

LCD Monitor User Manual

C3583FQ LED backlight



WWW.AOC.COM ©2015 AOC. All Rights Reserved.

Safety	4
National Conventions	4
Power	5
Installation	6
Cleaning	7
Other	8
Setup	9
Contents in Box	9
Adjusting Viewing Angle	10
Using "MHL (Mobile High-Definition Link)"	
Connecting the Monitor	12
Adaptive sync function	13
Adjusting	14
Setting Optimal Resolution	14
Windows 10	14
Windows 8	16
Windows 7	18
Hotkeys	20
OSD Setting	21
Luminance	22
Image Setup	23
Color Setup	24
Picture Boost	25
OSD Setup	26
Extra	27
Exit	28
LED Indicator	29
Driver	
Monitor Driver	
Windows 10	30
Windows 8	34
Windows 7	
i-Menu	41
e-Saver	42
Screen+	43
Troubleshoot	44
Specification	46
General Specification	46
Preset Display Modes	48
Pin Assignments	49
Plug and Play	51
Regulation	52
FCC Notice	52
WEEE Declaration	53
WEEE Declaration for India	53
RoHS Declaration for India	53

EPA Energy Star	54
EPEAT Declaration	54
Service	55
Warranty Statement for Europe	55
Warranty Statement for Middle East and Africa (MEA)	57
AOC International (Europe) B.V.	59
Warranty Statement for North & South America (excluding Brazil)	60
EASE PROGRAME	62
TCO DOCUMENT	63

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

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.

The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.

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.

To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 20V, 3.25A

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

For use only with the attached power adapter (Only for monitors with power adapter). Manufacturers:

1) TPV ELECTRONICS (FUJIAN) CO., LTD model : ADPC2090

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.

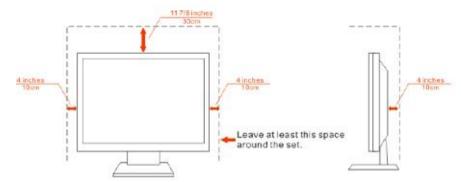
Never push any object into the slot on the monitor cabinet. It could damage circuit parts causing a fire or electric shock. Never spill liquids on the monitor.

Lo 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.

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.

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



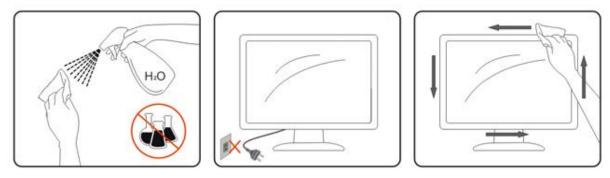
Installed with stand

Cleaning

Clean the cabinet regularly with cloth. You can use soft-detergent to wipe out the stain, instead of strong-detergent which will cauterize the product cabinet.

When cleaning, make sure no detergent is leaked into the product. The cleaning cloth should not be too rough as it will scratch the screen surface.

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.

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

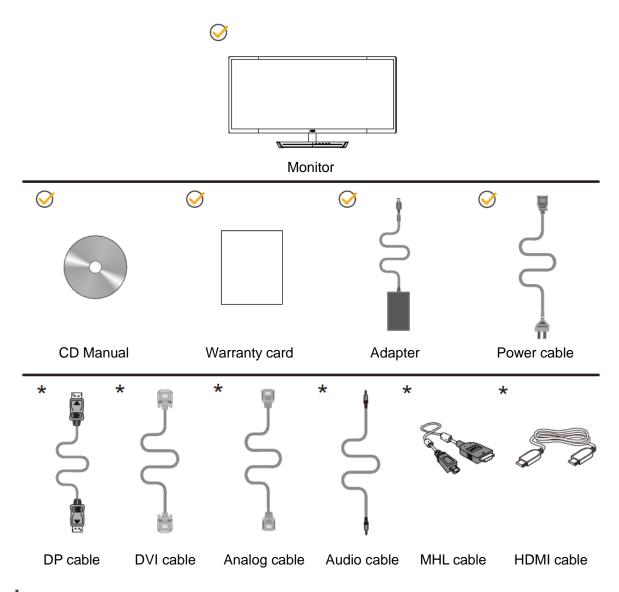
L Do not engage the LCD monitor in severe vibration or high impact conditions during operation.

For display with glossy bezel the user should consider the placement of the display as the bezel may cause disturbing reflections from surrounding light and bright surfaces.

If the phone on the base of LCD monitor when the phone calls will affect the circuit characteristics, may cause the screen to mute or screen interference.

Setup

Contents in Box



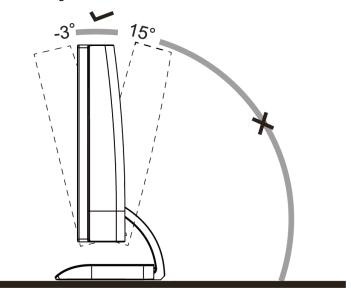
* Not all signal cables (DP, Dual link DVI, Analog, Audio, HDMI, MHL) will be provided for all countries and regions. Please check with the local dealer or AOC branch office for confirmation.

Adjusting Viewing Angle

For optimal viewing, it is recommended to look at the full face of the monitor, and 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's angle from -3° to 15°.



Do not adjust the viewing angle over 15 degrees in order to avoid damage.

Using "MHL (Mobile High-Definition Link)"

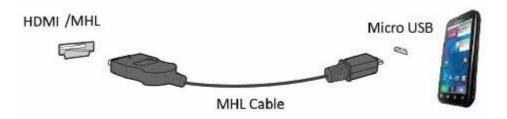
1."MHL" (Mobile High-Definition Link)

This feature allows you to enjoy videos and photos (imported from a connected mobile device that supports MHL) on the screen of the product.

- To use the MHL function, you need an MHL-certified mobile device. You can check if your mobile device is MHL certified on the device manufacturer's website. To find a list of MHL-certified devices, visit the official MHL website (http://www.mhlconsortium.org).
- To use the MHL function, the latest version of software must be installed on the mobile device.
- On some mobile devices, the MHL function may not be available depending on the device's performance or functionality.
- Since the display size of the product is larger than those of mobile devices, the picture quality may degrade.
- This product is officially MHL-certified. If you encounter any problem when using the MHL function, please contact the manufacturer of the mobile device.
- The picture quality may degrade when content (imported from the mobile device) with a low Resolution is played on the product.

Using "MHL"

1. Connect the micro USB port on the mobile device to the [HDMI / MHL] port on the product using the MHL cable.



- When the MHL cable is used, [HDMI / MHL] is the only port on this monitor that supports the MHL function.
- Mobile device must be purchased separately.
- 2. Connect the AC power cord to the product and a power outlet.
- 3. Press the source button and switch to HDMI /MHL to activate MHL mode.
- 4. After about 3 seconds, the MHL screen will be displayed if MHL mode is active.

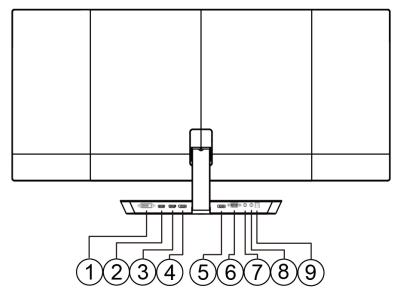
Remark: The indicated time "3 sec later" may vary depending on the mobile device.

When the mobile device is not connected or does not support MHL

• If MHL mode is not activated even though the mobile device supports MHL, check if mobile device MHL port is MHL standard port otherwise an additional MHL-enabled adapter is required.

Connecting the Monitor

Cable Connections In Back of Monitor and Computer:



- 1 DVI-D (Dual link)
- 2 HDMI/MHL-2
- 3 HDMI/MHL-1
- 4 DP-2
- 5 DP-1
- 6 D-SUB
- 7 Audio in
- 8 Earphone out
- 9 Power

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

- 1 Connect the power cable to the AC port on the back of the monitor.
- 2 Connect one end of the 15-pin D-Sub cable to the back of the monitor and connect the other end to the computer's D-Sub port.
- 3 Optional (Requires a video card with DVI port) Connect one end of the DVI cable to the back of the monitor and connect the other end to the computer's DVI port.
- 4 Optional (Requires a video card with HDMI port) Connect one end of the HDMI cable to the back of the monitor and connect the other end to the computer's HDMI port.
- 5 Optional (Requires a video card with DP port) Connect one end of the DP cable to the back of the monitor and connect the other end to the computer's DP port.
- 6 Turn on your monitor and computer.
- 7 Video content supporting resolution:
 - (1) MHL: 1920 x 1080/60Hz (Maximum)
 - (2) D-sub/DVI Dual-Link/HDMI: 2560x1080/60Hz (Maximum)
 - (3) DP: 2560x1080/144Hz (Maximum)

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

Adaptive sync function

- 1. Adaptive sync function is working with DisplayPort.
- 2. Compatible Graphics Card: Recommend list is as the below, also could be checked by visiting

www.AMD.com

AMD Radeon R9 295X2 AMD Radeon R9 290X AMD Radeon R9 290 AMD Radeon R9 285 AMD Radeon R7 260X AMD Radeon R7 260

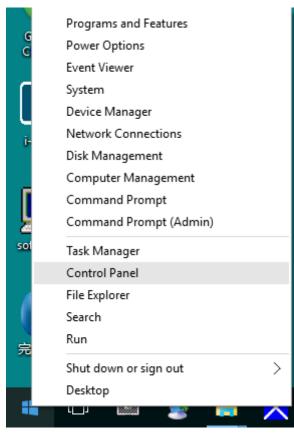
Adjusting

Setting Optimal Resolution

Windows 10

For Windows 10:

- Right click START.
- Click "CONTROL PANEL".



