AOPEN LCD Monitor

User Guide

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AOPEN LCD Monitor User Guide
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Record the model number, serial number, purchase date and place of purchase information in the space provided below. The serial number and model number are recorded on the label affixed to your computer. All correspondence concerning your unit should include the serial number, model number and purchase information.

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AOPEN LCD Monitor User Guide

Model number: ______
Serial number: ______
Date of purchase: ______

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Special notes on LCD monitors

The following are normal with the LCD monitor and do not indicate a problem.

- Due to the nature of the fluorescent light, the screen may flicker during initial use. Turn off the power switch and then turn it on again to make sure the flicker disappears.
- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- The LCD screen has 99.99% or more effective pixels. It may include blemishes of 0.01% or less such as a missing pixel or pixel lit all the time.
- Due to the nature of the LCD screen, an afterimage of the previous screen may
 remain after switching the image, when the same image is displayed for hours. In this
 case, the screen is recovered slowly by changing the image or turning off the power
 switch for a few hours.

Information for your safety and comfort

Safety instructions

Read these instructions carefully. Keep this document for future reference. Follow all warnings and instructions marked on the product.

Cleaning your monitor

Please carefully follow these guidelines when cleaning the monitor:

- Always unplug the monitor before cleaning.
- Use a soft cloth to wipe the screen and cabinet front and sides.

Connecting/disconnecting the device

Observe the following guidelines when connecting and disconnecting power from the LCD monitor:

- Make sure the monitor is attached to its base before connecting the power cord to the AC power outlet.
- Make sure both the LCD monitor and the computer are turned off before connecting any cable or unplugging the power cord.
- If the system has multiple sources of power, disconnect power from the system by unplugging all power cords from the power supplies.

Accessibility

Be sure that the power outlet you plug the power cord into is easily accessible and located as close to the equipment operator as possible. When you need to disconnect power from the equipment, be sure to unplug the power cord from the electrical outlet.

Safe listening

To protect your hearing, follow these instructions.

- Gradually increase the volume until you can hear it clearly and comfortably and without distortion.
- After setting the volume level, do not increase it after your ears have adjusted.
- · Limit the amount of time listening to music at high volume.
- Avoid turning up the volume to block out noisy surroundings.
- Turn the volume down if you can't hear people speaking near you.

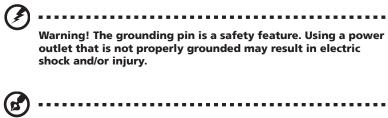
Warnings

- Do not use this product near water.
- Do not place this product on an unstable cart, stand or table. If the product falls, it could be seriously damaged.
- Slots and openings are provided for ventilation to ensure reliable operation of the
 product and to protect it from overheating. These openings must not be blocked
 or covered. The openings should never be blocked by placing the product on a bed,
 sofa, rug or other similar surface. This product should never be placed near or over
 a radiator or heat register, or in a built-in installation unless proper ventilation is
 provided.
- Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind onto or into the product.
- To avoid damage of internal components and to prevent battery leakage, do not place the product on a vibrating surface.
- Never use it under sporting, exercising, or any vibrating environment which will probably cause unexpected short current or damage internal devices.

Using electrical power

- This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- Do not allow anything to rest on the power cord. Do not locate this product where

- people will walk on the cord.
- If an extension cord is used with this product, make sure that the total ampere rating
 of the equipment plugged into the extension cord does not exceed the extension
 cord ampere rating. Also, make sure that the total rating of all products plugged into
 the wall outlet does not exceed the fuse rating.
- Do not overload a power outlet, strip or receptacle by plugging in too many devices. The overall system load must not exceed 80% of the branch circuit rating. If power strips are used, the load should not exceed 80% of the power strip's input rating.
- This product's power cord is equipped with a three-wire grounded plug. The
 plug only fits in a grounded power outlet. Make sure the power outlet is properly
 grounded before inserting the power cord plug. Do not insert the plug into a nongrounded power outlet. Contact your electrician for details.



