JOC



LCD Monitor User Manual

U27B3M



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Safety

National Conventions

The following subsections describe notational conventions used in this document.

Notes, Cautions, and Warnings

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, cautions, and warnings, and they are used as follows:



NOTE: A NOTE indicates important information that helps you make better use of your computer system.



CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



WARNING: A WARNING indicates the potential for bodily harm and tells you how to avoid the problem. Some warnings may appear in alternate formats and may be unaccompanied by an icon. In such cases, the specific presentation of the warning is mandated by regulatory authority.

Power

1 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 supplied to your home, consult your dealer or local power company.

⚠ Unplug the unit during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.



A Do not overload power strips and extension cords. Overloading can result in fire or electric shock.

1 To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100-240V AC, Min. 5A.



⚠ The wall socket shall be installed near the equipment and shall be easily accessible.

Installation

🗥 Do not place the monitor on an unstable cart, stand, tripod, bracket, or table. If the monitor falls, it can injure a person and cause serious damage to this product. Use only a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with this product. Follow the manufacturer's instructions when installing the product and use mounting accessories recommended by the manufacturer. A product and cart combination should be moved with care.

A Never push any object into the slot on the monitor cabinet. It could damage circuit parts causing a fire or electric shock. Never spill liquids on the monitor.

1 Do not place the front of the product on the floor.

If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.

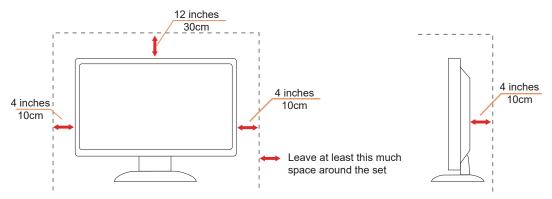
1 Leave some space around the monitor as shown below. Otherwise, air-circulation may be inadequate hence overheating may cause a fire or damage to the monitor.

To avoid potential damage, for example the panel peeling from the bezel, ensure that the monitor does not

downward by more than -5 degrees. If the -5 degree downward tilt angle maximum is exceeded, the monitor damage will

not be covered under warranty.

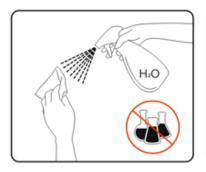
See below the recommended ventilation areas around the monitor when the monitor is installed on the wall or on the stand:



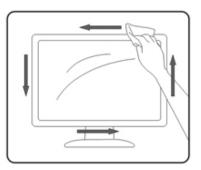
Cleaning

Clean the cabinet regularly with a water-dampened, soft cloth.

• When cleaning use a soft cotton or microfiber cloth. The cloth should be damp and almost dry, do not allow liquid into the case.







Please disconnect the power cord before cleaning the product.

Other

If the product is emitting a strange smell, sound or smoke, disconnect the power plug IMMEDIATELY and contact a Service Center.



Make sure that the ventilating openings are not blocked by a table or curtain.

1 Do not engage the LCD monitor in severe vibration or high impact conditions during operation.

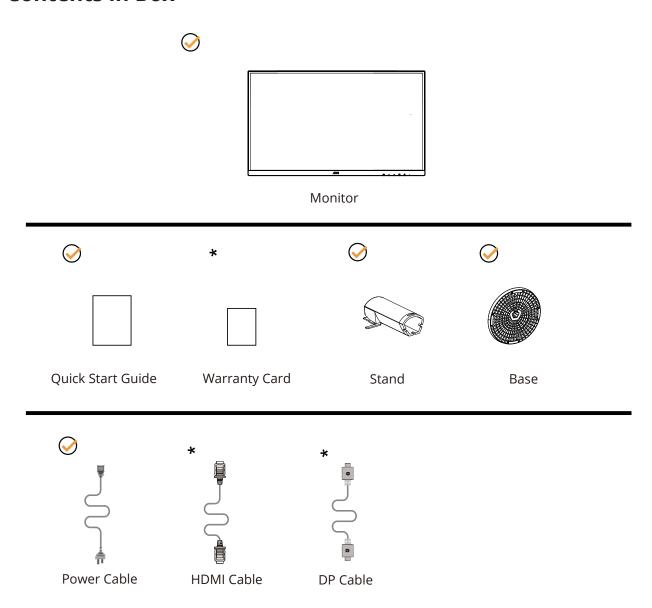
1 Do not knock or drop the monitor during operation or transportation.