• Click "DISPLAY".



• Click on the "Change display settings" button.

Display		-	\times
→ · ↑ 💷 > Control	Panel > All Control Panel Items > Display 🗸 🖑	Search Control Panel	Q
Edit View Tools Help			
Control Panel Home	Change size of items		
Adjust resolution Calibrate color	To change the size of text, apps, and other items, <u>use these display settings</u> . If you want to temporarily enlarge a portion of your screen, use <u>Magnifier</u> . If neither of these makes the changes you want, you can <u>set a custom</u> <u>scaling level</u> (not recommended). Setting custom levels can lead to unexpected behavior on some displays.		
<u>Change display settings</u> Adjust ClearType text			
, ,,	Change only the text size Instead of changing the size of everything on the desktop, change only the text size for a specific item.		
	Title bars V 9 V Bold		
	Apply		
See also			
Personalization			

• Set the resolution **SLIDE-BAR** to Optimal preset resolution.

Screen Resolution		-	×
← → ~ ↑ 🗔 > Control Par File Edit View Tools Help	el > All Control Panel Items > Display > Screen Resolution V 한	Search Control Panel	Q
	Change the appearance of your display Detect]	
	Identify		
	Display: 1. B24 ~ Resolution: 1920 × 1080 (Recommended) ~		
	Orientation: Landscape V Advanced setting:	5	
	Make text and other items larger or smaller What display settings should I choose?		
	OK Cancel Apply		

Windows 8

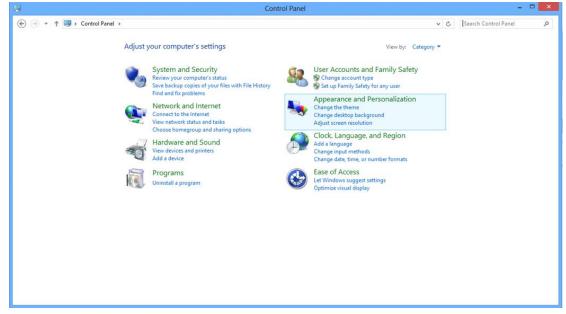
For Windows 8:

• Right click and click All apps at the bottom-right of the screen.



Apps				
o Bing	1 Reader		WordPad	Computer
Calendar	skyCrive	Calculator	XPS Viewer	Control Panel
Camera	Sports	Character Map		Default Programs
Desktop	Store 5	Math Input Panel	Magnifier	The Explorer
Finance	Travel	Notepad	Naviator	Help and Support
Games	I Wideo	🧒 Part	On-Screen Keyboard	ر م ^ا
🧧 Internet Explorer	Weather	Remote Desktop Connection	Windows Speech Recognition	and Tisk Manager
🖂 Mal		Snipping Tool		Windows Defender
Maps Naps		Sound Recorder	GPUNiew	S Windows Easy Transfer
Nessaging		Steps Recorder	GPUNiew Help	Sea Windows Easy Transfer Reports
n Music		Sticky Notes	Windows Performance	Vindows PowerShell
Reus News		Windows Fax and Scan	Windows Performance	
People		1 Windows Journal		
Photos		Windows Media Player	Command Prompt	

- Set the "View by" to "Category".
- Click "Appearance and Personalization".



• Click "DISPLAY".

Appearance and Personalization		×
(ⓒ ⊙ ▼ ↑ S, Control Panel → Appearance and Personalization → v	C Search Control Panel	Q
Control Panel Home System and Security System and Security Change the theme Change desktop background Network and Internet Hardware and Sound Display Hardware and Sound Display Make test and other items larger or smaller Adjust screen resolution Programs Display Make test and other items larger or smaller Adjust screen resolution Programs Display Make test and other items larger or smaller Adjust screen resolution Octock Language, and Region Ease of Access Ease of Access Center Accommodate low vision Use screen reader Turn on easy access keys Turn High Contrast on or off Objective Folder Options Ease of Access Folder Options Specify single or double-click to open Show hidden files and folders Image: Fonts Forts Preview, delete, or show and hide fonts Change Font Settings Adjust ClearType test		

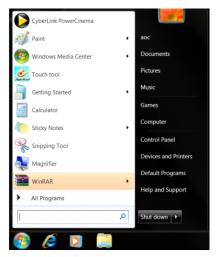
• Set the resolution SLIDE-BAR to Optimal preset resolution

ā	Screen Resolution							
(e) → ↑ (Image → Control Panel → Appearance and Personalization)	Appearance and Personalization + Display + Screen Resolution + C							
Change the ap	1.PLX2780H v	Detect Identify						
Resolution: Orientation: Make text and othe What display settin	1600 × 900	anced settings						
	OK Cancel 1024 × 768 Low	Apply						

Windows 7

For Windows 7:

- 1. Click START.
- 2. Click "CONTROL PANEL".



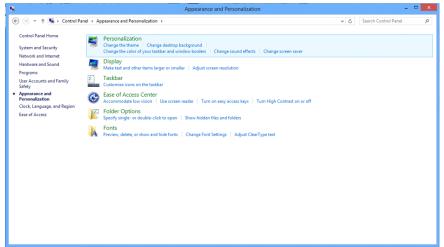
• Click "Appearance".

Action Center	C Administrative Tools	Lo AutoPlay	Backup and Restore	
Color Management	Credential Manager	💕 Date and Time	😨 Default Programs	
Desktop Gadgets	Device Manager	and Devices and Printers	💐 Display	
Ease of Access Center	E Folder Options	Fonts	Getting Started	
& HomeGroup	A Indexing Options	Internet Options	- Keyboard	
Location and Other Sensors	J Mouse	Setwork and Sharing Center	Dotification Area Icons	
NVIDIA Control Panel	MVIDIA PhysX	🌲 Parental Controls	/ Pen and Touch	
Performance Information and Tools	Personalization	Phone and Modern	Power Options	
Programs and Features	Realtek HD Audio Manager	Recovery	A Region and Language	
RemoteApp and Desktop Connections	Sound	Ø Speech Recognition	Sync Center	
System	Tablet PC Settings	Taskbar and Start Menu	Troubleshooting	
User Accounts	a Windows Anytime Upgrade	Windows CardSpace	Windows Defender	
Windows Firewall	A Windows Update			

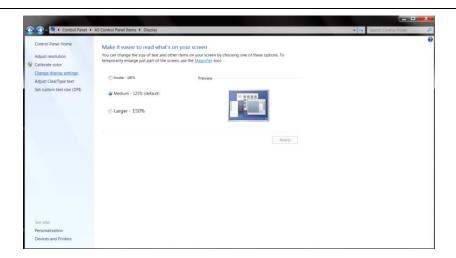
Click "DISPLAY".

L

•



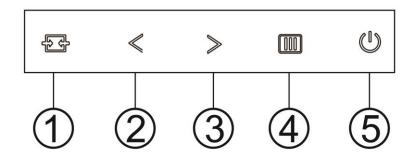
• Click on the "Change display settings" button.



Set the resolution SLIDE-BAR to Optimal preset resolution

		Screen Resolution			×
🛞 🕘 👻 🕇 🜉 🕨 Control Panel	Appearance and Personalization			👻 🖒 Search Control Pa	inel "P
		earance of your display	Detect Identify		
	Resolution: Orientation:	1920 × 1080 (Recommended) High 1920 × 1080 (Recommended) 1920 × 1080 (Recommended) 1600 × 900	Advanced settings		
	Make text and other What display setting		OK Cancel Apply		
		1024 × 768 Low			

Hotkeys



1	Source/Auto/Exit
2	Game mode/<
3	Volume/>
4	Menu/Enter
5	Power

Menu/Enter

Press to display the OSD or confirm the selection.

Power

Press the Power button to turn on/off the monitor.

Volume/>

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

Auto / Exit / Source hot key

When there is no OSD, press Auto/Source button continuously about 2 second to do auto configure. When the OSD is closed, press Source button will be Source hot key function. Press Source button continuously to select the input source showed in the message bar, press Menu/Enter button to change to the source selected.

Game mode/<

When there is no OSD, press the minus key to open game mode function, then press < or > key to select game mode (FPS, RTS, Racing, Gamer 1 or Gamer 2) basing on the different game types.

OSD Setting

Basic and simple instruction on the control keys.

< <u>*</u> >	Image Setur)	Color Setup	e Boost	Sg OSD Setup)× Extra	Exit
Contrast							50
			DCR	OFF			
			OverDrive	OFF			

- 1. Press the III MENU-button to activate the OSD window.
- Press < or > to navigate through the functions. Once the desired function is highlighted, press the MENU-button to activate it. If there is a sub-menu, press < or > to navigate through the sub-menu functions.
- 3. Press < or > to change the settings of the selected function. Press AUTO 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 **MENU-button** while the monitor is off and then press **U** power button to turn the monitor on. To un-lock the OSD press and hold the **MENU-button** while the monitor is off and then press **U** power button to turn the monitor on.

