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LCD Monitor **190EW8**



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Safety and Troubleshooting Information

Safety precautions and maintenance



WARNING: Use of controls, adjustments or procedures other than those specified in this documentation may result in exposure to shock, electrical hazards and/or mechanical hazards.

Read and follow these instructions when connecting and using your computer monitor:

Operation:

- Keep the monitor out of direct sunlight and away from stoves or any other heat source.
- Remove any object that could fall into ventilation holes or prevent proper cooling of the monitor's electronics.
- Do not block the ventilation holes on the cabinet.
- When positioning the monitor, make sure the power plug and outlet are easily accessible.
- If turning off the monitor by detaching the power cable or DC power cord, wait for 6 seconds before attaching the power cable or DC power cord for normal operation.
- Please use approved power cord provided by Philips all the time. If your power cord is missing, please contact with your local service center. (Please refer to Customer Care Consumer Information Center)
- Do not subject the LCD monitor to severe vibration or high impact conditions during operation.
- Do not knock or drop the monitor during operation or transportation.

Maintenance:

- To protect your display from possible damage, do not put excessive pressure on the LCD panel. When moving your monitor, grasp the frame to lift; do not lift the monitor by placing your hand or fingers on the LCD panel.
- Unplug the monitor if you are not going to use it for an extensive period of time.
- Unplug the monitor if you need to clean it with a slightly damp cloth. The screen may be wiped with a dry cloth when the power is off. However, never use organic solvent, such as, alcohol, or ammonia-based liquids to clean your monitor.
- To avoid the risk of shock or permanent damage to the set, do not expose the monitor to dust, rain, water, or excessive moisture environment.
- If your monitor gets wet, wipe it with dry cloth as soon as possible.
- If foreign substance or water gets in your monitor, please turn the power off immediately and disconnect the power cord. Then, remove the foreign substance or water, and send it to the maintenance center.
- Do not store or use the LCD monitor in locations exposed to heat, direct sunlight or extreme cold.
- In order to maintain the best performance of your monitor and use it for a longer lifetime, please use the monitor in a location

that falls within the following temperature and humidity ranges.

- Temperature: 0-40°C 32-104°F
- Humidity: 20-80% RH

Service:

- The casing cover should be opened only by qualified service personnel.
- If there is any need for any document for repair or integration, please contact with your local service center. (please refer to the chapter of "Consumer Information Center")
- For transportation information, please refer to "Physical Specifications".
- Do not leave your monitor in a car/trunk under direct sun light.



Consult a service technician if the monitor does not operate normally, or you are not sure what procedure to take when the operating instructions given in this manual have been followed.

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FAQs (Frequently Asked Questions)

General FAQs

Q: When I install my monitor what should I do if the screen shows 'Cannot display this video mode'?

A: Recommended video mode for Philips 19 ": 1440 x 900 @60Hz.

1. Unplug all cables, then connect your PC to the monitor that you used previously.
 2. In the Windows Start Menu, select Settings/Control Panel. In the Control Panel Window, select the Display icon. Inside the Display Control Panel, select the 'Settings' tab. Under the setting tab, in box labeled 'desktop area', move the slider to 1440 x 900 pixels (19").
 3. Open 'Advanced Properties' and set the Refresh Rate to 60Hz, then click OK.
 4. Restart your computer and repeat step 2 and 3 to verify that your PC is set at 1440 x 900@60Hz (19").
 5. Shut down your computer, disconnect your old monitor and reconnect your Philips LCD monitor.
 6. Turn on your monitor and then turn on your PC.
-

Q: What does 'refresh rate' mean in connection with an LCD monitor?

A: The refresh rate is of much less relevance for LCD monitors. LCD monitors display a stable, flicker-free image at 60Hz. There is no visible difference between 85Hz and 60Hz.

Q: What are the .inf and .icm files on the CD-ROM? How do I install the drivers (.inf and .icm)?

A: These are the driver files for your monitor. Follow the instructions in your user manual to install the drivers. Your computer may ask you for monitor drivers (.inf and .icm files) or a driver disk when you first install your monitor. Follow the instructions to insert the (companion CD-ROM) included in this package. Monitor drivers (.inf and .icm files) will be installed automatically.

Q: How do I adjust the resolution?

A: Your video card/graphic driver and monitor together determine the available resolutions. You can select the desired resolution under Windows® Control Panel with the "Display properties".

Q: What if I get lost when I am making monitor adjustments?

A: Simply press the MENU button, then select 'Reset' to recall all of the original factory settings.

Q: What is the Auto function?

A: The *AUTO adjustment* key restores the optimal screen position, phase and clock settings by pressing of a single button – without the need to navigate through OSD (On Screen Display) menus and control keys.

Note: Auto function is available in selected models only.

Q: My Monitor has no power (Power LED does not light up). What should I do?

A: Make sure the AC power cord is connected between the monitor and AC outlet, and click a key on keyboard/mouse to wake up the PC.

Q: Will the LCD monitor accept an interlaced signal under PC models?

A: No. If an Interlace signal is used, the screen displays both odd and even horizontal scanning lines at the same time, thus distorting the picture.

Q: What does the Refresh Rate mean for LCD?

A: Unlike CRT display technology, in which the speed of the electron beam is swept from the top to the bottom of the screen determines flicker, an active matrix display uses an active element (TFT) to control each individual pixel and the refresh rate is therefore not really applicable to LCD technology.

Q: Will the LCD screen be resistant to scratches?

A: A protective coating is applied to the surface of the LCD, which is durable to a certain extent (approximately up to the hardness of a 2H pencil). In general, it is recommended that the panel surface is not subject to any excessive shocks or scratches.

Q: How should I clean the LCD surface?

A: For normal cleaning, use a clean, soft cloth. For extensive cleaning, please use isopropyl alcohol. Do not use other solvents such as ethyl alcohol, ethanol, acetone, hexane, etc.

Q: Can I change the color setting of my monitor?

A: Yes, you can change your color setting through OSD control as the following procedures,

1. Press "MENU" to show the OSD (On Screen Display) menu
2. Press "Left Arrow" to select the option "color" then press "MENU" to enter color setting, there are five settings as below.
 - a. 6500K; this setting features the panel closed to red-white color tone.
 - b. 9300K; this setting features the panel closed to blue-white color tone.
 - c. Original; this setting load the default panel setting in terms of color tone. (Note: different panel maker may feature a different color temperature*)
 - d. User Define; the user can choose his/her preference color setting by adjusting red, green, blue color.

e. sRGB; this is a standard setting for ensuring correct exchange of colors between different device (e.g. digital cameras, monitors, printers, scanners, etc.)

*A measurement of the color of light radiated by an object while it is being heated. This measurement is expressed in terms of absolute scale, (degrees Kelvin). Lower Kevin temperatures such as 2004K are red; higher temperatures such as 9300K are blue. Neutral temperature is white, at 6504K.

Q: Can the Philips LCD Monitor be mounted on the wall?

A: Yes. Philips LCD monitors have this optional feature. For standard VESA mount holes on the rear cover allows the user to mount the Philips monitor on most of the VESA standard arms or accessories. We recommend to contact your Philips sales representative for more information.

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Screen Adjustments

Q: What is the FPadjust program on the CD-ROM?

A: The FPadjust program generates alignment patterns that help you adjust monitor settings such as Contrast, Brightness, Horizontal Position, Vertical Position, Phase and Clock for optimal performance.