The power cords shall be safety approved. For Germany, it shall be H03VV-F, 3G, 0.75 mm2, or better. For other countries, the suitable types shall be used accordingly.

Excessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphones and headphones output voltage and therefore the sound pressure level.

Setup

Contents in Box

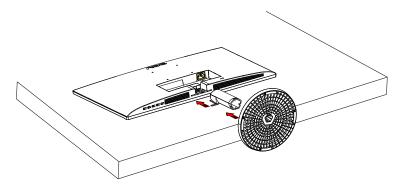


^{*}Not all signal cables will be provided for all countries and regions. Please check with the local dealer or AOC branch office for confirmation.

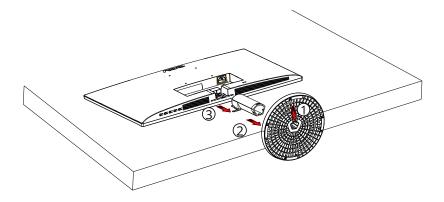
Setup Stand & Base

Please setup or remove the base following the steps as below.

Setup:



Remove:

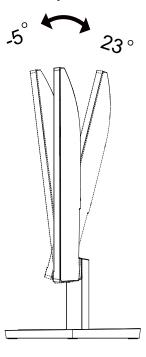


Adjusting Viewing Angle

For optimal viewing it is recommended to look at the full face of the monitor, then adjust the monitor's angle to your own preference.

Hold the stand so you will not topple the monitor when you change the monitor's angle.

You are able to adjust the monitor as below:





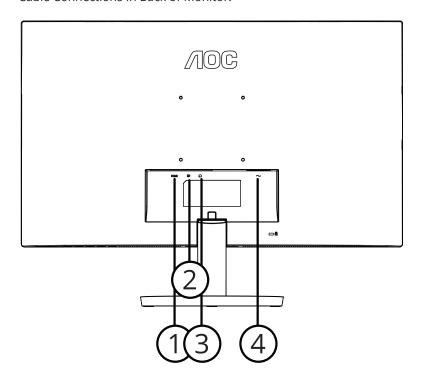
Do not touch the LCD screen when you change the angle. Touching the LCD screen may cause damage.

WARNING:

- 1. To avoid potential screen damage, such as panel peeling, ensure that the monitor does not tilt downward by more than -5 degrees.
- 2. Do not press the screen while adjusting the angle of the monitor. Grasp only the bezel.

Connecting the Monitor

Cable Connections In Back of Monitor:



- 1. HDMI
- 2. DP
- 3. Earphone
- 4. Power

Connect to PC

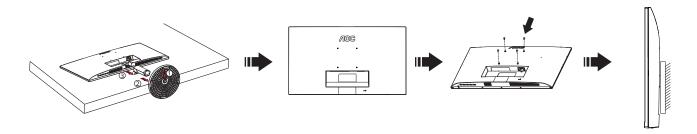
- 1. Connect the power cord to the back of the display firmly.
- 2. Turn off your computer and unplug its power cable.
- 3. Connect the display signal cable to the video connector on your computer.
- 4. Plug the power cord of your computer and your display into a nearby outlet.
- 5. Turn on your computer and display.

If your monitor displays an image, installation is complete. If it does not display an image, please refer Troubleshooting.

To protect equipment, always turn off the PC and LCD monitor before connecting.

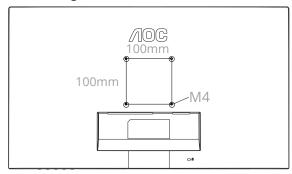
Wall Mounting

Preparing to Install An Optional Wall Mounting Arm.