Notes:

- 1. If the product has only one signal input, the item of "Input Select" is disabled.
- 2. If the product screen size is 4:3 or input signal resolution is native resolution, the item of "Image Ratio" is disabled.
- 3. One of Clear vision, DCR, Color Boost, and Picture Boost functions is activated; the other three functions are turned off accordingly.

Luminance

	Image Setu	D	Color Setup	re Boost	OSD Setup	X Extra	Exit	
Contrast								
			DCR	OFF				
			OverDrive	OFF				

1 Press **MENU** (Menu) to display menu.

2 Press < or > to select (Luminance), and press **MENU** to enter.

3 Press \leq or > to select submenu.

4 Press \leq or > to adjust.

5 Press AUTO to exit.

	Contrast	0-100		Contrast from Digital-register.		
	Brightness	0-100		Backlight Adjustment		
		Standard	>	Standard Mode		
		Text	T	Text Mode		
	Eco mode	Internet	E	Internet Mode		
	Ecomode	Game		Game Mode		
		Movie	Ó	Movie Mode		
		Sports		Sports Mode		
1	Gamma	Gamma1		Adjust to Gamma 1		
-0-		Gamma2		Adjust to Gamma 2		
1		Gamma3		Adjust to Gamma 3		
		Off		Disable dynamic contrast ratio		
	DCR	On	DCR	Enable dynamic contrast ratio		
		Weak		Adjust the response time.		
	OverDrive	Medium		It could be blur image, if user turns on the OverDrive in Strong Level.		
	OverDrive	Strong		User can adjust OverDrive level base on user's		
		Off		preference or turn it off.		
	ShadowControl	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 to 100 for clear picture. 2. If picture is too white to be saw the detail 		
				clearly, adjusting from 50 to 0 for clear picture		

Image Setup

mage Schip	Color Setup	Picture Boost	SSD Setup) Extra	Exit	Luminance
Clock	50	H. Positio	n 🗖	50		
Phase	50	V. Positio	n E	50		
Sharpness	50					

1 Press **MENU** (Menu) to display menu.

2 Press < or > to select (Image Setup), and press **MENU** to enter.

3 Press \leq or > to select submenu.

4 Press \leq or > to adjust.

5 Press AUTO to exit.

Clock	0-100	Adjust picture Clock to reduce Vertical-Line noise.
Phase	0-100	Adjust Picture Phase to reduce Horizontal-Line noise.
Sharpness	0-100	Adjust picture sharpness.
 H.Position	0-100	Adjust the horizontal position of the picture.
V.Position	0-100	Adjust the vertical position of the picture.

Color Setup

Color Selup		Picture B	Boost	OSD Setup	X Extra	Exit	Luminance	Z Image Setup
Color Temp.	-	Warm	•	Red		50		
DCB Mode	•	OFF	•	Green		50		
DCB Demo	•	OFF	×	Blue		50		

1 Press **MENU** (Menu) to display menu.

- 2 Press \lt or > to select \checkmark (Color Setup), and press **MENU** to enter.
- 3 Press \leq or > to select submenu.
- 4 Press \leq or > to adjust.
- 5 Press AUTO to exit.

		Warm		Recall Warm Color Temperature from EEPROM.
		Normal		Recall Normal Color Temperature from EEPROM.
	Color Temp.	Cool		Recall Cool Color Temperature from EEPROM.
		sRGB		Recall SRGB Color Temperature from EEPROM.
		User		Recall User Color Temperature from EEPROM
	DCB Mode	Full Enhance	ON/OFF	Red/Green/Blue Gain
		Nature Skin	ON/OFF	Red Gain from Digital-register.
		Green Field	ON/OFF	Green Gain from Digital-register.
		Sky-blue	ON/OFF	Blue Gain from Digital-register.
		AutoDetect	ON/OFF	Auto gain for input signal
	DCB Demo		ON/OFF	Enhance Area in half Picture
	Red		0-100	Red gain from Digital-register.
	Green		0-100	Green gain from Digital-register.
	Blue		0-100	Blue gain from Digital-register.

Picture Boost

<	Se osd se		× Extra	Exit	Luminance	Image Setup	Color Setup
Bright Frame Frame Size	 OFF 	► □ 14	Brightr		50 50	H. Position	0 0

1 Press **MENU** (Menu) to display menu.

- 2 Press < or > to select (Picture Boost), and press **MENU** to enter.
- 3 Press < or > to select submenu.
- 4 Press \leq or > to adjust.
- 5 Press AUTO to exit.

	Bright Frame	ON/OFF	Enable/Disable Bright Frame
	Frame Size 14-100		Adjust the Size of the Frame
	Brightness	0-100	Brightness Adjustment for Enhance Area
N	Contrast	0-100	Contrast Adjustment for Enhance Area
	H. position	0-100	Adjust the horizontal position of the Frame
	V. position	0-100	Adjust the vertical position of the Frame

Note:

Adjust the brightness, contrast, and position of the Bright Frame for better viewing experience.

OSD Setup

< 💦 >	X Extra	Exit	Luminance	Zage Setup	Color Setup	Pictu	re Boost
Language			H. Position		Transparence		
Timeout			V. Position			OFF	
DP Capability							

1 Press **MENU** (Menu) to display menu.

- 2 Press < or > to select (OSD Setup), and press MENU to enter.
 3 Press < or > to select submenu.
 4 Press < or > to adjust.
- 5 Press AUTO to exit.

	Language	English, France, Spanish, Portuguese, German, Italian, Dutch, Swedish, Finnish, Polish, Czech, Russia, Korea, TChina, SChina, Japanese	Select the OSD language		
	Timeout	5-120	Adjust the OSD timeout.		
	H. Position	0-100	Adjust the horizontal position of the OSD.		
	V. Position	0-100	Adjust the vertical position of the OSD.		
	Transparence	0-100	Adjust the OSD		
	Break Reminder	ON/OFF	Break Reminder if the user continuely work for more than 1 hours		
	DP Capability		 In DP 1.1 mode, DP-out outputs full image which is from DP-in if DP-in received image data. In DP 1.2 mode 		
		1.1/1.2	(A) DP-out outputs full image which is from DP-in if DP graphic card outputs single monitor data.		
			(B) DP-out outputs next 1 or 2 monitor image(s) if DP graphic card outputs 2 or 3 monitor images by daisy chain.		

Notes:

If the DP video content supports DP1.2, please select DP1.2 for DP Capability; otherwise, please select DP1.1.

Extra

$\langle \sum_{i=1}^{N} \rangle_{i}$		Exit	Luminance	Image Set	up	Color	Setup	Picture Boost	OSD Setup
Input Select		Auto	•	Image Ratio		Full screen	•	Resolution : 1024	(H)X768(V)
Auto Config.	•	Yes	•	DDC/CI	•	Yes	•	H. Frequency : 60)KHz
Off Timer		00	•	Reset	•	No	•	V. Frequency : 60	Hz

1 Press **MENU** (Menu) to display menu.

- 2 Press < or > to select × (Extra), and press **MENU** to enter.
- 3 Press \leq or > to select submenu.
- 4 Press \leq or > to adjust.
- 5 Press AUTO to exit.

		Auto	Auto Detect input signal	
		D-SUB	Select D-SUB signal source as input	
		DVI	Select DVI signal source as input	
	Input Select	HDMI1/MHL	Select HDMI signal Source as input	
		HDMI2/MHL	Select HDMI signal Source as input	
		DP1	Select DP signal Source as input	
		DP2	Select DP signal Source as input	
	Auto Config.	Yes / No	Auto adjust the picture to default.	
	Off Timer	0-24 hrs	Select DC off time.	
		wide		
21		1:1		
×		17" (4:3)		
		19" (4:3)		
		19" (5:4)		
	Image Ratio	19"W (16:10)	Select image Ratio format for display.	
		21.5"W (16:9)		
		22"W (16:10)		
		23"W (16:9)		
		23.6"W (16:9)		
		24"W (16:9)]	
	DDC/CI	Yes / No	Turn on or off DDC/CI Support.	
	Reset	Yes / No	Reset the menu to default.	

Exit						
< 🏹 > 👘	Luminance	Image Setup	Color Setup	Picture Boost	SSD Setup	X Extra

1 Press **MENU** (Menu) to display menu.

2 Press < or > to select (Exit), and press **MENU** to enter.

3 Press AUTO to exit.

LED Indicator

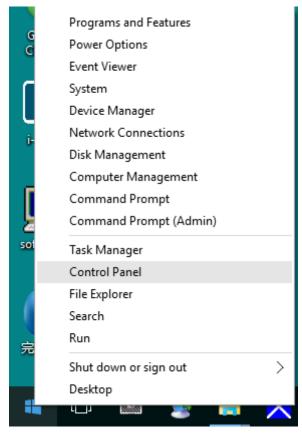
Status	LED Color
Power On	Blue
Power Saving	Orange

Driver

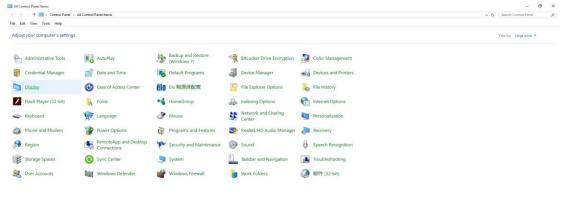
Monitor Driver

Windows 10

- Start Windows® 10
- Right click START.
- Click "Control Panel".