Q: When I install my monitor, how do I get the best performance from the monitor?

A:

1. For best performance, make sure your display settings are set at 1440 x 900@60Hz for 19". Note: You can check the current display settings by pressing the OSD MENU button once. The current display mode is shown in OSD first page.
2. To install the Flat Panel Adjust (FPadjust) program located on the monitor setup CD-ROM, open the CD-ROM and double-click the FP_setup4.3.exe icon. This will install FP Adjust automatically and place a shortcut on your desktop.
3. Run FPadjust by double clicking the shortcut. Follow the instructions step by step to optimize image performance with your system's video controller.

Q: How do LCDs compare to CRTs in terms of radiation?

A: Because LCDs do not use an electron gun, they do not generate the same amount of radiation at the screen surface.

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Compatibility with other Peripherals

Q: Are Philips LCD monitors Plug-and-Play?

A: Yes, the monitors are Plug-and-Play compatible with Windows® 95, 98, 2000 and XP, and Vista.

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LCD Panel Technology

Q: What is a Liquid Crystal Display?

A: A Liquid Crystal Display (LCD) is an optical device that is commonly used to display ASCII characters and images on digital items such as watches, calculators, portable game consoles, etc. LCD is the technology used for displays in notebooks and other small computers. Like light-emitting diode and gas-plasma technologies, LCD allows displays to be much thinner than cathode ray tube (CRT) technology. LCD consumes much less power than LED and gas-displays because it works on the principle of blocking light rather than emitting it.

Q: What differentiates passive matrix LCDs from active matrix LCDs?

A: An LCD is made with either a passive matrix or an active matrix display grid. An active matrix has a transistor located at each pixel intersection, requiring less current to control the luminance of a pixel. For this reason, the current in an active matrix display can be switched on and off more frequently, improving the screen refresh time (your mouse pointer will appear to move more smoothly across the screen, for example). The passive matrix LCD has a grid of conductors with pixels located at each intersection in the grid.

Q: What are the advantages of TFT LCD compared with CRT?

A: In a CRT monitor, a gun shoots electrons and general light by colliding polarized electrons on fluorescent glass. Therefore, CRT monitors basically operate with an analog RGB signal. A TFT LCD monitor is a device that displays an input image by operating a liquid crystal panel. The TFT has a fundamentally different structure than a CRT: Each cell has an active matrix structure and independent active elements. A TFT LCD has two glass panels and the space between them is filled with liquid crystal. When each cell is connected with electrodes and impressed with voltage, the molecular structure of the liquid crystal is altered and controls the amount of inlet lighting to display images. A TFT LCD has several advantages over a CRT, since it can be very thin and no flickering occurs because it does not use the scanning method.

Q: Why is vertical frequency of 60Hz optimal for an LCD monitor?

A: Unlike a CDT monitor, the TFT LCD panel has a fixed resolution. For example, an XGA monitor has 1024x3 (R, G, B) x 768 pixels and a higher resolution may not be available without additional software processing. The panel is designed to optimize the display for a 65MHz dot clock, one of the standards for XGA displays. Since the vertical/horizontal frequency for this dot clock is 60Hz/48kHz, the optimum frequency for this monitor is 60Hz.

Q: What kind of wide-angle technology is available? How does it work?

A: The TFT LCD panel is an element that controls/displays the inlet of a backlight using the dual-refraction of a liquid crystal. Using the property that the projection of inlet light refracts toward the major axis of the liquid element, it controls the direction of inlet light and displays it. Since the refraction ratio of inlet light on liquid crystal varies with the inlet angle of the light, the viewing angle of a TFT is much narrower than that of a CDT. Usually, the viewing angle refers to the point where the contrast ration is 10. Many ways to widen the viewing angle are currently being developed and the most common approach is to use a wide viewing angle film, which widens the viewing angle by varying the refraction ratio. IPS (In Plane Switching) or MVA (Multi Vertical Aligned) is also used to give a wider viewing angle.

Q: Why is there no flicker on an LCD Monitor?

A: Technically speaking, LCDs do flicker, but the cause of the phenomenon is different from that of a CRT monitor -- and it has no impact of the ease of viewing. Flickering in an LCD monitor relates to usually undetectable luminance caused by the difference between positive and negative voltage. On the other hand, CRT flickering that can irritate the human eye occurs when the on/off action of the fluorescent object becomes visible. Since the reaction speed of liquid crystal in an LCD panel is much slower, this troublesome form of flickering is not present in an LCD display.

Q: Why is an LCD monitor virtually low of Electro Magnetic Interference?

A: Unlike a CRT, an LCD monitor does not have key parts that generate Electro Magnetic Interference, especially magnetic fields. Also, since an LCD display utilizes relatively low power, its power supply is extremely quiet.

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Ergonomics, Ecology and Safety Standards

Q: Does the LCD monitor conform to general safety standards?

A: Yes. Philips LCD monitors conform to the guidelines of MPR-II and TCO 99/03 standards for the control of radiation, electromagnetic waves, energy reduction, electrical safety in the work environment and recyclability. The specification page provides detailed data on safety standards.

More information is provided in the [Regulatory Information](#) section.

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Troubleshooting

This page deals with problems that can be corrected by a user. If the problem still persists after you have tried these solutions, contact Philips customer service representative.

Common Problems

Having this problem

No Picture
(Power LED not lit)

Check these items

- Make sure the power cord is plugged into the power outlet and into the back of the monitor.
- First, ensure that the power button on the front of the monitor is in the OFF position, then press it to the ON position.

No Picture


(Power LED is amber or yellow)


- Make sure the computer is turned on.
- Make sure the VGA cable is properly connected to your computer.
- Check to see if the monitor cable has bent pins.
- The Energy Saving feature may be activated

Screen says



- Make sure the monitor cable is properly connected to your computer. (Also refer to the Quick Set-Up Guide).
- Check to see if the monitor cable has bent pins.
- Make sure the computer is turned on.

<p>AUTO button not working properly</p>	<ul style="list-style-type: none"> • The Auto Function is designed for use on standard Macintosh or IBM-compatible PCs running Microsoft Windows. • It may not work properly if using nonstandard PC or video card.
<p>Imaging Problems</p>	
<p>Display position is incorrect</p>	<ul style="list-style-type: none"> • Press the Auto button. • Adjust the image position using the Phase/Clock of More Settings in OSD Main Controls.
<p>Image vibrates on the screen</p>	<ul style="list-style-type: none"> • Check that the VGA cable is properly connected to the graphics board or PC.
<p>Vertical flicker appears</p> 	<ul style="list-style-type: none"> • Press the Auto button. • Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.