Note: The grounding pin also provides good protection from unexpected noise produced by other nearby electrical devices that may interfere with the performance of this product.

 Use the product only with the supplied power supply cord set. If you need to replace the power cord set, make sure that the new power cord meets the following requirements: detachable type, UL listed/CSA certified, type SPT-2, rated 7 A 125 V minimum, VDE approved or its equivalent, 4.6 meters (15 feet) maximum length.

Product servicing

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.

Unplug this product from the wall outlet and refer servicing to qualified service personnel when:

- the power cord or plug is damaged, cut or frayed
- · liquid was spilled into the product
- the product was exposed to rain or water
- the product has been dropped or the case has been damaged
- the product exhibits a distinct change in performance, indicating a need for service
- the product does not operate normally after following the operating instructions



Note: Adjust only those controls that are covered by the operating instructions, since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.

Potentially explosive environments

Switch off your device in any area with a potentially explosive atmosphere and obey all signs and instructions. Potentially explosive atmospheres include areas where you would normally be advised to turn off your vehicle engine. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Switch off the device near gas pumps at service stations. Observe restrictions on the use of radio equipment in fuel depots, storage and distribution areas; chemical plants; or where blasting operations are in progress. Areas with a potentially explosive atmosphere are often, but not always, marked. They include below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), and areas where the air contains chemicals or particles such as grain, dust or metal powders.

Additional safety information

Your device and its enhancements may contain small parts. Keep them out of the reach of small children.

IT Equipment Recycling Information

AOPEN is strongly committed to environmental protection and views recycling, in the form of salvaging and disposal of used equipment, as one of the company's top priorities in minimizing the burden placed on the environment.

We at AOPEN are very conscious of the environmental effects of our business and strive to identify and provide the best working procedures to reduce the environmental impact of our products.

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.

AOPEN monitor is purposed for video and visual display of information obtained from electronic devices.

LCD pixel statement

The LCD unit is produced with high-precision manufacturing techniques. Nevertheless, some pixels may occasionally misfire or appear as black or red dots. This has no effect on the recorded image and does not constitute a malfunction.

This product has been shipped enabled for power management:

- Activate display's Sleep mode within 5 minutes of user inactivity.
- Wake the monitor when it is in Active Off mode, move the mouse or press any keyboard key.

Tips and information for comfortable use

Computer users may complain of eyestrain and headaches after prolonged use. Users are also at risk of physical injury after long hours of working in front of a computer. Long work periods, bad posture, poor work habits, stress, inadequate working conditions, personal health and other factors greatly increase the risk of physical injury.

Incorrect computer usage may lead to carpal tunnel syndrome, tendonitis, tenosynovitis or other musculoskeletal disorders. The following symptoms may appear in the hands, wrists, arms, shoulders, neck or back:

- · numbness, or a burning or tingling sensation
- aching, soreness or tenderness
- pain, swelling or throbbing
- stiffness or tightness
- coldness or weakness

If you have these symptoms, or any other recurring or persistent discomfort and/or pain related to computer use, consult a physician immediately and inform your company's health and safety department.

The following section provides tips for more comfortable computer use.

Finding your comfort zone

Find your comfort zone by adjusting the viewing angle of the monitor, using a footrest, or raising your sitting height to achieve maximum comfort. Observe the following tips:

- refrain from staying too long in one fixed posture
- avoid slouching forward and/or leaning backward
- · stand up and walk around regularly to remove the strain on your leg muscles

Taking care of your vision

Long viewing hours, wearing incorrect glasses or contact lenses, glare, excessive room lighting, poorly focused screens, very small typefaces and low-contrast displays could stress your eyes. The following sections provide suggestions on how to reduce eyestrain.

Eyes

- · Rest your eyes frequently.
- Give your eyes regular breaks by looking away from the monitor and focusing on a
 distant point.
- Blink frequently to keep your eyes from drying out.