1. Click on the "Display" icon.



• Click on the "Change display settings" button

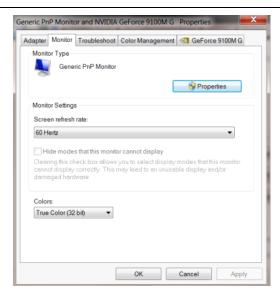
	Display	-	×
<	> · 1 🛄 > Control Pane	I → All Control Panel Items → Display v 🖏 Search Control Panel	Q
Fi	le Edit View Tools Help		
	Control Panel Home	Change size of items	•
•	Adjust resolution Calibrate color Change display settings	To change the size of text, apps, and other items, <u>use these display settings</u> . If you want to temporarily enlarge a portion of your screen, use <u>Magnifier</u> . If neither of these makes the changes you want, you can <u>set a custom</u> <u>scaling level</u> (not recommended). Setting custom levels can lead to unexpected behavior on some displays.	
	Adjust ClearType text	Change only the text size Instead of changing the size of everything on the desktop, change only the text size for a specific item.	
		Title bars V 9 V Bold	
		Apply	
	See also Personalization		
	Devices and Printers		

Click the "Advanced Settings" button.

•

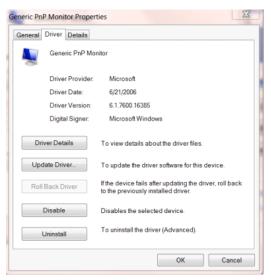
Screen Resolution				-	×
← → ~ ↑ ➡ > Control Panel File Edit View Tools Help	 All Control Par 	nel Items > Display > Screen Resolution	~ 5	Search Control Panel	Q
	Change the	appearance of your display	Detect		
			Identify		
	Display: Resolution:	1. B24 ~ 1920 × 1080 (Recommended) ~			
	Orientation:	Landscape \lor	Advanced settings		
		ther items larger or smaller tings should I choose?			
			OK Cancel Apply		

• Click the "Monitor" tab and then click the "Properties" button.



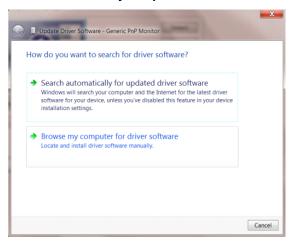
Click the "Driver" tab.

٠

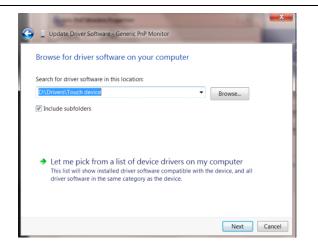


• Open the "Update Driver Software-Generic PnP Monitor" window by clicking on "Update Driver... "and then

click the "Browse my computer for driver software" button.



• Select "Let me pick from a list of device drivers on my computer".



• Click the "Have Disk" button. Click on the "Browse" button and navigate to the following directory:

X:\Driver\module name(where X is the drive letter designator for the CD-ROM drive).

Select		evice driver you want to install for this har	
Ins	tall Fron		
✓ : Me	~	Insert the manufacture's installation disk, and then make sure that the correct drive is selected below.	OK Cancel
		Copy manufacturer's files from:	
		F:\Drivers\e936Vw	Browse
Th	e drivar	is digitally signed.	Have Disk.

- Select the "xxx.inf" file and click the "Open" button. Click the "OK" button.
- Select your monitor model and click the "Next" button. The files will be copied from the CD to your hard disk

drive.

- Close all open windows and remove the CD.
- Restart the system. The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

Windows 8

- Start Windows® 8
- Right click and click **All apps** at the bottom-right of the screen.



- Click on the "Control Panel" icon
- Set the "View by" to "Large icons" or "Small icons".

Action Center	Administrative Tools	AutoPlay	RitLocker Drive Encryption	🕺 Color Management	Large icons Small icons
Credential Manager	Date and Time	Default Programs	Jevice Manager	Devices and Printers	
Display	🚱 Ease of Access Center	Family Safety	File History	Flash Player (32-bit)	
Folder Options	K Fonts	🝓 HomeGroup	lndexing Options	Real Internet Options	
Keyboard	🐖 Language	Docation Settings	I Mouse	Network and Sharing Center	
Notification Area Icons	NVIDIA Control Panel	Performance Information and Tools	Series Personalization	Phone and Modem	
Power Options	Programs and Features	Recovery	Region	RemoteApp and Desktop Connections	
Sound	Speech Recognition	Storage Spaces	Sync Center	🎉 System	
Taskbar	Troubleshooting	User Accounts	Windows 7 File Recovery	Windows Defender	
Windows Firewall	Windows Update				

• Click on the "Display" icon.

Query Management Crosterial Management © Dates and Times © Dates and Times Density Galagement If Order Options If Options and Proteins © Dates and Proteins © Protei	Decket Manager Decket Manager <lidecket li="" manager<=""></lidecket>	Desktop Gadgets	Credential Manager	Date and Time		
B Lase of Access Center IF Folder Options Access Center If Center Options B Interview Control and One Sensor If Sensor Decess Access Center If Sensor Decess Control and One Sensor If Mone If Mone Center Decess If Mone Center Decess If Mone Center Decess MUDIA Control Prend If MOLEA Prevail If Prevail Control If Prevail Control If Prevail Control If MOLEA Prevail If Prevail Control If Prevail Control If Prevail Control If Prevail Control If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails If Prevails				The many many rating	C Default Programs	
Home-Group Ap Indexing Options Procession Activation Bicontrol and Other Senson Mouse Bit Hennok and Saving Cetter El Moltation Area Kons MOBA Consol Prime WMDIA Primerk Bit Nethon and Saving Cetter In Moltation Area Kons MOBA Consol Prime WMDIA Primerk Bit Nethon Consols Prime and Saving Prime and Modern Reformance Information and Feature Bit Resource Bit Resource Prime and Modern Prime and Saving Resource Bit Resource Bit Resource Bit Resource Bit Resource Saving and Linguiges Remote/pair and Desking Connection Bit Saving and Desking Connections Bit Saving and Linguiges Saving and Linguiges Remote/pair and Desking Connections Bit Saving and Desking Connections Bit Saving and Linguiges Saving and Linguiges	Ap Intering Options Proces Proces Proces Proces Proces Proces Process P		Device Manager	we Devices and Printers	💐 Display	
Locator and Other Sensors	• Mouse	Ease of Access Center	E Folder Options	A Fonts	Getting Started	
INDEA Control Rend M VXEDA Pryck Prestal Control / Prestal Control Informance Externation and Tools Prestal Control Prove Options Informance Externation Prestal Control Prove Options Information Second Press Information Control Information Second Press Information Control System Information StateMen Information StateMen	MVXDX Impacts Controls / Pre-set Truck Financialization Impacts Address Prove and Modern Impacts Address Impacts Address Pre-set Options Impacts Address Impacts Address Impacts Address	& HomeGroup	A Indexing Options	C Internet Options	- Keyboard	
Performance Information and Toolis ♥ Prosenalization ● Prove and Modern ♥ Prover Options IP regramma of Federary ● Restrict Ki Ausegier ▲ Rescriety ● Region and Linguage Remote/pp and Destrop Connections ● Speech Recognition ● Speech Recognition ● Speech Recognition System ● Tablet FC Settings ▲ Tablet AC Settings ▲ Tablet AC Settings ▲ Tablet AC Settings	In Pennonalization	Location and Other Sensors	J Mouse	Network and Sharing Center	Notification Area Icons	
Programs and Features ■ Reatives HO Audio Manager Anno Anno Anno Anno Anno Anno Anno	Brante HC Audio Manager	NVIDIA Control Panel	MVIDIA PhysX	🍓 Parental Controls	/ Pen and Touch	
StemoteApp and Desitop Connections 🛞 Sound 0 Speech Recognition 🛞 Sync Center System 🥤 Tablet PC Settings 🛄 Teldbar and Start Menu. 🙀 Toublehooting	Image: Sound Ø Speech Recognition Image: Speech Recognition Im	Performance Information and Tools	Personalization	Phone and Modern	Power Options	
System Tablet PC Settings	Tablet PC Settings	Programs and Features	Realtek HD Audio Manager	📽 Recovery	Region and Language	
		RemoteApp and Desktop Connections	Sound	Ø Speech Recognition	Sync Center	
		System	Tablet PC Settings	Taskbar and Start Menu.	Troubleshooting	
🕵 User Accounts 😽 Windows Anytime Upgrade 🦉 Windows CardSpace 🙀 Windows Defender	🐇 Windows Anytime Upgrade 🛛 🚯 Windows CardSpace 🙀 Windows Defender	& User Accounts	🍇 Windows Anytime Upgrade	Windows CardSpace	Windows Defender	
🔐 Windows Firewail 🛛 🖉 Windows Update	2 Windows Update	Windows Firewall	🖉 Windows Update			

• Click on the "Change display settings" button.