<p>Horizontal flicker appears</p> 	<ul style="list-style-type: none"> • Press the Auto button. • Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.
<p>The screen is too bright or too dark</p>	<ul style="list-style-type: none"> • Adjust the contrast and brightness on On-Screen Display. (The backlight of the LCD monitor has a fixed life span. When the screen becomes dark or begins to flicker, please contact your sales representative).
<p>An after-image appears</p>	<ul style="list-style-type: none"> • If an image remains on the screen for an extended period of time, it may be imprinted in the screen and leave an after-image. This usually disappears after a few hours
<p>An after-image remains after the power has been turned off.</p>	<ul style="list-style-type: none"> • This is characteristic of liquid crystal and is not caused by a malfunction or deterioration of the liquid crystal. The after-image will disappear after a period of time.
<p>Green, red, blue, dark, and white dots remains</p>	<ul style="list-style-type: none"> • The remaining dots are normal characteristic of the liquid crystal used in today's technology.
<p>For further assistance, refer to the Consumer Information Centers list and contact Philips customer service representative.</p> <p style="text-align: center;">RETURN TO TOP OF THE PAGE</p>	

- Recycling Information for Customers Waste Electrical and
- Electronic Equipment-WEEE
- Energy Star Declaration
- BSMI Notice (Taiwan Only)
- China RoHS in EDFU
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- Frequently Asked Questions (FAQs)

Regulatory Information

Product Name:	190EW8
Model ID:	190EW8CB/93
Model No:	HWC7190A

Recycling Information for Customers

Philips establishes technically and economically viable objectives to optimize the environmental performance of the organization's product, service and activities.

From the planning, design and production stages, Philips emphasizes the important of making products that can easily be recycled. At Philips, end-of-life management primarily entails participation in national take-back initiatives and recycling programs whenever possible, preferably in cooperation with competitors.

There is currently a system of recycling up and running in the European countries, such as The Netherlands, Belgium, Norway, Sweden and Denmark.

In U.S.A., Philips Consumer Electronics North America has contributed funds for the Electronic Industries Alliance (EIA) Electronics Recycling Project and state recycling initiatives for end-of-life electronics products from household sources. In addition, the Northeast Recycling Council (NERC) - a multi-state non-profit organization focused on promoting recycling market development - plans to implement a recycling program.

In Asia Pacific, Taiwan, the products can be taken back by Environment Protection Administration (EPA) to follow the IT product recycling management process, detail can be found in web site www.epa.gov.tw

The monitor contains parts that could cause damage to the nature environment. Therefore, it is vital that the monitor is recycled at the end of its life cycle. For help and service, please contact [Consumers Information Center](#) or [F1rst Choice Contact Information Center](#) in each country or the following team of Environmental specialist can help.

Mr. WY Chen- Environment manager
Philips Multimedia Flat Display
E-mail: w.y.chen@philips.com

Tel: +886 (0) 3 222 6791

Mr. Maarten ten Houten - Senior Environmental Consultant
Philips Consumer Electronics
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Tel: +31 (0) 40 27 33402

Mr. Delmer F. Teglas
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Waste Electrical and Electronic Equipment-WEEE

Attention users in European Union private households



This marking on the product or on its packaging illustrates that, under European Directive 2002/96/EG governing used electrical and electronic appliances, this product may not be disposed of with normal household waste. You are responsible for disposal of this equipment through a designated waste electrical and electronic equipment collection. To determine the locations for dropping off such waste electrical and electronic, contact your local government office, the waste disposal organization that serves your household or the store at which you purchased the product.

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Energy Star Declaration

This monitor is equipped with a function for saving energy which supports the VESA Display Power Management Signaling (DPMS) standard. This means that the monitor must be connected to a computer which supports VESA DPMS. Time settings are adjusted from the system unit by software.

	VESA State	LED Indicator	Power Consumption
Normal operation	ON (Active)	Green	< 36 W (typ.)
Power Saving Alternative 2 One step	OFF (Sleep)	Amber	< 1 W
	Switch Off	Off	< 1 W



As an ENERGY STAR® Partner, PHILIPS has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.



We recommend you switch off the monitor when it is not in use for a long time.

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BSMI Notice (Taiwan Only)

符合乙類資訊產品之標準

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China RoHS in EDFU

The People’s Republic of China released a regulation called “Management Methods of Controlling Pollution by Electronic Information Products” or commonly referred to as China RoHS. All products including CRT and LCD monitor which produced and sold for China market have to meet China RoHS request.

中国大陆RoHS

根据中国大陆《电子信息产品污染控制管理办法》（也称为中国大陆RoHS），以下部分列出了本产品中可能包含的有毒有害物质或元素的名称和含量。

本表选用之产品

显示器（液晶及CRT）

有毒有害物质或元素

部件名称	有毒有害物质或元素					
	铅（Pb）	汞（Hg）	镉（Cd）	六价铬（Cr（VI））	多溴联苯（PBB）	多溴二苯醚（PBDE）
外壳	O	O	O	O	O	O
CRT顯示屏	X	O	O	O	O	O
液晶顯示屏/燈管	X	X	O	O	O	O

电路板组件*	X	O	O	O	O	O
電源選配器	X	O	O	O	O	O
電源線/連接線	X	O	O	O	O	O
*：电路板组件包括印刷电路板及其构成的零部件，如电阻、电容、集成电路、连接器等。						
：表示该有毒有害物质在该部件所有均质材料中的含量均在《电子信息产品中有毒有害物质的限量要求标准》规定的限量要求以下。						
×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出《电子信息产品中有毒有害物质的限量要求标准》规定的限量要求；但是上表中打“×”的部件，符合欧盟RoHS法规要求 属于豁免的部分 。						

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Other Related Information

Information for Users in the U. S.

For units set at 115 V :

Use a UL Listed Cord Set consisting of a minimum 18 AWG, Type SVT or SJT three conductor cord a maximum of 15-feet long and a parallel blade, grounding type attachment plug rated 15 A, 125 V.

For units set at 230 V:

Use a UL Listed Cord Set consisting of a minimum 18 AWG, Type SVT or SJT three conductor cord a maximum of 15-feet long and a tandem blade, grounding type attachment plug rated 15 A, 250 V.

Information for Users outside the U.S.

For units set at 230 V:

Use a Cord Set consisting of a minimum 18 AWG cord and grounding type attachment plug rated 15 A, 250 V. The Cord Set should have the appropriate safety approvals for the country in which the equipment will be installed and / or be marked HAR.

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Consumer Information Centers

[Antilles](#) • [Argentina](#) • [Australia](#) • [Bangladesh](#) • [Brasil](#) • [Canada](#) • [Chile](#) • [China](#) • [Colombia](#) • [Belarus](#) • [Bulgaria](#) • [Croatia](#) • [Czech Republic](#) • [Estonia](#) • [Dubai](#) • [Hong Kong](#) • [Hungary](#) • [India](#) • [Indonesia](#) • [Korea](#) • [Latvia](#) • [Lithuania](#) • [Malaysia](#) • [Mexico](#) • [Morocco](#) • [New Zealand](#) • [Pakistan](#) • [Paraguay](#) • [Peru](#) • [Philippines](#) • [Poland](#) • [Romania](#) • [Russia](#) • [Serbia & Montenegro](#) • [Singapore](#) • [Slovakia](#) • [Slovenia](#) • [South Africa](#) • [Taiwan](#) • [Thailand](#) • [Turkey](#) • [Ukraine](#) • [Uruguay](#) • [Venezuela](#)

Eastern Europe

[BELARUS](#)

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[CZECH REPUBLIC](#)

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SERBIA & MONTENEGRO

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Bulevar Vojvode Misica 37B
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SLOVAKIA

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Tel: +421 2 49207155
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www.zolter.com.pl

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Fax : (02)-777 6730

COLOMBIA

Industrias Philips de Colombia
S.A.-Division de Servicio
CARRERA 15 Nr. 104-33
Bogota, Colombia
Phone:(01)-8000 111001 (toll free)
Fax : (01)-619-4300/619-4104

MEXICO

Consumer Information Centre
Norte 45 No.669
Col. Industrial Vallejo
C.P.02300, -Mexico, D.F.
Phone: (05)-3687788 / 9180050462
Fax : (05)-7284272