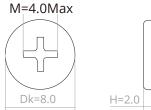


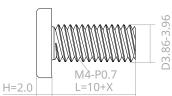
This monitor can be attached to a wall mounting arm you purchase separately. Disconnect power before this procedure. Follow these steps:

- 1. Remove the base.
- 2. Follow the manufacturer's instructions to assemble the wall mounting arm.
- 3. Place the wall mounting arm onto the back of the monitor. Line up the holes of the arm with the holes in the back of the monitor.
- 4. Reconnect the cables. Refer to the user's manual that came with the optional wall mounting arm for instructions on attaching it to the wall.

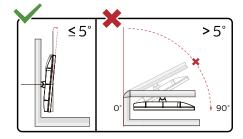


Specification of wall hanger screws: M4*(10+X)mm, (X=Thickness of Wall mount bracket)





Noted: VESA mounting screw holes are not available for all models, please check with the dealer or official department of AOC. Always contact manufacturer for wall-mount installation.



* Display design may differ from those illustrated.

WARNING:

- 1. To avoid potential screen damage, such as panel peeling, ensure that the monitor does not tilt downward by more than -5 degrees.
- 2. Do not press the screen while adjusting the angle of the monitor. Grasp only the bezel.

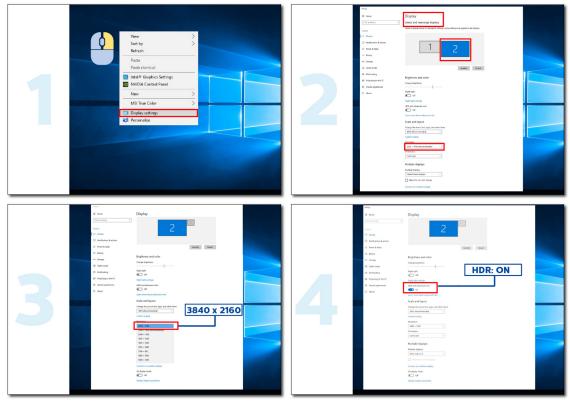
HDR

This monitor is compatible with HDR10 formatted input signals.

The display may automatically activate the HDR function if the player and content are compatible. Please contact the device manufacturer and the content provider for information on the compatibility of your device and content. If you have no need for the automatically activated HDR functions, please select "OFF" from the display settings menu.

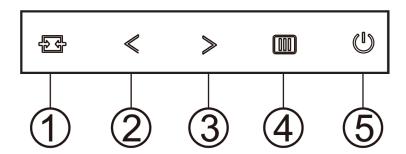
Note:

- 1. 3840×2160@50Hz/60Hz is only available on devices such as UHD players or Xbox/PS.
- 2. Display Settings:
- a. The display resolution is set to 3840x2160, and HDR is preset to ON. Under these conditions, the screen may slightly dim, indicating HDR has been activated.
- b. After entering an application, the best HDR effect can be achieved when the resolution is changed to 3840x2160 (if available).



Adjusting

Hotkeys



1	Source/Exit
2	Clear Vision/<
3	Volume/>
4	Menu/Enter
5	Power

Menu/Enter

When there is no OSD, Press to display the OSD or confirm the selection.

Power

Press the Power button to turn on the monitor.

Volume

When there is no OSD, Press > Volume button to active volume adjustment bar, Press < or > to adjust volume.

Source/Exit

When the OSD is closed, press Source/Exit button will be Source hot key function.

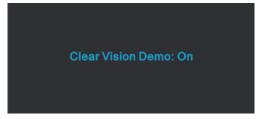
When the OSD is closed, press Source/Exit button continuously about 2 second to do auto configure (Only for the models with D-Sub).

Clear Vision

- 1. When there is no OSD, Press the "<" button to activate Clear Vision.
- 2. Use the ">" or ">" buttons to select between weak, medium, strong, or off settings. Default setting is always "off".