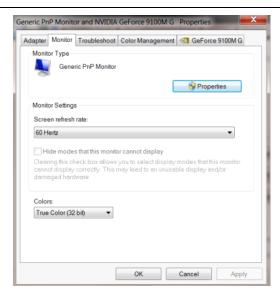
Control Panel Home Adjust resolution	All Control Panel Items	r items on your screen by choosing one of these options. To	
Calibrate color Change display settings Adjust ClearType text	temporarily enlarge just part of the scree	n, use the <u>Magnifier</u> tool.	
Set custom text size (DPI)	Medium - 125% (default)		
	larger - 150%		
		Apply	
See also Personalization			
Devices and Printers			

Click the "Advanced Settings" button.

•

😋 🕞 🗧 🎙 Control Panel 🔸 All Control Panel Ite	ns + Display + Screen Resolution	• • Search Control Panel P
	Change the appearance of your display	
	Duplay: I. Nota Default fra Panet • Resolution: IB30 + 1080 (excommended) • Orientator: Landscape • Advanced attings Make text and other from larger or smaller Make text and other should 1 closed	
	OK Cancel Apply	

• Click the "Monitor" tab and then click the "Properties" button.

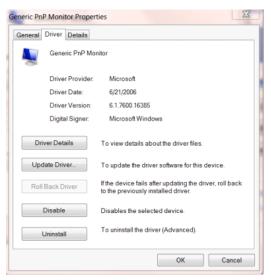


Click the "Driver" tab.

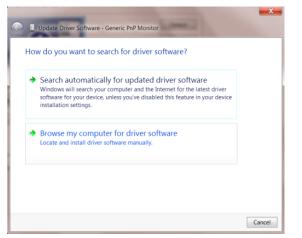
٠

•

٠

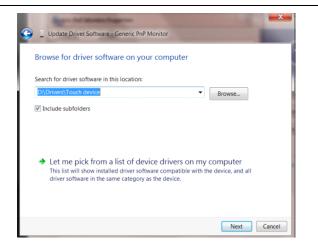


Open the "Update Driver Software-Generic PnP Monitor" window by clicking on "Update Driver..." and



then click the "Browse my computer for driver software" button.

Select "Let me pick from a list of device drivers on my computer".



• Click the "Have Disk" button. Click on the "Browse" button and navigate to the following directory:

X:\Driver\module name (where X is the drive letter designator for the CD-ROM drive).

	Coloct	evice driver you want to install for this har	
 ✓ ✓	Install From	In DISK Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.	OK Cancel
		Copy manufacturer's files from: F:\Drivers\e936Vw -	Browse

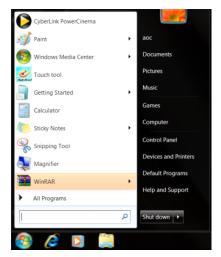
- Select the "xxx.inf" file and click the "Open" button. Click the "OK" button.
- Select your monitor model and click the "Next" button. The files will be copied from the CD to your hard disk

drive.

- Close all open windows and remove the CD.
- Restart the system. The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

Windows 7

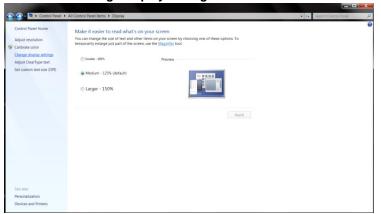
- Start Windows® 7
- Click on the "Start" button and then click on "Control Panel".



• Click on the "Display" icon.

Adjust your computer's settings				View by: Small icons •
Action Center	C Administrative Tools	autoPlay	Backup and Restore	
Color Management	Credential Manager	Date and Time	Default Programs	
Upesktop Gadgets	J Device Manager	na Devices and Printers	Display	
Ease of Access Center	E Folder Options	Fonts	Getting Started	
HomeGroup	A Indexing Options	C Internet Options	- Keyboard	
Location and Other Sensors	J Mouse	Stewark and Sharing Center	Notification Area Icons	
NVIDIA Control Panel	MVIDIA PhysiX	Revental Controls	/ Pen and Touch	
Performance Information and Tools	Personalization	A Phone and Modern	Power Options	
Programs and Features	Realtek HD Audio Manager	Kecovery	Region and Language	
RemoteApp and Desktop Connections	Sound	Ø Speech Recognition	Sync Center	
System	Tablet PC Settings	Taskbar and Start Menu	Troubleshooting	
K User Accounts	S Windows Anytime Upgrade	Windows CardSpace	Windows Defender	
Windows Firewall	2 Windows Update			

• Click on the "Change display settings" button.



• Click the "Advanced Settings" button.

🚱 💮 📲 🗣 Control Panel 🕨 All Control Panel Iter	is + Display + Screen Resolution	 ■ ■ ■ ■ ■ ■ ■ 4 Search Centrol Panel
	Change the appearance of your display	
	Tupipar, I. Holds Default first Parent Resolution: ISD = 1300 + 1000 (recommended) Orientation: Landscape Advanced settings Male feet and other thems larger or smaller Male feet advanced settings	
	OK Caxel Apply	

• Click the "Monitor" tab and then click the "Properties" button.

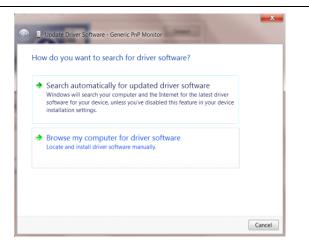
eneric PnP Monitor and NVIDIA GeForce 9100M G Properties	X
Adapter Monitor Troubleshoot Color Management 🚳 GeForce 9100M G	
Monitor Type Generic PnP Monitor	
Properties	
Monitor Settings	
Screen refresh rate:	
60 Hertz 💌	
Hide modes that this monitor cannot display Clearing this check box allows you to select display modes that this monitor	
cannot display correctly. This may lead to an unusable display and/or damaged hardware.	
Colors:	
True Color (32 bit)	
OK Cancel App	ły

Click the "Driver" tab.

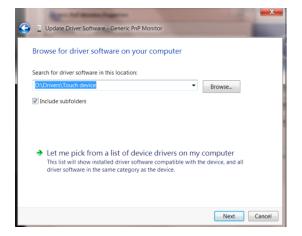
•

Generic PnP Monitor Properties					
General Driver Details					
Generic PnP Mor	nitor				
Driver Provider.	Microsoft				
Driver Date:	6/21/2006				
Driver Version:	6.1.7600.16385				
Digital Signer:	Microsoft Windows				
Driver Details	To view details about the driver files.				
Update Driver	To update the driver software for this device.				
Roll Back Driver	If the device fails after updating the driver, roll back to the previously installed driver.				
Disable	Disables the selected device.				
Uninstall	To uninstall the driver (Advanced).				
	OK Cancel				

• Open the **"Update Driver Software-Generic PnP Monitor**" window by clicking on **"Update Driver..."** and then click the **"Browse my computer for driver software**" button.

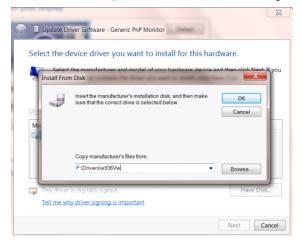


Select "Let me pick from a list of device drivers on my computer".



Click the "Have Disk" button. Click on the "Browse" button and navigate to the following directory:

X:\Driver\module name(where X is the drive letter designator for the CD-ROM drive).



- Select the "xxx.inf" file and click the "Open" button. Click the "OK" button.
- Select your monitor model and click the "Next" button. The files will be copied from the CD to your hard disk

drive.

•

- Close all open windows and remove the CD.
- Restart the system. The system will automatically select the maximum refresh rate and corresponding Color Matching Profiles.

i-Menu



Welcome to "i-Menu" software by AOC. i-Menu makes it easy to adjust your monitor display setting by using on screen menus instead of the OSD button on the monitor. To complete installation, please follow the installation guide. The software Supported operating systems: Windows 8, Windows 7, Windows 10.

i-Menu	Lumi	Luminance		
		×		
Contrast γ Gamma Markov Gamma DCR	0 <u> </u>	🔆 Brightness 🔆 Eco Mode	0 36 ∢	
		C	\$	

e-Saver



Welcome to use AOC e-Saver monitor power management software! The AOC e-Saver features Smart Shutdown functions for your monitors, allows your monitor to timely shutdown when PC unit is at any status (On, Off, Sleep or Screen Saver); the actual shutdown time depends on your preferences (see example below). Please click on "driver/e-Saver/setup.exe" to start installing the e-Saver software, follow the install wizard to complete software installation.

Under each of the four PC statuses, you may choose the desired time (in minutes) from the pull-down menu for your monitor to automatically shutdown. The example below illustrated:

- 1) The monitor will never shutdown when the PC is powered on.
- 2) The monitor will automatically shutdown 5 minutes after the PC is powered off.
- 3) The monitor will automatically shutdown 10 minutes after the PC is in sleep/stand-by mode.
- 4) The monitor will automatically shutdown 20 minutes after the screen saver appears.