PARAGUAY

Av. Rca. Argentina 1780 c/Alfredo Seiferheld
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Fax: (595 21) 664 336
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Limab18
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Fax : (01)-2136276

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Fax: (598) 619 77 77
Customer Desk:
Phone: 0004054176

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Apartado Postal 1167
Caracas 1010-A
Phone: (02) 2377575
Fax : (02) 2376420

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CANADA

Philips Electronics Ltd.
281 Hillmount Road
Markham, Ontario L6C 2S3
Phone: (800) 479-6696

Pacific

AUSTRALIA

Philips Consumer Electronics
Consumer Care Center
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North Ryde NSW 2113
Phone: 1300 363 391
Fax : +61 2 9947 0063

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P.O. box 1041
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Phone: 0800 477 999 (toll free)
Fax : 0800 288 588

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BANGLADESH

Philips Service Centre
100 Kazi Nazrul Islam
Avenue Kawran Bazar C/A
Dhaka-1215
Phone: (02)-812909
Fax : (02)-813062

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Rm 1007, Hongyun Building, No. 501 Wuning road,
200063 Shanghai P.R. China
Phone: 4008 800 008
Fax: 21-52710058

HONG KONG

Philips Electronics Hong Kong Limited
Consumer Service
Unit A, 10/F. Park Sun Building
103-107 Wo Yi Hop Road
Kwai Chung, N.T.
Hong Kong
Phone: (852)26199663
Fax: (852)24815847

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Fax: 91-20-712 1558

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Bandbox House
254-D Dr. A Besant Road, Worli
Bombay 400 025

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Customer Relation Centre
7 justice Chandra Madhab Road
Calcutta 700 020

MADRAS

Customer Relation Centre
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Madras 600 006

NEW DELHI
Customer Relation Centre
68, Shivaji Marg
New Dehli 110 015

INDONESIA

Philips Group of Companies in Indonesia
Consumer Information Centre
Jl.Buncit Raya Kav. 99-100
12510 Jakarta
Phone: (021)-7940040 ext: 2100
Fax : (021)-794 7511 / 794 7539

KOREA

Philips Consumer Service
Jeong An Bldg. 112-2
Banpo-dong, Seocho-Ku
Seoul, Korea
Customer Careline: 080-600-6600
Phone: (02) 709-1200
Fax : (02) 595-9688

MALAYSIA

After Market Solutions Sdn Bhd,
Philips Authorised Service Center,
Lot 6, Jalan 225, Section 51A,
46100 Petaling Jaya,
Selangor Darul Ehsan,
Malaysia.
Phone: (603)-7954 9691/7956 3695
Fax: (603)-7954 8504
Customer Careline: 1800-880-180

PAKISTAN

Philips Consumer Service
Mubarak manzil,
39, Garden Road, Saddar,
Karachi-74400
Tel: (9221) 2737411-16
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E-mail: care@philips.com
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PHILIPPINES

PHILIPS ELECTRONICS & LIGHTING, INC.
Consumer Electronics
48F PBCOM tower
6795 Ayala Avenue cor VA Rufino St.
Salcedo Village
1227 Makati City, PHILS
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Philips Electronique Maroc
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Middle East

DUBAI

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DUBAI
Phone: (04)-335 3666
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F1rst Choice Contact Information

Country	Code	Telephone number	Tariff
Austria	+43	0820 901115	€ 0.20
Belgium	+32	070 253 010	€ 0.17
Denmark	+45	3525 8761	Local call tariff
Finland	+358	09 2290 1908	Local call tariff
France	+33	08 9165 0006	€ 0.23
Germany	+49	0180 5 007 532	€ 0.12
Greece	+30	00800 3122 1223	Local call tariff
Ireland	+353	01 601 1161	Local call tariff
Italy	+39	199 404 042	€ 0.25
Luxembourg	+352	26 84 30 00	Local call tariff
The Netherlands	+31	0900 0400 063	€ 0.20
Norway	+47	2270 8250	Local call tariff
Portugal	+351	2 1359 1440	Local call tariff
Spain	+34	902 888 785	€ 0.15
Sweden	+46	08 632 0016	Local call tariff
Switzerland	+41	02 2310 2116	Local call tariff
United Kingdom	+44	0207 949 0069	Local call tariff

- [About This Guide](#)
- [Notational Descriptions](#)

About This Manual

About This Guide

This electronic user's guide is intended for anyone who uses the Philips LCD Monitor. It describes the LCD monitor's features, setup, operation and other important information. Its contents are identical to the information in our printed version.

It includes the following sections:

- [Safety and Troubleshooting Information](#) provides tips and solutions for common problems as well as other related information you may need.
- About This Electronic User's Manual gives an overview of information included, along with notation icon descriptions and other documentation for your reference.
- [Product Information](#) gives an overview of the monitor's features as well as the technical specifications for this monitor.
- [Installing Your Monitor](#) describes the initial setup process and gives an overview of how to use the monitor.
- [On-Screen Display](#) provides information on adjusting the settings on your monitor.
- [Customer Care and Warranty](#) contains a list of worldwide Philips Consumer Information Centers along with help desk phone numbers and information on the warranty applicable to your product.
- [Glossary](#) defines technical terms.
- [Download and Print Option](#) transfers this entire manual to your hard drive for easy reference.

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Notational Descriptions

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 or italic type. These blocks contain notes, cautions or warnings. They are used as follows:



NOTE: This icon indicates important information and tips that help you make better use of your computer system.



CAUTION: This icon indicates information that tells you how to avoid either potential damage to hardware or loss of data.



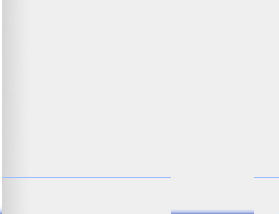
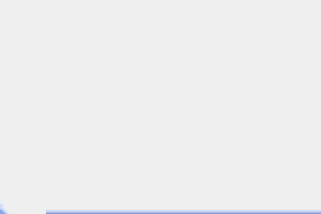
WARNING: This icon indicates the potential for bodily harm and tells you how to avoid the problem.

Some warnings may appear in alternate formats and may not be accompanied by an icon. In such cases, the specific presentation of the warning is mandated by the relevant regulatory authority.

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- Product
 - Features
- Lead-free Product
- Technical
 - Specifications
- Resolution & Preset Modes
- Philips Pixel Defect Policy
- Automatic Power Saving
- Physical
 - Specification
- Pin Assignment
- Product Views
- Physical Function

Product Information

Product Features

190EW8

- **Outstanding front of screen performance:**
 - Big, wide screen: IM, write mail, watch videos on one screen
 - Fast response time
 - WXGA+, wide format 1440 x 900 resolution for sharper display
- **Green design:**
 - For your safety: Aerospace composite fire retardant case
 - Lead-free design safeguards our environment
 - Power consumption below the industry average
- **Great convenience:**
 - Empowered for Windows Vista
 - One-touch brightness and contrast controls
 - Embedded power supply eliminates power adaptors
 - Auto adjustment for perfect picture display with one touch

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Lead-free Product



Philips eliminated toxic substances like lead from its displays. Lead-free display helps protect your health and promotes environmentally sound recovery and disposal of waste from electrical and electronic equipment. Philips complies with the European Community stringent RoHS Directive mandating restrictions on hazardous substances in electrical and electronic equipment. With Philips, you can be confident that your display device does not harm the environment.