Display

- Keep your display clean.
- Keep your head at a higher level than the top edge of the display so your eyes point downward when looking at the middle of the display.
- Adjust the display brightness and/or contrast to a comfortable level for enhanced text readability and graphics clarity.
- Eliminate glare and reflections by:
 - placing your display in such a way that the side faces the window or any light source
 - minimizing room light by using drapes, shades or blinds
 - · using a task light
 - changing the display's viewing angle
 - using a glare-reduction filter
 - using a display visor, such as a piece of cardboard extended from the display's top front edge
- Avoid adjusting your display to an awkward viewing angle.
- Avoid looking at bright light sources, such as open windows, for extended periods of time.

Developing good work habits

Develop the following work habits to make your computer use more relaxing and productive:

- Take short breaks regularly and often.
- Perform some stretching exercises.
- Breathe fresh air as often as possible.
- Exercise regularly and maintain a healthy body.





Declaration of Conformity

We,

AOPEN Smartview Incorporated

7F.-5, NO. 369, FUXING N. RD., SONGSHAN DIST., TAIPEI CITY 10541, Taiwan

And,

Acer Italy s.r.l.

Viale delle Industrie 1/A, 20020 Arese (MI), Italy Tel: +39-02-939-921 ,Fax: +39-02 9399-2913

www.acer.it

Product: LCD Monitor
Trade Name: AOPEN
Model Number: 20CH1Q

SKU Number: 20CH1Q xxxxxx;

 $("x" = 0 \sim 9, a \sim z, A \sim Z, or blank)$

We, AOPEN Smartview Incorporated., hereby declare under our sole responsibility that the product described above is in conformity with the relevant Union harmonization legislations as below Directive and following harmonized standards and/or other relevant standards have been applied:

⊠ EMC Directive: 2014/30/EU

⊠ EN 55032:2015+AC:2016 Class B

M EN 55024:2010+A1: 2015

⊠ EN 61000-3-3:2013

⊠ EN 61000-3-2:2014 Class D

IXI LVD Directive: 2014/35/EU

⊠ EN 62368-1: 2014+ A11: 2017

⊠ RoHS Directive: 2011/65/EU

⋈ EN 50581:2012

□ ErP Directive: 2009/125/EC

X (EU) 2019/2021:EN 50564:2011

Year to begin affixing CE marking: 2020.

RU Jan / Sr. Manager

Du T.

AOPEN Smartview Incorporated (Taipei, Taiwan)

Nov. 16, 2020

Date



Federal Communications Commission Declaration of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The following local Manufacturer /Importer is responsible for this declaration:

Product: LCD Monitor

Brand: AOPEN

Model Number: 20CH1Q

SKU Number: 20CH1Q xxxxxx

("x" = $0 \sim 9$, a \sim z, A \sim Z or Blank)

Name of Responsible Party: Acer America Corporation

Address of Responsible Party: 333 West San Carlos St.

Suite 1500

San Jose, CA 95110

U. S. A.

Contact Person: Acer Representative

Phone No.: 254-298-4000

Fax No.: 254-298-4147

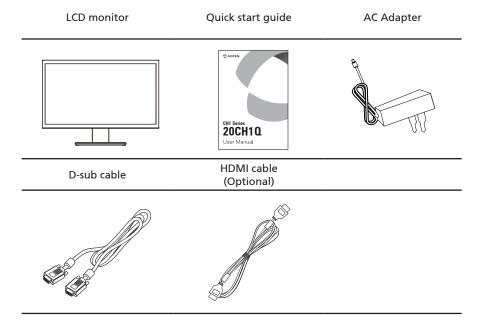
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Unpacking

Please check that the following items are present when you unpack the box, and save the packing materials in case you need to ship or transport the monitor in the future.



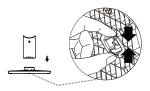
Attaching the base (for selected models)



Note: Remove the monitor and monitor base from its packaging. Carefully place the monitor face-down on a stable surface -- use a cloth to avoid scratching the screen.







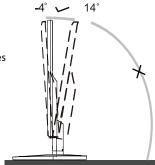
- 1 Attach the stand to the inner support by the fastening structures (for selected models).
- 2 Align the release button at the bottom of the monitor with the corresponding slot at the bottom of the base. A clicking sound signifies that the monitor has been securely attached to the base.



