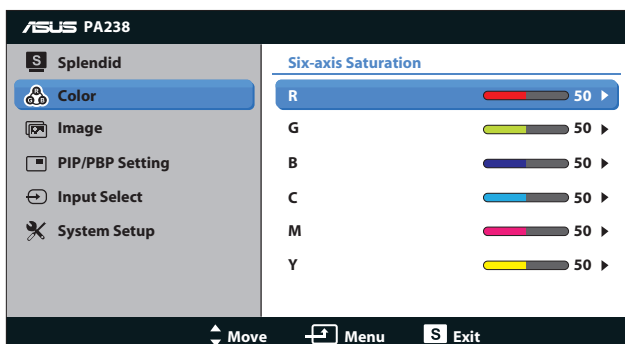


The DDC/CI tool installed at your PC will display “User 1” instead of the “5500K” color temperature you selected for this monitor.

- **Gamma:** Set the color mode to 2.2 or 1.8.
- **Advanced Setting:**
 - Six-axis Hue adjustment.



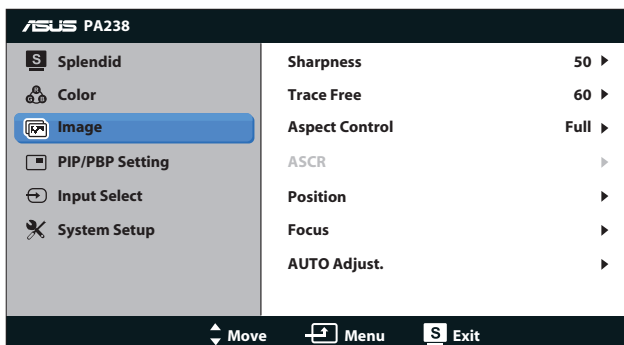
- Six-axis Saturation adjustment.



- Adjust the gain levels for R, G, B.
- Adjust the black level offset values for R, G, B.
- **Color Reset:**
 - **Current mode color reset:**
Reset the color settings of current color mode to the factory default value.
 - **All modes color reset:**
Reset the color settings of all color modes to the factory default value.

3. Image

Set the image related setting from this menu.



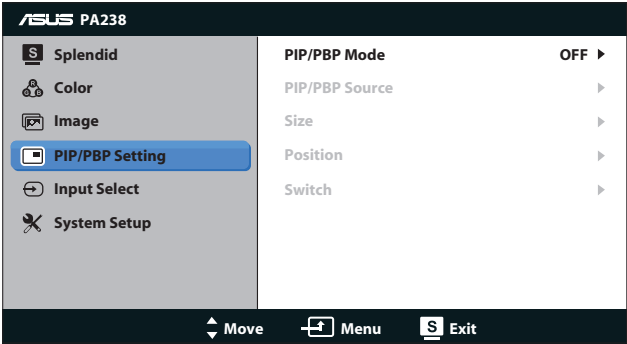
- **Sharpness:** Adjust the picture sharpness. The adjusting range is from 0 to 100.
- **Trace Free:** Speed up the response time. The adjusting range is from 0 to 100.
- **Aspect Control:** Adjust the aspect ratio to “Full”, “4:3”, “1:1”, or “Over Scan”. (The “4:3” ratio is only for 4:3 or 5:4 image source. The “Over Scan” ratio is only available for HDMI input.)
- **ASCR:** Turn on or off the ASCR (ASUS Smart Contrast Ratio) function. (Only available at Scenery Mode and Theater Mode.)
- **Position:** Adjust the horizontal position (H-Position) and the vertical position (V-Position) of the image. The adjusting range is from 0 to 100. (Only available for VGA input.)
- **Focus:** Reduce Horizontal-line noise and Vertical-line noise of the image by adjusting (Phase) and (Clock) separately. The adjusting range is from 0 to 100. (Only available for VGA input.)
- **AUTO Adjust.:** Automatically adjust the image to its optimized position, clock, and phase. (Only available for VGA input.)



- Phase adjusts the phase of the pixel clock signal. With a wrong phase adjustment, the screen shows horizontal disturbances.
- Clock (pixel frequency) controls the number of pixels scanned by one horizontal sweep. If the frequency is not correct, the screen shows vertical stripes and the image is not proportional.

4. PIP/PBP Setting

The PIP/PBP Setting allows you to open up another sub-window connected from another video source besides the main-window from your original video source.



By activating this function, this monitor displays two pictures from two different video sources.