Technical Specifications*

LCD PANEL	
• Type	TFT LCD
• Screen size	19" visual
• Pixel Pitch	0.284 x 0.284 mm
• LCD Panel type	1440 x 900 pixels R.G.B. vertical stripe Anti-glare polarizer, hard coated
• Effective viewing area	408.2 x 255.2 mm
• Display Colors	16.7M colors
SCANNING	
• Vertical refresh rate	56 Hz-76 Hz
• Horizontal Frequency	30 kHz - 83 kHz

VIDEO

• Video dot rate	140 MHz
• Input impedance	
- Video	75 ohm
- Sync	2.2K ohm
• Input signal levels	0.7 Vpp
• Sync input signal	Separate sync Composite sync
• Sync polarities	Positive and negative

Optical characteristics

• Peak contrast angle	6 o'clock
-----------------------	-----------

- White Chromaticity

x: 0.283 y: 0.299 (at 9300°K)
x: 0.313 y: 0.329 (at 6500°K)

** This data is subject to change without notice.*

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Resolution & Preset Modes

A. Maximum Resolution

- For 190EW8
1440 x 900 at 75Hz (analog input)

B. Recommended Resolution

- For 190EW8
1440 x 900 at 60Hz (analog input)

15 factory preset modes:

H. freq (kHz)	Resolution	V. freq (Hz)
31.469	720*400	70.087
31.469	640*480	59.940
37.500	640*480	75.000
35.156	800*600	56.250
37.879	800*600	60.317
46.875	800*600	75.000
48.363	1024*768	60.004
60.023	1024*768	75.029
55.935	1440*900	59.887
70.635	1440*900	74.984
35.000	640*480	67.000
31.469	640*350	70.086
63.981	1280*1024	60.020
79.976	1280*1024	75.025
55.469	1440*900	59.901

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Automatic Power Saving

If you have VESA DPMS compliance display card or software installed in your PC, the monitor can automatically reduce its power consumption when not in use. If an input from a keyboard, mouse or other input device is detected, the monitor will 'wake up' automatically. The following table shows the power consumption and signaling of this automatic power saving feature:

Power Management Definition

VESA Mode	Video	H-sync	V-sync	Power Used	LED color
Active	ON	Yes	Yes	< 37 W (typ.)	Green
Sleep	OFF	No	No	< 1 W	Amber
Switch Off	OFF	-	-	< 1W	Off

This monitor is ENERGY STAR® compliant. As an ENERGY STAR® Partner, PHILIPS has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

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Physical Specifications

• Dimension (WxHxD) *	450.3 x 387.5 x 167.7 mm (incl. Pedestal)
• Weight	4.64 Kg
• Tilt	-5° ~ 20°
• Power supply	100 ~ 240 VAC, 50/60 Hz
• Power consumption	37 W* (typ.)
• Temperature	0° C to 40° C (operating) -20° C to 60° C (storage)
• Relative humidity	20% to 80%
• System MTBF	50K hours (CCFL 40K hours)
• Cabinet color	190EW8CB: Black

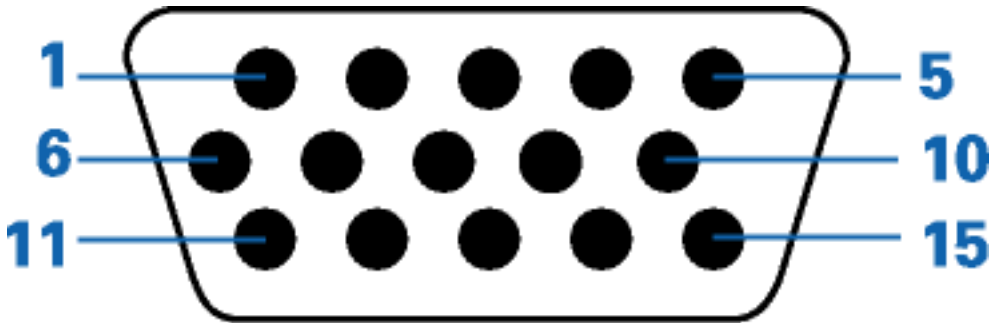
** This data is subject to change without notice.*

** 1440 x 900, standard size, contrast 50%, brightness max., 6500° K, full white pattern.*

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Pin Assignment

The 15-pin D-sub connector (male) of the signal cable:



Pin No.	Assignment	Pin No.	Assignment
1	Red video input	9	DDC + 5 V
2	Green video input/SOG	10	Logic ground
3	Blue video input	11	Ground
4	Sense (GND)	12	Serial data line (SDA)
5	Cable detect (GND)	13	H. Sync / H+V. Sync
6	Red video ground	14	V. Sync

7	Green video ground	15	Data clock line (SCL)
8	Blue video ground		

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Product Views

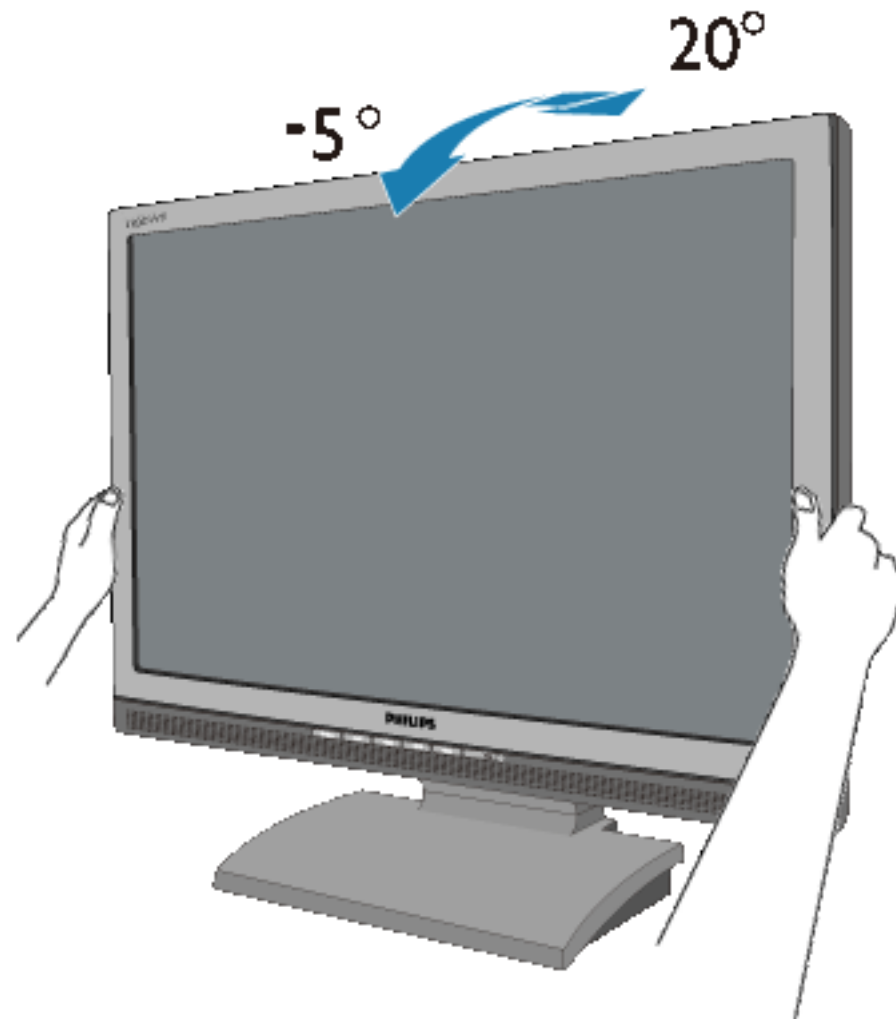
Follow the links to see various views of the monitor and its components.