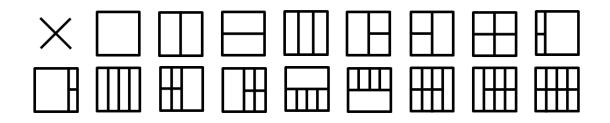
You can click "RESET" to set the e-Saver to its default settings like below.



Screen+



Welcome to "Screen+" software by AOC. Screen+ software is a desktop screen splitting tool; it splits the desktop into different panels, and each panel displays a different window. You only need to drag the window to a corresponding panel when you want to access it. It supports multiple monitor display to make your task easier. Please follow the installation software to install it. The software Supported operating systems: Windows 8, Windows 7, Windows 10.



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 cable connected correctly? (Connected using the D-sub cable) Check the DB-15 cable connection. (Connected using the DVI cable) Check the DVI cable connection. * DVI input is not available on every model. If the power is on, reboot the computer to see the initial screen (the login screen), which can be seen. If the initial screen (the login screen) appears, boot the computer in the applicable mode (the safe mode for Windows ME/2000) 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 to auto adjust. Make sure you are not using an extension cable or switch box. We recommend plugging the monitor directly to the video card output connector on the back.		
Picture Bounces, Flickers Or Wave Pattern Appears In The Picture	Move electrical devices that may cause electrical interference as far away from 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 95/98/2000/ME shut-down mode to adjust CLOCK and PHASE. Press to auto-adjust.

Specification

General Specification

	Model name	C3583FQ			
	Driving system	TFT Color LCD			
	Viewable Image Size	890 mm diagonal			
	Pixel pitch	0.32025(H)mm x 0.32025(V)mm			
Panel	Video	R, G, B Analog Interface& Digital Interface & HDMI Interface& DP Interface			
	Separate Sync.	H/V TTL			
	Display Color	16.7M Colors			
	Dot Clock	VGA:205MHz; DP: 600MHz; Dual link DVI/HDMI/MHL: 300MHz			
	Horizontal scan range	30~99KHz (MHL) 30~160KHz (D-sub, DVI Dual link ,HDMI) 30~190KHz(DP)			
	Horizontal scan Size(Maximum)	820mm			
	Vertical scan range	23~76Hz(MHL) 50~146Hz(D-sub, DVI Dual link ,HDMI) 45~162Hz (DP)			
	Vertical scan Size(Maximum)	346mm			
Resolution	Optimal preset resolution	MHL:1920×1080@60Hz D-sub/DVI-D(Dual link)/HDMI:2560x1080@60Hz DP:2560x1080@60Hz			
	Plug & Play	VESA DDC2B			
	Input Connector	R/G/B Analog, DVI-D(Dual link), HDMI/MHL, DP, Audio in			
	Input Video Signal	Analog: 0.7Vp-p(standard), 75 OHM, Positive TMDS			
	Output Connector	Earphone out			
	Power Source	20VDC, 4.5A			
		Typical(Brightness = 90,Contrast = 50)	≤60W		
	Power Consumption	Max. (Brightness = 100,Contrast =100)	≤95W		
		Power saving	≤0.5W		
	Off timer	0-24 hrs			
	Connector Type	R/G/B Analog, DVI-D(Dual link), HDMI/MHL, DP, Earphone out, Line-In			
	Signal Cable Type	Detachable			
Physical Characteristics	Height (with base)	844.6 mm			
Characteriotice	Width	458 mm			
	Depth	213.6 mm			
	Weight (monitor only)	11.6kg			
	Temperature:				
	Operating	0° to 40°C			
Environmental	Non-Operating	-25° to 55°C			
	Humidity:				
	Operating	10% to 85% (non-condensing)			
	Non-Operating	5% to 93% (non-condensing)			

Altitude:	
Operating	0~ 5000m(0~ 16404 ft)
Non-Operating	0~ 12192m (0~ 40000 ft)

Since the MHL provides mobile phone charging function and share the same connector with HDMI, Whether the MHL is set to On, Off or Standby mode, the MHL port provides power to charge the connected device simultaneously. In Standby and Off energy saving of ErP not applicable for the MHL charging functionality.

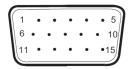
Preset Display Modes

Standard	Resolution	H. Frequency (kHz)	V. Frequency (Hz)
VGA	640x480@60Hz	31.469	59.94
VGA	640x480@67Hz	35	66.667
VGA	640x480@72Hz	37.861	72.809
VGA	640x480@75Hz	37.5	75
VGA	640x480@100Hz	51.08	99.769
VGA	640x480@120Hz	61.91	119.518
DOS MODE	720x400@70Hz	31.469	70.087
DOS MODE	720x480@60Hz	29.855	59.710
SD	720x576@50Hz	31.25	50
SVGA	800x600@56Hz	35.156	56.25
SVGA	800x600@60Hz	37.879	60.317
SVGA	800x600@72Hz	48.077	72.188
SVGA	800x600@75Hz	46.875	75
SVGA	800x600@100Hz	63.684	99.662
SVGA	800x600@120Hz	76.302	119.97
SVGA	832x624@75Hz	49.725	74.551
XGA	1024x768@60Hz	48.363	60.004
XGA	1024x768@70Hz	56.476	70.069
XGA	1024x768@75Hz	60.023	75.029
XGA	1024x768@100Hz	81.577	99.972
XGA	1024x768@120Hz	97.551	119.989
WXGA+	1440x900@60Hz	55.935	59.887
SXGA	1280x1024@60Hz	63.981	60.02
SXGA	1280x1024@75Hz	79.975	75.025
HD	1280x720@50HZ	37.071	49.827
HD	1280x720@60HZ	45	60
HD	1280x1080@60Hz	67.173	59.976
Full HD	1920x1080@60Hz	67.5	60
Full HD	1920x1080@100Hz	113.21	99.93
Full HD	1920x1080@120Hz	137.26	119.982
QHD	2560x1080@60Hz	66.636	59.978
QHD(DP Only)	2560x1080@144Hz	166.544	143.945
*QHD(DP Only)	2560x1080@160Hz	186.489	159.939

*2560x1080@160Hz is overclock mode no guarantee display performance.

If your computer cannot support this mode, please back to recommend resolution 2560x1080@60Hz or 2560x1080@144Hz.

Pin Assignments



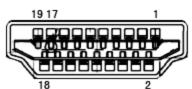
15-Pin Color Display Signal Cable

Pin No.	Signal Name	Pin No.	Signal Name
1	Video-Red	9	+5V
2	Video-Green	10	Ground
3	Video-Blue	11	N.C.
4	N.C.	12	DDC-Serial data
5	Detect Cable	13	H-sync
6	GND-R	14	V-sync
7	GND-G	15	DDC-Serial clock
8	GND-B		



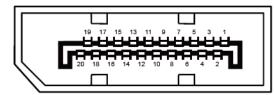
24-Pin Color Display Signal Cable

Pin No.	Signal Name	Pin No.	Signal Name
1	TMDS data 2-	13	TMDS data 3+
2	TMDS data 2+	14	+5V Power
3	TMDS data 2/4 Shield	15	Ground (for+5V)
4	TMDS data 4-	16	Hot Plug Detect
5	TMDS data 4+	17	TMDS data 0-
6	DDC Clock	18	TMDS data 0+
7	DDC Data	19	TMDS data 0/5 Shield
8	N.C.	20	TMDS data 5-
9	TMDS data 1-	21	TMDS data 5+
10	TMDS data 1+	22	TMDS Clock Shield
11	TMDS data 1/3 Shield	23	TMDS Clock +
12	TMDS data 3-	24	TMDS Clock —



18 2 19-Pin Color Display Signal Cable

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



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.

Regulation

FCC Notice

FCC Class B Radio Frequency Interference Statement WARNING: (FOR FCC CERTIFIED MODELS)

NOTE: 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.

NOTICE:

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibilities of the user to correct such interference. It is the responsibility of the user to correct such interference.

WEEE Declaration

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.

WEEE Declaration for India



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 in India, please visit the below web link.

www.aocindia.com/ewaste.php.

RoHS Declaration for India

his product complies with all implemented RoHS type regulations worldwide, including but not limited to, EU, Korea, Japan, US States (e.g. California), Ukraine, Serbia, Turkey, Vietnam and India. We continue to monitor, influence and develop our processes to comply with upcoming proposed RoHS type regulations, including but not limited to, Brazil, Argentina, Canada.

Restriction on Hazardous Substances statement (India)

This product complies with the "India E-waste Rule 2011" and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in concentrations exceeding 0.1 weight % and 0.01 weight % for cadmium, except for the exemptions set in Schedule 2 of the Rule.

EPA Energy Star



ENERGY STAR® is a U.S. registered mark. As an ENERGY STAR® Partner, AOC International (Europe) BV and Envision Peripherals, Inc. have determined that this product meets the ENERGY STAR® guidelines for energy efficiency. (FOR EPA CERTIFIED MODELS)

EPEAT Declaration



EPEAT is a system to help purchasers in the public and private sectors evaluate, compare and select desktop computers, notebooks and monitors based on their environmental attributes. EPEAT also provides a clear and consistent set of performance criteria for the design of products, and provides an opportunity for manufacturers to secure market recognition for efforts to reduce the environmental impact of its products.