- **PIP/PBP Mode:** Select PIP or PBP function, or turn it off.
- **PIP/PBP Source:** Select the video input source among “VGA”, “DVI”, “HDMI”, or “DisplayPort”.
- **Size:** Adjust the PIP size to “Small”, “Middle”, or “Large”.
- **Position:** Adjust the position of PIP sub-window to “Right-Top”, “Left-Top”, “Right-Bottom”, or “Left-Bottom”.
- **Switch:** Swap the sources of the main- and sub-windows.

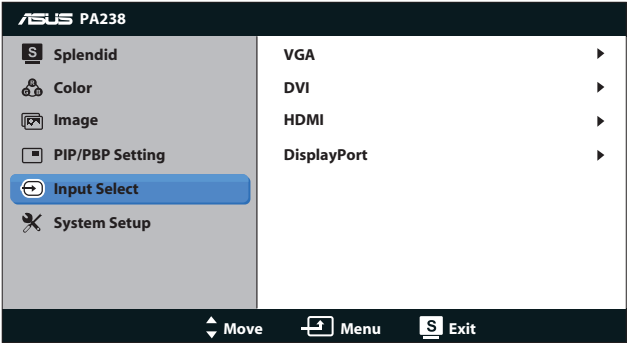


The DVI and HDMI input sources should not be selected as the main-window or sub-window at the same time. See the table below for details.

		Main-window			
		VGA	DVI	HDMI	DisplayPort
Sub-window	VGA		Yes	Yes	Yes
	DVI	Yes		No	Yes
	HDMI	Yes	No		Yes
	DisplayPort	Yes	Yes	Yes	

5. Input Select

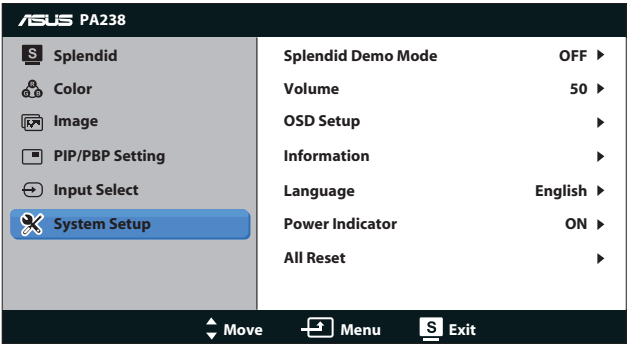
Select the input source from **VGA**, **DVI**, **HDMI**, or **DisplayPort**.



Only the VGA and DVI input supports the “Auto scan” function.

6. System Setup

Adjust the system configuration.



- **Splendid Demo Mode:** Split the screen into two for Splendid modes comparison. (Scenery mode/Theater mode only)
- **Volume:** Adjust the earphone output volume level. The adjusting range is from 0 to 100. (Disabled in VGA or DVI input source.)
- **OSD Setup:**
 - **H-Position / V-Position:** Adjust the horizontal position (H-Position) or the vertical position (V-Position) of the OSD from 0 to 100.
 - **OSD Timeout:** Adjust the OSD timeout from 10 to 120 seconds.

- **DDC/CI:** Enable or disable the DDC/CI function.
- **Transparency:** Adjust the OSD background from opaque to transparent.
- **Information:** Show the monitor information.
- **Language:** There are 10 languages for your selection, including English, French, German, Spanish, Italian, Dutch, Russian, Traditional Chinese, Simplified Chinese, and Japanese.
- **Power Indicator:** Turn the power LED indicator on/off.
- **All Reset:** Select “**Yes**” to restore the default settings.