[Front View Product Description](#)

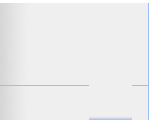
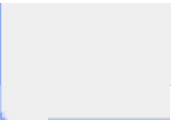
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Physical Function

Tilt



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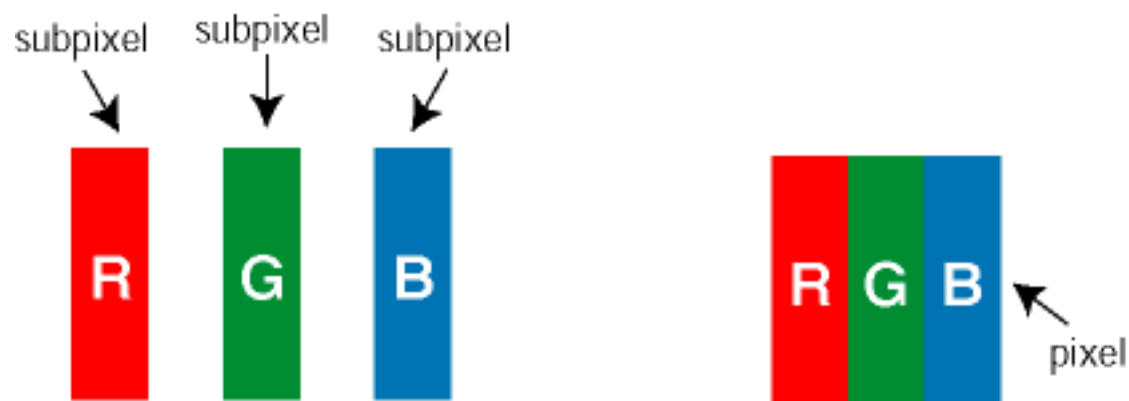


- Product Features
- Technical Specifications
- Resolution & Preset Modes
- Automatic Power Saving
- Physical Specification
- Pin Assignment
- Product Views

Philips Pixel Defect Policy

Philips' Flat Panel Monitors Pixel Defect Policy

Philips 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 LCD panels used in flat panel monitors are sometimes unavoidable. No manufacturer can guarantee that all panels will be free from pixel defects, but Philips guarantees that any monitor with an unacceptable number of defects will be repaired or replaced under warranty. This notice explains the different types of pixel defects and defines acceptable defect levels for each type. In order to qualify for repair or replacement under warranty, the number of pixel defects on a TFT LCD panel must exceed these acceptable levels. For example, no more than 0.0004% of the sub pixels on a 15" XGA monitor may be defective. Furthermore, Philips sets even higher quality standards for certain types or combinations of pixel defects that are more noticeable than others. This policy is valid worldwide.



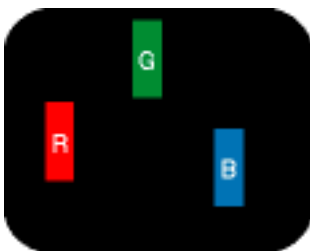
Pixels and Sub pixels

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

Types of Pixel Defects

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

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



One lit red, green or blue sub pixel



Two adjacent lit sub pixels:

- Red + Blue = Purple
- Red + Green = Yellow
- Green + Blue = Cyan (Light Blue)

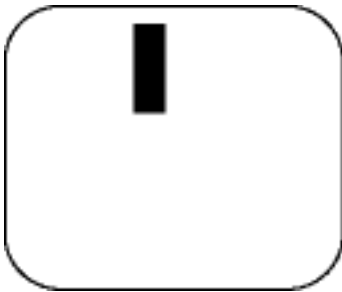


Three adjacent lit sub pixels (one white pixel)

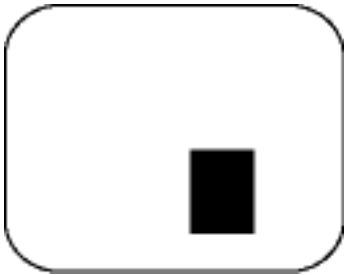


A red or blue *bright dot* must be more than 50 percent brighter than neighboring dots while a green bright dot is 30 percent brighter than neighboring dots.

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



One dark sub pixel



Two or three adjacent dark sub pixels

Proximity of Pixel Defects

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

Pixel Defect Tolerances

In order to qualify for repair or replacement due to pixel defects during the warranty period, a TFT LCD panel in a Philips flat panel monitor must have pixel or sub pixel defects exceeding the tolerances listed in the following tables.

BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	190EW8
1 lit subpixel	3
2 adjacent lit subpixels	1
3 adjacent lit subpixels (one white pixel)	0
Distance between two bright dot defects*	>25mm
Total bright dot defects of all types	3

BLACK DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	190EW8
1 dark subpixel	5
2 adjacent dark subpixels	2
3 adjacent dark subpixels	1
Distance between two black dot defects*	>15mm
Total black dot defects of all types	5

TOTAL DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	190EW8
Total bright or black dot defects of all types	5

Note:

** 1 or 2 adjacent sub pixel defects = 1 dot defect*

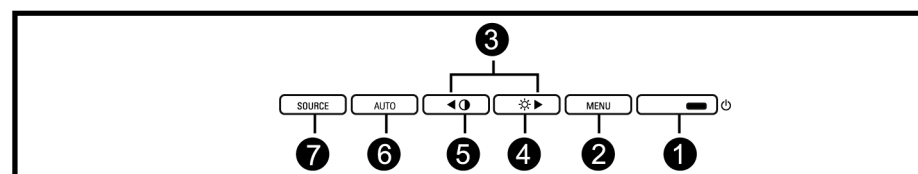
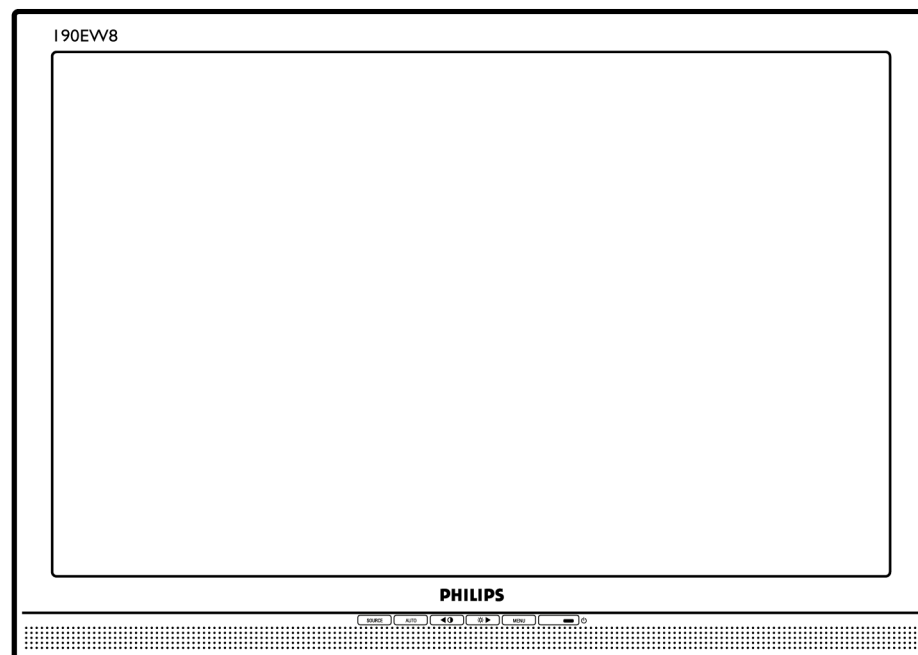
Your Philips monitor is ISO13406-2 Compliant