AOC believes in protecting the environment. With a key concern for the conservation of natural resources, as well as landfill protection, AOC announces the launch of AOC monitor's packaging recycling program. This program is designed to help you discard of your monitor carton and filler materials properly. If a local recycling center is not available, AOC will recycle the packaging material for you, including foam filler and carton. AOC Display solution will only recycle AOC monitor packaging. Please refer to the following website address:

Only for North and South American, excluding Brazil:

http://us.aoc.com/about/environmental_impact

For Germany: http://www.aoc-europe.com/en/service/tco.php

For Brazil:

<u>http://www.aoc.com.br/2007/php/index.php?req=pagina&pgn_id=134</u> (FOR EPEAT CERTIFIED MODELS)

Service

Warranty Statement for Europe

LIMITED THREE-YEAR WARRANTY*

For AOC LCD Monitors sold within Europe, AOC International (Europe) B.V. warrants this product to be free from defects in material and workmanship for a period of Three (3) years after the original date of consumer purchase. During this period, AOC International (Europe) B.V. will, at its option, either repair the defective product with new or rebuilt parts, or replace it with a new or rebuilt product at no charge except as *stated below. In the absent of the proof of purchase, the warranty will start 3 months after the date of manufacturing indicated on the product.

If the product appears to be defective, please contact your local dealer or refer to the service and support section on <u>www.aoc-europe.com</u> for the warranty instructions in your country. The freight cost for the warranty is pre-paid by AOC for the delivery and return. Please ensure you provide a dated proof of purchase along with the product and deliver to the AOC Certified or Authorized Service Center under the following condition:

- Make sure the LCD Monitor is packed in a proper carton box (AOC prefers the original carton box to
 protects your monitor well enough during transport).
- Put the RMA number on the address label
- Put the RMA number on the shipping carton

AOC International (Europe) B.V. will pay the return shipping charges within one of the countries specified within this warranty statement. AOC International (Europe) B.V. is not responsible for any costs associated with the transportation of product across international borders. This includes the international border within the European Union. If the LCD Monitor is not available for collection when the currier attends, you will be charged a collection fee.

* This limited warranty does not cover any losses or damages that occur as a result of:

- Damages during transport due to improper packaging
- Improper installation or maintenance other then in accordance with AOC's user manual
- Misuse
- Neglect
- Any cause other than ordinary commercial or industrial application
- Adjustment by non-authorized source
- Repair, modification, or installation of options or parts by anyone other than an AOC Certified or Authorized Service Center
- Improper environments like humidity, water damage and dusts
- Damaged by violence, earthquake and terrorist attacks
- Excessive or inadequate heating or air conditioning or electrical powers failures, surges, or other irregularities

This limited warranty does not cover any of the product firmware or hardware that you or any third party have modified or altered; you bear the sole responsibility and liability for any such modifications or alteration.

All AOC LCD Monitors are produced according to the ISO 9241-307 Class 1 pixel policy standards.

If your warranty has expired, you still have access to all available service options, but you will be responsible for the cost of service, including parts, labor, shipping (if any) and applicable taxes. AOC Certified or Authorized Service Center will provide you with an estimate of service costs before receiving your authorization to perform service.

ALL EXPRESS AND IMPLIED WARRANTIES FOR THIS PRODUCT (INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO A PERIOD OF THREE (3) YEARS FOR PARTS AND LABOR FROM THE ORIGINAL DATE OF CONSUMER PURCHASE. NO WARRANTIES (EITHER EXPRESSED OR IMPLIED) APPLY AFTER THIS PERIOD. AOC INTERNATIONAL (EUROPE) B.V. OBLIGATIONS AND YOUR REMEDIES HEREUNDER ARE SOLELY AND EXCULSIVELY AS STATED HERE. AOC INTERNATIONAL (EUROPE) B.V. LIABILITY, WHETHER BASED ON CONTRACT, TORT, WARRANTY, STRICT LIABILITY, OR OTHER THEORY, SHALL NOT EXCEED THE PRICE OF THE INDIVIDUAL UNIT WHOSE DEFECT OR DAMAGE IS THE BASIS OF THE CLAIM. IN NO EVENT SHALL AOC INTERNATIONAL (EUROPE) B.V. BE LIABLE FOR ANY LOSS OF PROFITS, LOSS OF USE OR FACILITIES OR EQUIPMENT, OR OTHER INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALTHOUGH THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, YOU MAY HAVE OTHER RIGHTS, WHICH MAY VARY FROM COUNTRY TO COUNTRY. THIS LIMITED WARRANTY IS ONLY VALID FOR PRODUCTS PURCHASED IN THE MEMBER COUNTRIES OF THE EUROPEAN UNION.

Information in this document is subject to change without notice. For more information, please visit: http://www.aoc-europe.com

Warranty Statement for Middle East and Africa (MEA)

And

The Commonwealth of Independent States (CIS)

LIMITED ONE to THREE YEARS WARRANTY*

For AOC LCD Monitors sold within the Middle East and Africa (MEA) and the Commonwealth of Independent States (CIS), AOC International (Europe) B.V. warrants this product to be free from defects in material and workmanship for a period of One (1) to Three (3) years from the manufacture date depending on sale country. During this period, AOC International (Europe) B.V. offers a Carry-In (return to Service Center) Warranty Support at an AOC's Authorized Service Center or Dealer and at its option, either repair the defective product with new or rebuilt parts, or replace it with a new or rebuilt product at no charge except as *stated below. As a Standard Policy, the warranty will be calculated from the manufacture date identified from the product ID serial number, but the total warranty will be Fifteen (15) months to Thirty Nine (39) months from MFD (manufacture date) depending on sale country. Warranty will be considered for exceptional cases that are out of warranty as per the product ID serial number and for such exceptional cases; Original Invoice/Proof of Purchase Receipt is mandatory.

If the product appears to be defective, please contact your AOC authorized dealer or refer to the service and support section on AOC's website for the warranty instructions in your country:

- Egypt: <u>http://aocmonitorap.com/egypt_eng</u>
- CIS Central Asia: <u>http://aocmonitorap.com/ciscentral</u>
- Middle East: <u>http://aocmonitorap.com/middleeast</u>
- South Africa: <u>http://aocmonitorap.com/southafrica</u>
- Saudi Arabia: <u>http://aocmonitorap.com/saudiarabia</u>

Please ensure you provide a dated proof of purchase along with the product and deliver to the AOC Authorized Service Center or Dealer under the following condition:

- Make sure the LCD Monitor is packed in a proper carton box (AOC prefers the original carton box to protects your monitor well enough during transport).
- Put the RMA number on the address label
- Put the RMA number on the shipping carton

* This limited warranty does not cover any losses or damages that occur as a result of:

- Damages during transport due to improper packaging
- Improper installation or maintenance other then in accordance with AOC's user manual
- Misuse
- Neglect
- Any cause other than ordinary commercial or industrial application
- Adjustment by non-authorized source

- Repair, modification, or installation of options or parts by anyone other than an AOC Certified or Authorized Service Center
- Improper environments like humidity, water damage and dusts
- Damaged by violence, earthquakes and terrorist attacks
- Excessive or inadequate heating or air conditioning or electrical powers failures, surges, or other irregularities

This limited warranty does not cover any of the product firmware or hardware that you or any third party have modified or altered; you bear the sole responsibility and liability for any such modifications or alteration.

All AOC LCD Monitors are produced according to the ISO 9241-307 Class 1 pixel policy standards.

If your warranty has expired, you still have access to all available service options, but you will be responsible for the cost of service, including parts, labor, shipping (if any) and applicable taxes. AOC Certified, Authorized Service Center or dealer will provide you with an estimate of service costs before receiving your authorization to perform service.

ALL EXPRESS AND IMPLIED WARRANTIES FOR THIS PRODUCT (INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO A PERIOD OF ONE (1) to THREE (3) YEARS FOR PARTS AND LABOR FROM THE ORIGINAL DATE OF CONSUMER PURCHASE. NO WARRANTIES (EITHER EXPRESSED OR IMPLIED) APPLY AFTER THIS PERIOD. AOC INTERNATIONAL (EUROPE) B.V. OBLIGATIONS AND YOUR REMEDIES HEREUNDER ARE SOLELY AND EXCULSIVELY AS STATED HERE. AOC INTERNATIONAL (EUROPE) B.V. LIABILITY, WHETHER BASED ON CONTRACT, TORT, WARRANTY, STRICT LIABILITY, OR OTHER THEORY, SHALL NOT EXCEED THE PRICE OF THE INDIVIDUAL UNIT WHOSE DEFECT OR DAMAGE IS THE BASIS OF THE CLAIM. IN NO EVENT SHALL AOC INTERNATIONAL (EUROPE) B.V. BE LIABLE FOR ANY LOSS OF PROFITS, LOSS OF USE OR FACILITIES OR EQUIPMENT, OR OTHER INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALTHOUGH THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, YOU MAY HAVE OTHER RIGHTS, WHICH MAY VARY FROM COUNTRY TO COUNTRY. THIS LIMITED WARRANTY IS ONLY VALID FOR PRODUCTS PURCHASED IN THE MEMBER COUNTRIES OF THE EUROPEAN UNION.