3.2 Specifications

Panel Type	TFT LCD
Panel Size	23" W (58.4 cm)
Max. Resolution	1920 x 1080
Pixel Pitch	0.2652 mm
Brightness (Max.)	250 cd/m ²
Contrast Ratio (Typ.)	1000:1
Contrast Ratio (Max.)	50,000,000:1 (with ASCR on)
Viewing Angle (H/V) CR \geq 10	178° (H)/ 178° (V)
Display Colors	16.7 M
Response Time	6 ms (Gray to gray)
SPLendid™ Video Enhancement	Yes
SPLendid™ Selection	5 video preset modes (by hotkey)
Auto Adjustment	Yes
Color Temperature Selection	4 color temperatures
Digital Input	HDMI v1.3, DisplayPort V1.1a, DVI-D with HDCP
Analog Input	D-Sub
Earphone Jack	Yes
Colors	Black
Power LED	White (On) / Amber (Standby)
Tilt	+20° ~ -5°
Swivel	+60° ~ -60°
Height Adjustment	100 mm
Kensington Lock	Yes
AC Input Voltage	AC: 100 ~ 240V
Power Consumption	Power On: < 65 W (Max.) Standby: < 1 W (Typ.) Power Off: 0 W (Switch off)
Temperature (Operating)	0°C ~ +35°C
Temperature (Non-operating)	-20°C ~ +60°C
Dimension (W x H x D)	549 x 396 x 201 mm (Physical) 671 x 386 x 253 mm (Packing)
Weight (Esti.)	5.5 kg (Net), 8.4 kg (Gross)
Regulation Approvals	Energy Star, UL/cUL, CB, CE, ErP, FCC, CCC, BSMI, Gost-R, C-Tick, VCCI, PSB, J-MOSS, RoHS, WEEE, Windows 7 WHQL, Mac Compliance**, Tuv GS, Tuv ERGO, TCO 5.2

* Specifications subject to change without notice.

** Requires Mac OS X v10.x

3.3 Troubleshooting (FAQ)

Problem	Possible Solution
Power LED is not ON	<ul style="list-style-type: none"> • Press the  button to check if the monitor is in the ON mode. • Check if the power cord is properly connected to the monitor and the power outlet. • Check if the power switch is ON.
The power LED lights amber and there is no screen image	<ul style="list-style-type: none"> • Check if the monitor and the computer are in the ON mode. • Make sure the signal cable is properly connected the monitor and the computer. • Inspect the signal cable and make sure none of the pins are bent. • Connect the computer with another available monitor to check if the computer is properly working.
Screen image is too light or dark	<ul style="list-style-type: none"> • Adjust the Contrast and Brightness settings via OSD.
Screen image is not centered or sized properly	<ul style="list-style-type: none"> • Press the  /  button for 2 ~ 4 seconds to automatically adjust the image (for VGA mode only). • Adjust the H-Position or V-Position settings via OSD.
Screen image bounces or a wave pattern is present in the image	<ul style="list-style-type: none"> • Make sure the signal cable is properly connected to the monitor and the computer. • Move electrical devices that may cause electrical interference.
Screen image has color defects (white does not look white)	<ul style="list-style-type: none"> • Inspect the signal cable and make sure that none of the pins are bent. • Perform All Reset via OSD. • Adjust the R/G/B color settings or select the Color Temperature via OSD.
Screen image is blurry or fuzzy	<ul style="list-style-type: none"> • Press the  /  button for 2 ~ 4 seconds to automatically adjust the image (for VGA mode only). • Adjust the Phase and Clock settings via OSD.
No sound or sound is low	<ul style="list-style-type: none"> • Adjust the volume settings of both your monitor and computer. • Make sure the computer sound card driver is properly installed and activated. • Check your input source. The audio function will be disabled in VGA or DVI input source.

3.4 Supported Timing List

Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Pixel (MHz)
640x480	31.47(N)	59.94(N)	25.18
640x480	35.00(N)	66.66(N)	30.24
640x480	37.87(N)	72.82(N)	31.5
640x480	37.5(N)	75.00(N)	31.5
720x400	31.47(N)	70.08(P)	28.32
800x600	35.16(P)	56.25(P)	36
800x600	37.88(P)	60.32(P)	40
800x600	48.08(P)	72.12(P)	50
800x600	46.86(P)	75.00(P)	49.5
832x624	49.72(P/N)	74.55(P/N)	57.28
1024x768	48.36(N)	60.00(N)	65
1024x768	56.476(N)	70.069(N)	75
1024x768	60.02(N)	75.00(N)	78.75
1152x864	67.5(P/N)	75.00(P/N)	108
1280x960	60.00(P)	60.00(N)	108
1280x1024	63.98(P)	60.02(P)	108
1280x1024	79.98(P)	75.02(P)	135
1366x768	47.712(P)	59.79(P)	85.5
1440x900	55.94(N)	59.89(P)	106.5
1680x1050	65.29(N)	60.00(P)	146.25
1920x1080	67.5(P)	60.00(P)	148.5

* The modes not listed in the above tables may not be supported. For optimal resolution, we recommend that you choose a mode listed in the above tables.

* This monitor supports full HD (480p, 576p, 720p, 1080i/p) video content from game consoles, DVD players and other consumer video devices via HDMI or DisplayPort.