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Installing Your LCD Monitor

- Front View
- Product Description
- Connecting to Your PC
- The Base
- Getting Started
- Optimizing Performance

Front View Product Description

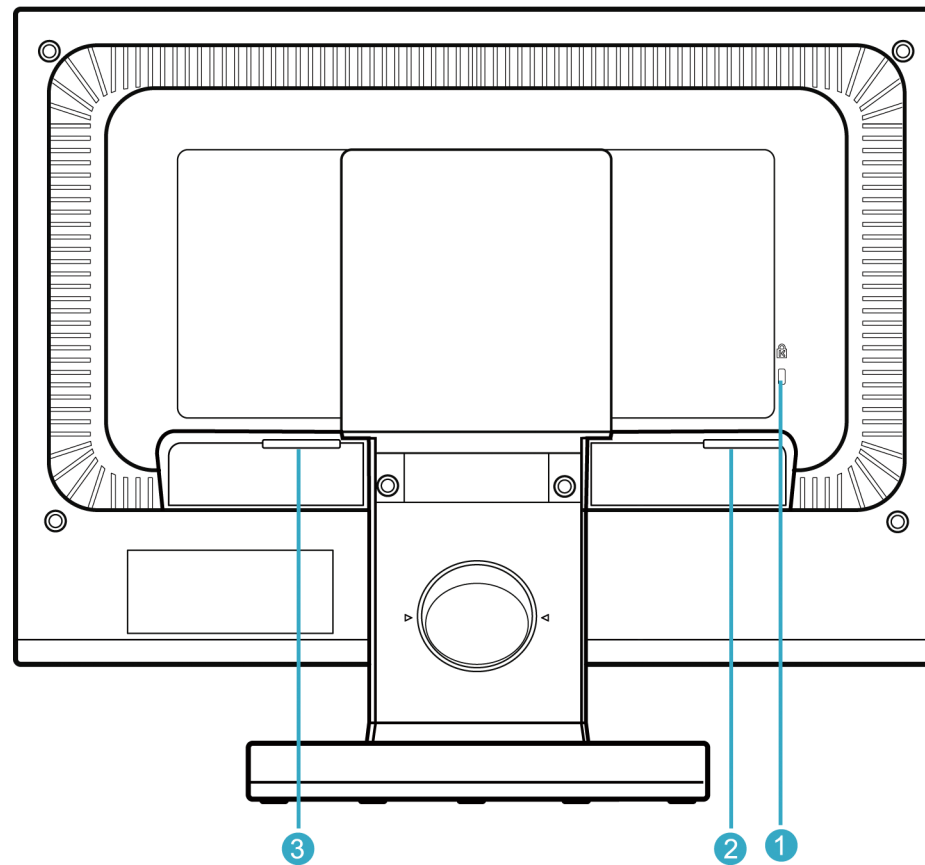


- 1  To switch monitor's power On and Off
- 2 **MENU** To access OSD menu / to confirm

- 3  To move and adjust
- 4  To adjust contrast of the display
- 5  To adjust brightness of the display
- 6 **AUTO** Automatically adjust the horizontal position, vertical position, phase and clock settings
- 7 **SOURCE** To show input source

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Rear View



- 1 Kensington anti-thief lock
- 2 VGA input
- 3 AC power input

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Optimizing Performance

- For best performance, ensure that your display settings are set at 1440 x 900, 60Hz.



Note: You can check the current display settings by pressing the 'MENU' button once. The current display mode is shown in OSD main controls called RESOLUTION.

- You can also install the [Flat Panel Adjust \(FP Adjust\) program](#), a program for getting the best performance out of your monitor. This is included on this CD. Step-by-step instructions are provided to guide you through the installation process. Click on the link to know more about this program.

More about



[FP_setup4.3.exe](#)

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Connecting to Your PC

- Front View Product Description
- Accessory Pack
- Connecting to Your PC
- Getting Started
- Optimizing Performance
- The base

Accessory Pack

Unpack all the parts.