Note: Take care when performing the installation to avoid injuring yourself.

Screen position adjustment

To optimize the viewing position, you can adjust the monitor tilt, using both of your hands to hold the edges of the monitor. The monitor can be adjusted to 14 degrees up or 4 degrees down.



Connecting the adapter and AC Power cord

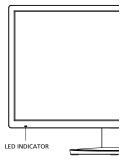
- The monitor has a universal power supply that allows operation in either 100/120 V AC or 220/240 V AC voltage area. No user-adjustment is required.
- Insert the power cable of adapter into the power port at the back of the Monitor, then plug the adapter into a nearby electrical outlet

Power saving

The monitor will be switched to "power saving" mode by the control signal from the display controller, as indicated by the red light.

Mode	LED light
On	Green
Standby/Power saving	Red

The power saving mode will be kept until a control signal has been detected or the keyboard or mouse is activated. The recovery time from "power saving" mode back to "on" is around 3 seconds.



Display Data Channel (DDC)

To make installation easier, so long as your system supports the DDC protocol, the monitor is able to plug-and-play. The DDC is a communication protocol through which the monitor automatically informs the host system about its capabilities; for example, supported resolutions and corresponding timing. The monitor supports the DDC2B standard.

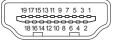
Connector pin assignment

15-pin color display signal cable



PIN No.	Description	PIN No.	Description
1	Red	9	+5 V
2	Green	10	Logic ground
3	Blue	11	Monitor ground
4	Monitor ground	12	DDC-serial data
5	DDC-return	13	H-sync
6	R-ground	14	V-sync
7	G-ground	15	DDC-serial clock
8	B-ground		

19-pin color display signal cable



PIN No.	Description	PIN No.	Description
1	TMDS Data2+	2	TMDS Data2 Shield
3	TMDS Data2-	4	TMDS Data1+
5	TMDS Data1 Shield	6	TMDS Data1-
7	TMDS Data0+	8	TMDS Data0 Shield
9	TMDS Data0-	10	TMDS Clock+
11	TMDS Clock Shield	12	TMDS Clock-
13	CEC	14	Reserved (N.C. on device)
15	SCL	16	SDA
17	DDC/CEC Ground	18	+5V Power
19	Hot Plug Detect		

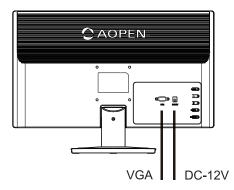
Standard timing table

No.	Mode	Resolution	Refresh	n Rate
1	VGA	640x480	60	Hz
2	MAC	640x480	67	Hz
3	VGA	640x480	72	Hz
4	VGA	640x480	75	Hz
5	VESA	720x400	70	Hz
6	SVGA	800x600	56	Hz
7	SVGA	800x600	60	Hz
8	SVGA	800x600	72	Hz
9	SVGA	800x600	75	Hz
10	MAC	832x624	75	Hz
11	XGA	1024x768	60	Hz
12	XGA	1024x768	70	Hz
13	XGA	1024x768	75	Hz
14	VESA	1280x720	60	Hz
15	VESA	1280x960	60	Hz
16	SXGA	1280x1024	60	Hz
17	SXGA	1280x1024	75	Hz
18	WXGA	1366x768	60	Hz

Installation

To install the monitor on your host system, please follow the steps below: Steps

- 1 Turn off your monitor and unplug your computer's power cord.
- 2 2-1 Connect VGA Cable (Only VGA-input model)
 - a Make sure both the monitor and computer are powered-OFF.
 - b Connect the VGA cable to the computer.
 - 2-2 Connect HDMI Cable (Only HDMI-input model)
 - a Make sure both the monitor and computer are powered-OFF.
 - b Connect the HDMI cable to the computer.
- 3 Insert the power cable of adapter into the power port at the back of the Monitor, then plug the adapter into a nearby electrical outlet.
- 4 Turn on the monitor first, then the computer. This sequence is very important.
- 5 If the monitor does not function properly, please refer to the troubleshooting section to diagnose the problem.