3. Press and hold "<" button for 5 seconds to activate the Clear Vision Demo, and a message of "Clear Vision Demo: on" will be display on the screen for a duration of 5 seconds. Press Menu or Exit button, the message will disappear. Press and hold "<" button for 5 seconds again, Clear Vision Demo will be off.



Clear Vision function provides the best image viewing experience by converting low resolution and blurry images into clear and vivid images.

OSD Setting

Basic and simple instruction on the control keys.



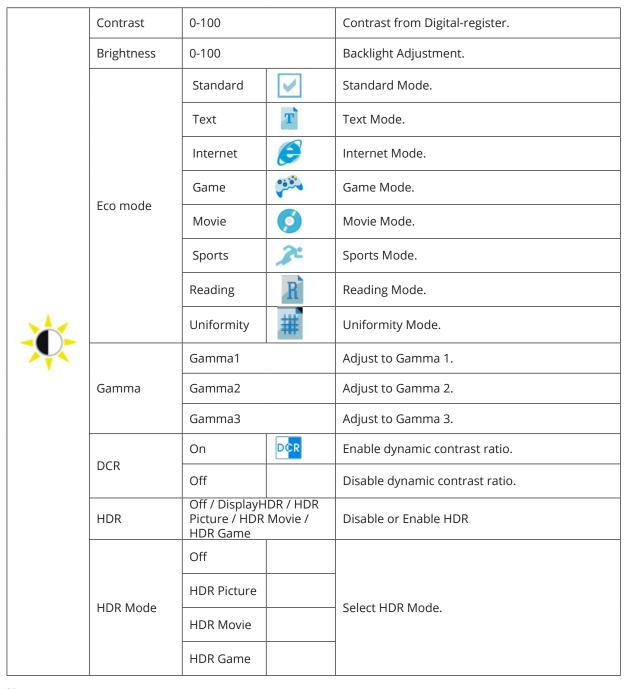
- 1). Press the **III MENU-button** to activate the OSD window.
- 2). Press < Left or > Right to navigate through the functions. Once the desired function is highlighted, press the III MENU-button to activate it, press < Left or > Right to navigate through the sub-menu functions. Once the desired function is highlighted, press III MENU-button to activate it.
- 3). Press < **Left** or > to change the settings of the selected function. Press to exit. If you want to adjust any other function, repeat steps 2-3.
- 4). OSD Lock Function: To lock the OSD, press and hold the III MENU-button while the monitor is off and then press () power button to turn the monitor on. To un-lock the OSD press and hold the III MENU-button while the monitor is off and then press () power button to turn the monitor on.

Notes:

- 1). If the product has only one signal input, the item of "Input Select" is disable to adjust.
- 2). ECO modes (except Standard mode), DCR, DCB mode and Picture Boost, for these four states that only one state can exist.

Luminance



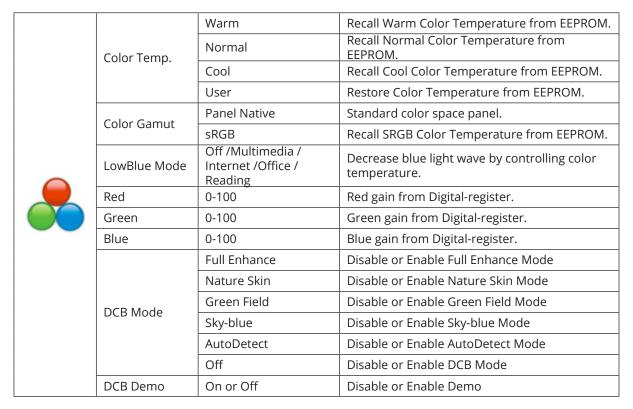


Note:

When "HDR" is set to "non-off", the items "Contrast", "Brightness", "ECO", "Gamma", "DCR" cannot be adjusted. When "HDR Mode" is set to "non-off", the items "Contrast", "ECO", "Gamma" cannot be adjusted. When "Color Gamut" under "Color Setup" is set to "sRGB", the items "Contrast", "ECO", "Gamma", "HDR Mode" cannot be adjusted.