Information in this document is subject to change without notice. For more information, please visit: http://www.aocmonitorap.com



AOC International (Europe) B.V.

Prins Bernhardplein 200 / 6th floor, Amsterdam, The Netherlands Tel: +31 (0)20 504 6962 • Fax: +31 (0)20 5046933

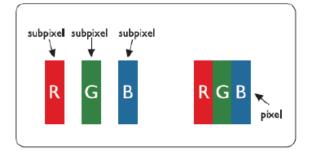
AOC Pixel Policy ISO 9241-307 Class 1

July 25th, 2013

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 TFT monitor panels used in flat panel 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 Pixel Policy 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 TFT monitor panel must exceed these acceptable levels.

Pixels and Sub Pixel Definition

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



Types of Pixel Defects

- Bright Dot Defects: the monitor displays a dark pattern, sub pixels or pixels are always lit or "on"
- Black Dot Defects: the monitor displays a light pattern, sub pixels or pixels are always dark or "off".

ISO 9241-307	Defect Type 1	Defect Type 2	Defect Type 3		Defect Type 4 Black
Pixel Defect Class	Bright Pixel	Black Pixel	Bright Sub pixel		Sub pixel
			2	+	1
Class 1	1	1	1	+	3
			0	+	5

AOC International (Europe) B.V.

Warranty Statement for North & South America (excluding Brazil)

WARRANTY STATEMENT

for AOC Color Monitors Including those Sold within North America as Specified

Envision Peripherals, Inc. warrants this product to be free from defects in material and workmanship for a period of three (3) years for parts & labor and one (1) year for CRT Tube or LCD Panel after the original date of consumer purchase. During this period, EPI (EPI is the abbreviation of Envision Peripherals, Inc.) will, at its option, either repair the defective product with new or rebuilt parts, or replace it with a new or rebuilt product at no charge except as *stated below. The parts or product that are replaced become the property of EPI.

In the USA to obtain service under this limited warranty, call EPI for the name of the Authorized Service Center closest to your area. Deliver the product freight pre-paid, along with the dated proof of purchase, to the EPI Authorized Service Center. If you cannot deliver the product in person:

- Pack it in its original shipping container (or equivalent)
- Put the RMA number on the address label
- Put the RMA number on the shipping carton
- Insure it (or assume the risk of loss/damage during shipment)
- Pay all shipping charges

EPI is not responsible for damage to inbound product that was not properly packaged.

EPI will pay the return shipment charges within one of the countries specified within this warranty statement. EPI is not responsible for any costs associated with the transportation of product across international borders. This includes the international borders of the countries within this warranty statements.

In the United States and Canada contact your Dealer or EPI Customer Service, RMA Department at the toll free number (888) 662-9888. Or you can request an RMA Number online at www.aoc.com/na-warranty.

* This limited warranty does not cover any losses or damages that occur as a result of:

- Shipping or improper installation or maintenance
- Misuse
- Neglect
- Any cause other than ordinary commercial or industrial application
- Adjustment by non-authorized source
- Repair, modification, or installation of options or parts by anyone other than an EPI Authorized Service Center
- Improper environment
- * Excessive or inadequate heating or air conditioning or electrical power failures, surges, or other irregularities

This three-year limited warranty does not cover any of the product's firmware or hardware that you or any third party have modified or altered; you bear the sole responsibility and liability for any such modification or alteration.

ALL EXPRESS AND IMPLIED WARRANTIES FOR THIS PRODUCT (INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO A PERIOD OF THREE (3) YEARS FOR PARTS AND LABOR AND ONE (1) YEAR FOR CRT TUBE OR LCD PANEL FROM THE ORIGINAL DATE OF CONSUMER PURCHASE. NO WARRANTIES (EITHER EXPRESSED OR IMPLIED) APPLY AFTER THIS PERIOD. IN THE UNITED STATES OF AMERICA, SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

EPI OBLIGATIONS AND YOUR REMEDIES HEREUNDER ARE SOLELY AND EXCLUSIVELY AS STATED HERE. EPI' LIABILITY, WHETHER BASED ON CONTRACT, TORT. WARRANTY, STRICT LIABILITY, OR OTHER THEORY, SHALL NOT EXCEED THE PRICE OF THE INDIVIDUAL UNIT WHOSE DEFECT OR DAMAGE IS THE BASIS OF THE CLAIM. IN NO EVENT SHALL ENVISION PERIPHERALS, INC. BE LIABLE FOR ANY LOSS OF PROFITS, LOSS OF USE OR FACILITIES OR EQUIPMENT OR OTHER INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGE. IN THE UNITED STATES OF AMERICA, SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALTHOUGH THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

In the United States of America, this limited warranty is only valid for Products purchased in the Continental United States, Alaska, and Hawaii.

Outside the United States of America, this limited warranty is only valid for Products purchased in Canada.

Information in this document is subject to change without notice. For more details, please visit:

USA: http://us.aoc.com/support/find_service_center ARGENTINA: http://ar.aoc.com/support/find_service_center BOLIVIA: http://bo.aoc.com/support/find_service_center CHILE: http://cl.aoc.com/support/find_service_center COLOMBIA: http://co.aoc.com/support/find_service_center COSTA RICA: http://cr.aoc.com/support/find_service_center DOMINICAN REPUBLIC: http://do.aoc.com/support/find_service_center ECUADOR: http://ec.aoc.com/support/find_service_center EL SALVADOR: http://sv.aoc.com/support/find_service_center GUATEMALA: http://gt.aoc.com/support/find_service_center HONDURAS: http://hn.aoc.com/support/find_service_center NICARAGUA: http://ni.aoc.com/support/find_service_center PANAMA: http://pa.aoc.com/support/find_service_center PARAGUAY: http://py.aoc.com/support/find_service_center PERU: http://pe.aoc.com/support/find_service_center URUGUAY: http://pe.aoc.com/support/find_service_center VENEZUELA: http://ve.aoc.com/support/find_service_center IF COUNTRY NOT LISTED: http://latin.aoc.com/support/find_service_center

EASE PROGRAME



Only for AOC branded monitors sold within the continental United States.

All AOC branded monitors are now covered by the EASE Program. If your monitor malfunctions at any time during the first three months, AOC will provide a replacement monitor within 72 hours after you are approved for our program. If your monitor qualifies for the EASE program, AOC will pay for freight both

ways.

Step 1: Phone our TECH Department at 888.662.9888.

Step 2: Fill out and return EASE registration forms by mail or fax.

Step 3: We will issue a Return Authorization Number upon verification into the program.

Step 4: A monitor will be advance shipped to your location.

Step 5: We will issue a UPS Call Tag to pick up the defective unit.

Step 6: Please review the following chart to see your EASE program qualifications.

WARRANTY	COVERAGE AT	CUSTOMER
PERIOD	NO CHARGE	CHARGES
Within the first three months of	- New AOC monitor - Call tag	- None*
purchase: Covered by EASE	dispatched and return freight	
	charges via UPS	
Between 4 months – 1 Year	- All Parts & Labor Including CRT	- UPS Return Freight to AOC
	Tube & LCD Panel	
Between 1 Year - 3 Years: Covered	- Parts & Labor (excluding CRT	- UPS Return Freight to AOC
by standard limited warranty	Tube & LCD Panel)	

*AOC will need to obtain a credit card number if you would like to get a new AOC monitor advanced shipped to your location, prior to the defective unit arriving at AOC's service center. If you do not wish to supply a credit card, AOC will only ship the new monitor, once the defective unit arrives at the AOC service center.



TCO DOCUMENT

Congratulations!

This product is designed for both you and the planet!



TCO Development works for sustainable IT manufacture, use and recycling of IT products reflecting environmental, social and economic responsibility.

TCO Certified is a third party verified program, where every product model is tested by an accredited impartial test laboratory. TCO

Certified represents one of the toughest certifications for ICT products worldwide.

Some of the Usability features of TCO Certified Displays:

- Visual Ergonomics for image quality is tested to ensure top performance and reduce sight and strain problems. Important parameters are Resolution, Luminance, Contrast, Reflection and Colour characteristics
- Products are tested according to rigorous safety standards at impartial laboratories
- Electric and magnetic fields emissions as low as normal household background levels
- Workload ergonomics to ensure a good physical environment

Some of the Environmental features of TCO Certified Displays:

- Production facilities have an Environmental Management System (EMAS or ISO 14001)
- Low energy consumption to minimize climate impact
- Restrictions on Chlorinated and Brominated flame retardants, plasticizers, plastics and heavy metals such as cadmium, mercury and lead (RoHS compliance)
- Both product and product packaging is prepared for recycling
- The brand owner offers take-back options

Corporate Social Responsibility

 The brand owner demonstrates the product is manufactured under working practices that promote good labour relations and working conditions.

The Criteria Document can be downloaded from our web site. The criteria included in this label have been developed by TCO Development in co-operation with scientists, experts, users as well as manufacturers all over the world. Since the end of the 1980s TCO has been involved in influencing the development of IT equipment in a more user and environmentally friendly direction. Our ICT product labeling system began in 1992 and is now requested by users and ICT-manufacturers all over the world.

For more information, please visit www.tcodevelopment.com

TCO Certified Document for Displays version, 2.3



(FOR TCO CERTIFIED MODELS)