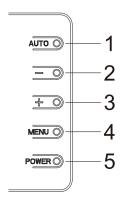






In order to prevent damage to the monitor, do not lift the monitor by its base.

Users controls



External Controls

No.	Icon	Item	Description
1	AUTO	Source/ Auto / Exit	If the OSD is active, press Auto to exit the OSD. Once the OSD is inactive, press Auto and the monitor will automatically optimize the display position, phase, and clock of your display.
2	-/◀	Eco mode/ Minus	If the OSD isn't active, continuous press the Minus button to choose the different Eco model. If the OSD is active, press the Minus button to toggle between the OSD options.
3	+/▶	Image ratio/ Plus	If the OSD isn't active, press the Plus button to change 4:3 or wide image ratio. If the OSD is active, press the Plus button to toggle between the OSD options.
4	MENU	Menu/ Option	Press to activate the OSD menu, then use it as directional key to highlight the desired function. Press it again to enter a selection.
5	POWER	Power button	Turns the monitor on/off. Green indicates power on. Red indicates standby/power saving mode.

Using the Shortcut Menu



Note: The following content is for general reference only. Actual product specifications may vary.

The OSD (on-screen display) can be used to adjust the settings of your LCD monitor.

Press the MENU key to open the OSD. You can use the OSD to adjust the picture quality, OSD position and general settings.

For shortcut settings, please refer to following page:

Press the function button to open the shortcut menu. The shortcut menu lets you quickly select the most commonly accessed settings.

Input Source Select Menu/Auto Adjust Menu





For single input model.

Press AUTO button to active auto adjust function.

For multi-input model.

Press AUTO button to open source select menu. Press AUTO button again to select available source and press MENU button to execute.

Press AUTO button continuously about 3 second to active auto adjust function.

ECO Menu



- 1)Press -/ ◀button to open ECO mode menu
- 2)Press +/▶button to check current ECO mode, then press ◀/ ▶ button to select mode(Standard, Text, Internet, Game, Movie, Sports).
- 3)Default setting is "Standard".

Image Ratio Menu



- 1)Press +/▶button to open Image Ratio Function menu.
- 2)Press +/▶ button again to check current mode, then press ◀/ ▶ key to change image ratio (Wide, 4:3).
- 3)Default setting is "Wide".



Note:If monitor with normal panel(4:3 or 5:4) and have not audio function, +/Right hot key may be not used when OSD is closed.

Main Page



- 1) Press the Menu button to activate the OSD window.
- 2) Press + or to navigate through the functions. (Press "-" key: the item will move to the forward item; Press "+" key: the item will move to the next item), (Once the desired function is highlighted, press the MENU-button to activate it. If the function selected has a sub-menu, press + or again to navigate through the sub-menu functions. Once the desired function is highlighted, press MENU-button to activate it.
- 3) Press + or to change the settings of the selected function. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-3.

Modes Selection Luminance

Main Menu Item	Sub Menu Item	Sub Menu	Description
	Contrast	0~100	Contrast Adjustment
	Brightness	0~100	Backlight Adjustment
		Standard	Standard Mode
		Text	Text Mode
Luminance	Eco Mode	Internet	Internet Mode
Luminance		Game	Game Mode
_		Movie	Movie Mode
344		Sports	Sports Mode
1	DCR	On/Off	Disable or enable dynamic contrast ratio
		Off	Off blue light
		50%	Blue light: 50%
	Blue Light	60%	Blue light: 60%
		70%	Blue light: 70%
		80%	Blue light: 80%



Image Setup

Main Menu Item	Sub Menu Item	Sub Menu	Description
	Clock	0~100	Adjust picture Clock to reduce Vertical-Line
			noise.
Image setup	Phase	0~100	Adjust Picture Phase to reduce
	Filase		Horizontal-Line noise.
4	H.Position	0~100	Adjust the horizontal position of the picture.
	V.Position	0~100	Adjust the vertical position of the picture.
	Image Ratio	Wide/ 4:3	Select wide or 4:3 format for display

Note:

If the product screen size is 4:3 or input signal resolution is wide format, the item of "Image Ratio" is disabled to adjust.