Color Setup





Note:

When "HDR Mode" under "Luminance" is set to "non-off", all items under "Color Setup" cannot be adjusted. When "Color Gamut" is set to "sRGB", all items under "Color Setup" cannot be adjusted except Color Gamut.

Picture Boost



	Bright Frame	on or off	Disable or Enable Bright Frame
-	Frame Size	14-100	Adjust Frame Size
	Brightness	0-100	Adjust Frame Brightness
•	Contrast 0-100		Adjust Frame Contrast
	H. position	0-100	Adjust Frame horizontal Position
	V. position	0-100	Adjust Frame vertical Position

Note:

Adjust the brightness, contrast, and position of the Bright Frame for better viewing experience. When "HDR Mode" under "Luminance" is set to "non-off", all items under "Picture Boost" cannot be adjusted.

OSD Setup



	Language		Select the OSD language
	Timeout	5-120	Adjust the OSD Timeout
	DP Capability	1.1/1.2/1.4	If the DP video content supports DP1.2/1.4, please select DP1.2/1.4 for DP Capability; otherwise, please select DP1.1
Contract of the contract of th	H. Position	0-100	Adjust the horizontal position of OSD
-96	V. Position	0-100	Adjust the vertical position of OSD
	Transparence	0-100	Adjust the transparence of OSD
	Break Reminder	on / off	Break reminder if the user continuously work for more than 1hrs

Game Setting



		Off	No optimization by Game Mode.	
		FPS	For playing FPS (First Person Shooters) games. Improves dark theme black level details.	
		RTS	For playing RTS (Real Time Strategy). Improves the image quality.	
	Game Mode	Racing	For playing Racing games, Provides fastest response time and high color saturation.	
		Gamer 1	User's preference settings saved as Gamer 1.	
		Gamer 2	User's preference settings saved as Gamer 2.	
		Gamer 3	User's preference settings saved as Gamer 3.	
منعن ا	Shadow Control	0-100	Shadow Control Default is 50, then end-user can adjust from 50 to 100 or 0 to increase contrast for clear picture. 1. If picture is too dark to be saw the detail clearly, adjusting from 50 to100 for clear picture. 2. If picture is too white to be saw the detail clearly, adjusting from 50 to0 for clear picture.	
	Low Input Lag	On or Off	Turn off frame buffer to decrease input lag	
	Game Color	0-20	Game Color will provide 0-20 level for adjusting saturation to get better picture.	
		Off		
	Overdrive	Weak	Adjust the response time.	
	Overdrive	Medium	Aujust the response time.	
		Strong		
	Dial Point	On or Off	The"Dial Point"function places an aiming indicator in the center of screen for helping gamers to play First Person Shooter (FPS) games with an accurate and precise aiming.	

Note:

When "HDR Mode" under "Luminance" is set to "non-off", the items "Game Mode", "Shadow Control", "Game Color" cannot be adjusted.

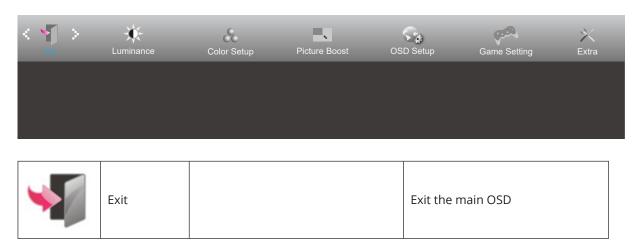
When "Color Gamut" under "Color Setup" is set to "sRGB", the items "Game Mode", "Shadow Control", "Game Color" cannot be adjusted.

Extra



	Input Select		Select Input Signal Source
	Off timer	0-24hrs	Select DC off time
		Wide	
		4:3	
>	Image Ratio	1:1	Select image ratio for display.
		movie1	
		movie2	
	DDC/CI	Yes or No	Turn ON/OFF DDC/Cl Support
		Yes or No	Reset the menu to default
	Reset	ENERGY STAR® or No	Reset the menu to default (ENERGY STAR® available for selective models)

Exit



LED Indicator

Status	LED Color
Full Power Mode	White
Active-off Mode	Orange

Troubleshoot

Problem & Question	Possible Solutions		
Power LED Is Not ON	Make sure the power button is ON and the Power Cord is properly connected to a grounded power outlet and to the monitor.		
No images on the screen	 Is the power cord connected properly? Check the power cord connection and power supply. Is the video cable connected correctly?? (Connected using the VGA cable) Check the VGA cable connection. (Connected using the HDMI cable) Check the HDMI cable connection. (Connected using the DP cable) Check the DP cable connection. *VGA/HDMI/DP input is not available on every model. If the power is on, reboot the computer to see the initial screen (the login screen.) If the initial screen (the login screen) appears, boot the computer in the applicable mode (the safe mode for Windows 7/8/10) and then change the frequency of the video card. (Refer to the Setting the Optimal Resolution) If the initial screen (the login screen) does not appear, contact the Service Center or your dealer. Can you see "Input Not Supported" on the screen? You can see this message when the signal from the video card exceeds the maximum resolution and frequency that the monitor can handle properly. Adjust the maximum resolution and frequency that the monitor can handle properly. Make sure the AOC Monitor Drivers are installed. 		
Picture Is Fuzzy & Has Ghosting Shadowing Problem Adjust the Contrast and Brightness Controls. Press hot-key (AUTO) to auto-adjust. Make sure you are not using an extension cable or switch box. We replugging the monitor directly to the video card output connector on the contrast and Brightness Controls.			
Picture Bounces, Flickers Or Wave Pattern Appears In The Picture Move electrical devices that may cause electrical interference as far away the monitor as possible. Use the maximum refresh rate your monitor is capable of at the resolution you are using.			
Monitor Is Stuck In Active Off-Mode"	The Computer Power Switch should be in the ON position. The Computer Video Card should be snugly fitted in its slot. Make sure the monitor's video cable is properly connected to the computer. Inspect the monitor's video cable and make sure no pin is bent. Make sure your computer is operational by hitting the CAPS LOCK key on the keyboard while observing the CAPS LOCK LED. The LED should either turn ON or OFF after hitting the CAPS LOCK key.		
Missing one of the primary colors (RED, GREEN, or BLUE)	Inspect the monitor's video cable and make sure that no pin is damaged. Make sure the monitor's video cable is properly connected to the computer.		
Screen image is not centered or sized properly	Adjust H-Position and V-Position or press hot-key (AUTO).		
Picture has color defects (white does not look white) Adjust RGB color or select desired color temperature.			
Horizontal or vertical disturbances on the screen	Use Windows 7/8/10 shut-down mode to adjust CLOCK and FOCUS. Press hot-key (AUTO) to auto-adjust.		
Regulation & Service Please refer to Regulation & Service Information which is in the CD man or www.aoc.com (to find the model you purchase in your country and to Regulation & Service Information in Support page.)			

Specification

General Specification

	Model name	U27B3M				
	Driving system	TFT Color LCD				
Panel	Viewable Image Size	68.5cm diagonal				
	Pixel pitch	0.1554(H)mm x 0.1554(V)) mm			
	Display Color	1.07B Colors				
	Horizontal scan range	30k-140kHz				
	Horizontal scan Size(Maximum)	596.736mm				
	Vertical scan range	23-75Hz				
	Vertical Scan Size(Maximum)	335.664mm				
	Optimal preset resolution	3840x2160@60Hz	_			
	Max resolution	3840x2160@60Hz				
	Plug & Play	VESA DDC2B/CI				
Others	Power Source	100-240V~, 50/60Hz,1.5A				
		Typical(default brightnes contrast)	28W			
	Power Consumption	Max. (brightness = 100, c	≤45W			
		Standby mode	≤0.3W			
		Normal Operation	95.56 BTU/hr (typ.)			
	Heat Dissipation	Sleep (Standby mode)	<1.02 BTU/hr			
	Heat Dissipation	Off mode		<1.02 BTU/hr		
		Off mode(AC switch)	0 BTU/hr			
Physical	Connector Type	HDMI/DP/Earphone				
Characteristics	Signal Cable Type	Detachable				
		Operating 0°C~40°C				
	Temperature	Non-Operating -25°C~55°C				
		 		on-condensing)		
Environmental	Humidity	Non-Operating 5%~93% (nor		n-condensing)		
	Altitud	Operating 0m~5000m (0		Oft~16404ft)		
	Altitude	Non-Operating 0m~12192m ((0ft~40000ft)		