Color Setup

Main Menu Item	Sub Menu Item	Sub Menu	Description
	Warm		Recall Warm Color Temperature.
Color Temp.	Normal		Recall Normal Color Temperature.
	Cool		Recall Cool Color Temperature.
	sRGB		Recall sRGB Color Temperature.
		Red	Red Gain from Digital-register.
	USER	Green	Green Gain from Digital-register.
		Blue	Blue Gain from Digital-register.



Color Boost

Main Menu Item	Sub Menu Item	Sub Menu	Description
	Full Enhance	On/Off	Disable or Enable Full Enhance Mode
Color Boost	Nature Skin	On/Off	Disable or Enable Nature Skin Mode
	Green Field	On/Off	Disable or Enable Green Field Mode
	Sky-blue	On/Off	Disable or Enable Sky-blue Mode
	Auto Detect	On/Off	Disable or Enable Auto Detect Mode
	Demo	On/Off	Enhance Area in the left half of screen.



Picture Boost

Main Menu Item	Sub Menu Item	Sub Menu	Description
	Frame Size	14,29,43,57,7 1,86,100	Adjust the Size of the Frame
Picture Boost	Contrast	0-100	Contrast Adjustment for Enhance Area
	Brightness	0-100	Brightness Adjustment for Enhance Area
	H. Position	0-100	Adjust the horizontal position of the Bright Frame.
	V. Position	0-100	Adjust the vertical position of the Bright Frame.
	Bright Frame	On/Off	Enhance Area function



OSD Setup

Main Menu Item	Sub Menu Item	Sub Menu	Description
OSD Setup	H. Position	0-100	Adjust the horizontal position of the OSD. each step will increase/decrease value by 5
	V. Position	0-100	Adjust the vertical position of the OSD. each step will increase/decrease value by 5
	Timeout	5-100	Adjust the OSD timeout. each step will increase/decrease value by 5
	Language		Select the OSD language. (English is default setting)



Extra

Main Menu Item	Sub Menu Item	Sub Menu	Description
Extra	Input Select	AUTO D-SUB HDMI	Select input source
	DDC/CI	On/Off	Select DDC/Cl on or off
	Off Timer	00~24H	Select DC Off Time
	Reset	Yes/ No	Set Monitor to default status.
	Information		Show the resolution, H/V frequency of current input timing.



Troubleshooting

Before sending your LCD monitor for servicing, please check the troubleshooting list below to see if you can self-diagnose the problem.

VGA Mode

Problem	LED status	Remedy
No picture visible	Green	Using the OSD menu, adjust brightness and contrast to maximum or reset to their default settings.
	Off	Check the power switch.
		Check if the power cord is properly connected to the monitor.
	Red	Check if the video signal cable is properly connected at the back of monitor.
		Check if the computer system is switched on and in power saving/standby mode.
Unstable picture	Green	Check if the specification of graphics adapter and monitor is in compliance which may be causing the input signal frequency mismatch.
Abnormal picture (Image is missing, off-center, too	Green	Using the OSD menu, adjust focus, clock, H-position and V-position with non-standard signals.
large or too small on the screen)		Check the display setting on your system. In case of a missing image, please select another resolution or vertical refresh rate.
		Wait for a few seconds after adjusting the size of the image before changing or disconnecting the signal cable or switching off the monitor.

HDMI Mode (Optional)

Problem	LED status	Remedy
No picture visible	Green	Using the OSD menu, adjust brightness and contrast to maximum or reset to their default settings.
	Off	Check the power switch.
		Check if the AC power cord is properly connected to the monitor.
	Red	Check if the video signal cable is properly connected at the back of monitor.
		Check if the computer system is switched on and in power saving/standby mode.