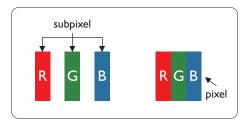


AOC Monitors Panel Pixel Defect Policy

AOC strives to deliver the highest quality products. We use some of the industry's most advanced manufacturing processes and practice stringent quality control. However, pixel or sub pixel defects on the Monitor panels used in the monitors are sometimes unavoidable.

No manufacturer can guarantee that all panels will be free from pixel defects, but AOC guarantees that any monitor with an unacceptable number of defects will be repaired or replaced under warranty. This notice explains the different types of pixel defects and defines acceptable defect levels for each type. In order to qualify for repair or replacement under warranty, the number of pixel defects on a Monitor panel must exceed these acceptable levels. For example, no more than 0.0004% of the sub pixels on a monitor may be defective.

Furthermore, AOC sets even higher quality standards for certain types or combinations of pixel defects that are more noticeable than others. This policy is valid worldwide.



Pixels and Sub pixels

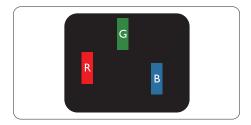
A pixel, or picture element, is composed of three sub pixels in the primary colors of red, green and blue. Many pixels together form an image. When all sub pixels of a pixel are lit, the three colored sub pixels together appear as a single white pixel. When all are dark, the three colored sub pixels together appear as a single black pixel. Other combinations of lit and dark sub pixels appear as single pixels of other colors.

Types of Pixel Defects

Pixel and sub pixel defects appear on the screen in different ways. There are two categories of pixel defects and several types of sub pixel defects within each category.

Bright Dot Defects

Bright dot defects appear as pixels or sub pixels that are always lit or 'on'. That is, a bright dot is a sub-pixel that stands out on the screen when the monitor displays a dark pattern. There are the types of bright dot defects.



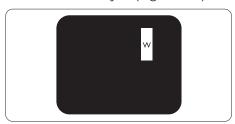
One lit red, green or blue sub pixel.



Two adjacent lit sub pixels:

- Red + Blue = Purple
- Red + Green = Yellow

- Green + Blue = Cyan (Light Blue)



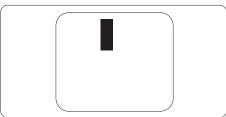
Three adjacent lit sub pixels (one white pixel).

Note

A red or blue bright dot must be more than 50 percent brighter than neighboring dots while a green bright dot is 30 percent brighter than neighboring dots.

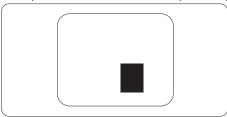
Black Dot Defects

Black dot defects appear as pixels or sub pixels that are always dark or 'off'. That is, a dark dot is a sub-pixel that stands out on the screen when the monitor displays a light pattern. These are the types of black dot defects.



Proximity of Pixel Defects

Because pixel and sub pixels defects of the same type that are near to one another may be more noticeable, AOC also specifies tolerances for the proximity of pixel defects.



Pixel Defect Tolerances

In order to qualify for repair or replacement due to pixel defects during the warranty period, a Monitor panel in a AOC panel monitor must have pixel or sub pixel defects exceeding the tolerances listed in the web manual.

BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL
1 lit subpixel	2
2 adjacent lit subpixels	1
3 adjacent lit subpixels (one white pixel)	0
Distance between two bright dot defects*	>=15mm
Total bright dot defects of all types	2
BLACK DOT DEFECTS	ACCEPTABLE LEVEL
1 dark subpixel	5 or fewer
2 adjacent dark subpixels	2 or fewer
3 adjacent dark subpixels	≤1
Distance between two black dot defects*	>=15mm
Total black dot defects of all types	5 or fewer
TOTAL DOT DEFECTS	ACCEPTABLE LEVEL
Total bright or black dot defects of all types	5 or fewer

Note

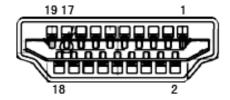
^{*: 1} or 2 adjacent sub pixel defects = 1 dot defect.

Preset Display Modes

STANDARD	RESOLUTION(±1Hz)	HORIZONTAL FREQUENCY(kHz)	VERTICAL FREQUENCY(Hz)
	640x480@60Hz	31.469	59.94
VGA	640x480@72Hz	37.861	72.809
	640x480@75Hz	37.5	75
	800x600@56Hz	35.156	56.25
CVC A	800x600@60Hz	37.879	60.317
SVGA	800x600@72Hz	48.077	72.188
	800x600@75Hz	46.875	75
	1024x768@60Hz	48.363	60.004
XGA	1024x768@70Hz	56.476	70.069
	1024x768@75Hz	60.023	75.029
CVCA	1280x1024@60Hz	63.981	60.02
SXGA	1280x1024@75Hz	79.976	75.025
MAN/C A .	1440x900@60Hz	55.935	59.887
WXGA+	1440x900@60Hz	55.469	59.901
MCVCA	1680x1050@60Hz	65.29	59.954
WSXGA	1680x1050@60Hz	64.674	59.883
FHD	1920x1080@60Hz	67.5	60
QHD	2560x1440@60Hz	88.787	59.951
UHD	3840x2160@30Hz	67.5	30
UHD	3840x2160@60Hz	133.32	60
	IBM N	10DES	
DOS	DOS 720x400@70Hz		70.087
	MAC N	MODES	
VGA	640x480@67Hz	35	66.667
SVGA	832x624@75Hz	49.725	74.551
XGA	1024x768@75Hz	60.241	74.927

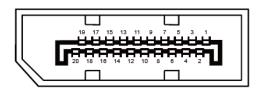
Note: According to the VESA standard, there may be a certain error (+/-1Hz) when calculating the refresh rate (field frequency) of different operating systems and graphics cards. In order to improve compatibility, the nominal refresh rate of this product has been rounded off. Please refer to the actual product.

Pin Assignments



19-Pin Color Display Signal Cable

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
1.	TMDS Data 2+	9.	TMDS Data 0-	17.	DDC/CEC Ground
2.	TMDS Data 2 Shield	10.	TMDS Clock +	18.	+5V Power
3.	TMDS Data 2-	11.	TMDS Clock Shield	19.	Hot Plug Detect
4.	TMDS Data 1+	12.	TMDS Clock-		
5.	TMDS Data 1Shield	13.	CEC		
6.	TMDS Data 1-	14.	Reserved (N.C. on device)		
7.	TMDS Data 0+	15.	SCL		
8.	TMDS Data 0 Shield	16.	SDA		



20-Pin Color Display Signal Cable

Pin No.	Signal Name	Pin No.	Signal Name
1	ML_Lane 3 (n)	11	GND
2	GND	12	ML_Lane 0 (p)
3	ML_Lane 3 (p)	13	CONFIG1
4	ML_Lane 2 (n)	14	CONFIG2
5	GND	15	AUX_CH(p)
6	ML_Lane 2 (p)	16	GND
7	ML_Lane 1 (n)	17	AUX_CH(n)
8	GND	18	Hot Plug Detect
9	ML_Lane 1 (p)	19	Return DP_PWR
10	ML_Lane 0 (n)	20	DP_PWR

Plug and Play

Plug & Play DDC2B Feature

This monitor is equipped with VESA DDC2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities.

The DDC2B is a bi-directional data channel based on the I2C protocol. The host can request EDID information over the DDC2B channel.