Power cord



VGA cable

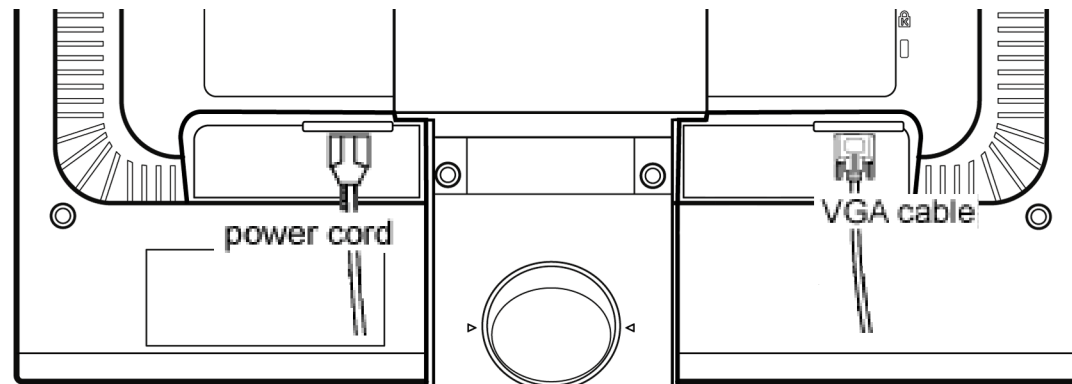


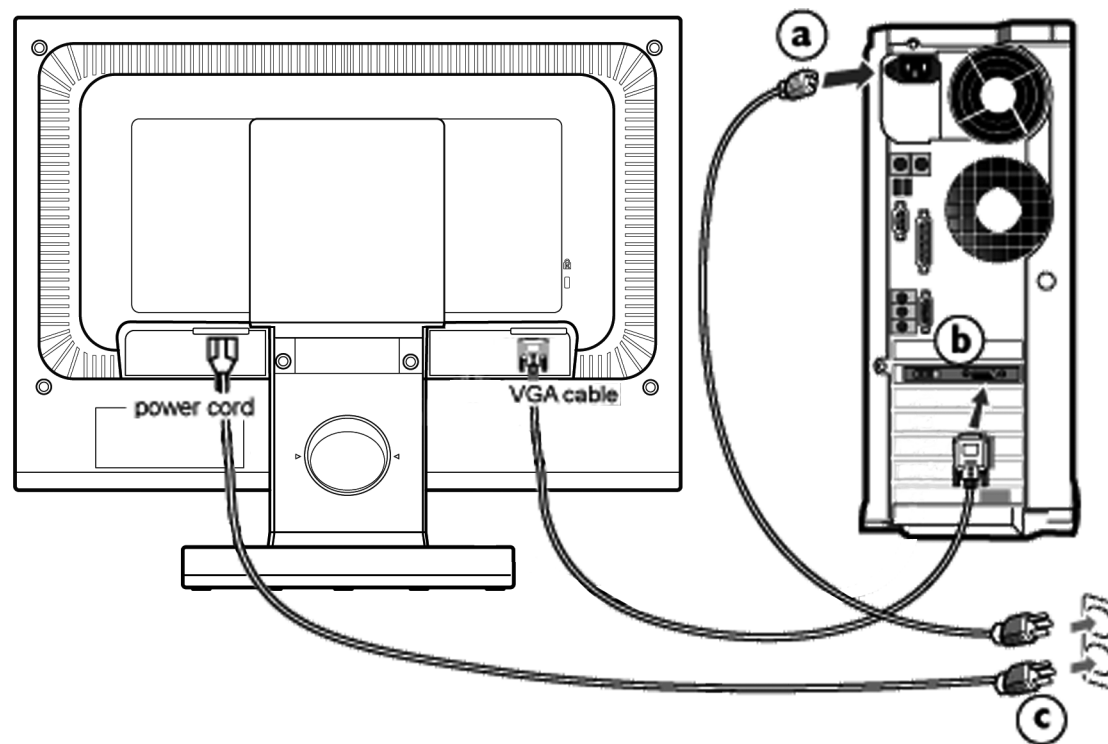
EDFU pack

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Connecting to Your PC

- 1) Connect the power cord to the back of the monitor firmly.





2) Connect to PC

- (a) Turn off your computer and unplug its power cable.
- (b) Connect the monitor signal cable to the video connector on the back of your computer.
- (c) Plug the power cord of your computer and your monitor into a nearby outlet.
- (d) Turn on your computer and monitor. If the monitor displays an image, installation is complete.

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Your LCD Monitor :

- Front View Product Description
- Setting Up and Connecting Your Monitor
- Getting Started
- Optimizing Performance

Getting Started

Getting Started

Use the information file (.inf) for Windows® 95/98/2000/Me/XP/Vista or later

The built-in VESA DDC2B feature in Philips Monitors supports Plug & Play requirements for Windows® 95/98/2000/Me/XP/Vista. This information file (.inf) should be installed in order that your Philips monitor can be enabled from the 'Monitor' dialog box in Windows® 95/98/2000/Me/XP/Vista and the Plug & Play application can be activated. The installation procedure based on Windows® '95 OEM Release 2 , 98 , 2000, Me, XP, and Vista is specified as follows.

For Windows® 95

1. Start Windows® '95.
2. Click on the 'Start' button, point to 'Settings', and then click on 'Control Panel'.
3. Double click on the 'Display' Icon.
4. Select the 'Settings' tab then click on 'Advanced...'.
5. Select the 'Monitor' button, point to 'Change...' then click on 'Have Disk...'.
6. Click on the 'Browse...' button, select the appropriate drive F: (CD-ROM Drive) then click on the 'OK' button.
7. Click on the 'OK' button then select your monitor model and click on 'OK'.
8. Click on the 'Close' button.

For Windows® 98

1. Start Windows® 98.
2. Click on the 'Start' button, point to 'Settings', and then click on 'Control Panel'.
3. Double click on the 'Display' Icon.
4. Select the 'Settings' tab then click on 'Advanced...'.
5. Select the 'Monitor' button, point to 'Change...' then click on 'Next'
6. Select 'Display a list of all the drivers in a specific location, so you can choose the driver you want.' then click on 'Next' and then click on 'Have Disk...'.
7. Click on the 'Browse...' button, select the appropriate drive F: (CD-ROM Drive) then click on the 'OK' button.
8. Click on the 'OK' button then select your monitor model and click on the 'Next' button.
9. Click on the 'Finish' button then the 'Close' button.

For Windows® 2000

1. Start Windows® 2000.
2. Click on the 'Start' button, point to 'Settings', and then click on 'Control Panel'.
3. Double click on the 'Display' Icon.
4. Select the 'Settings' tab then click on 'Advanced...'.
 - If the 'Properties' button is inactive, it means your monitor is properly configured. Please stop installation.
 - If the 'Properties' button is active. Click on 'Properties' button. Please follow the steps given below.
6. Click on 'Driver' and then click on 'Update Driver...' then click on the 'Next' button.
7. Select 'Display a list of the known drivers for this device so that I can choose a specific driver', then click on 'Next' and then click on 'Have disk...'.
 - If the 'Properties' button is inactive, it means your monitor is properly configured. Please stop installation.
 - If the 'Properties' button is active. Click on 'Properties' button. Please follow the steps given below.
8. Click on the 'Browse...' button then select the appropriate drive F: (CD-ROM Drive).
9. Click on the 'Open' button, then click on the 'OK' button.
10. Select your monitor model and click on the 'Next' button.
11. Click on the 'Finish' button then the 'Close' button.
 - If you can see the 'Digital Signature Not Found' window, click on the 'Yes' button.

For Windows® Me

1. Start Windows® Me.
2. Click on the 'Start' button, point to 'Settings', and then click on 'Control Panel'.
3. Double click on the 'Display' Icon.
4. Select the 'Settings' tab then click on 'Advanced...'.
 - If the 'Properties' button is inactive, it means your monitor is properly configured. Please stop installation.
 - If the 'Properties' button is active. Click on 'Properties' button. Please follow the steps given below.
6. Click on 'Driver' and then click on 'Update Driver...' then click on the 'Next' button.
7. Select 'Display a list of all the drivers in a specific location, so you can choose the driver you want', then click on 'Next' and then click on 'Have Disk...'.
 - If the 'Properties' button is inactive, it means your monitor is properly configured. Please stop installation.
 - If the 'Properties' button is active. Click on 'Properties' button. Please follow the steps given below.
8. Click on the 'Browse...' button, select the appropriate drive F: (CD-ROM Drive) then click on the 'OK' button.
9. Click on the 'OK' button, select your monitor model and click on the 'Next' button.
10. Click on 'Finish' button then the 'Close' button.

For Windows® XP

1. Start Windows® XP.
2. Click on the 'Start' button and then click on 'Control Panel'.
3. Click on the 'Display' Item.
4. Select the 'Settings' tab then click on the 'Advanced' button.
5. Select 'Monitor' tab
 - If the 'Properties' button is inactive, it means your monitor is properly configured. Please stop installation.
 - If the 'Properties' button is active, click on 'Properties' button.Please follow the steps below.
6. Click on the 'Driver' tab and then click on 'Update Driver...' button.
7. Select the 'Install from a list or specific location [advanced]' radio button and then click on the 'Next' button.
8. Select the 'Don't Search. I will choose the driver to install' radio button. Then click on the 'Next' button.
9. Click on the 'Have disk...' button, then click on the 'Browse...' button and then select the appropriate drive F: (CD-ROM Drive).
10. Click on the 'Open' button, then click the 'OK' button.
11. Select your monitor model and click on the 'Next' button.

- If you can see the 'has not passed Windows® Logo testing to verify its compatibility with Windows® XP' message, please click on the 'Continue Anyway' button.
- 12. Click on the 'Finish' button then the 'Close' button.
- 13. Click on the 'OK' button and then the 'OK' button again to close the Display_Properties dialog box.

For Windows® Vista

1. Start Windows® Vista.
2. Click on the 'Start' button and then click on 'Control Panel'.
3. Double click on 'Personalization' Icon.
4. Click on 'Display Settings' Item.
5. Click on 'Advanced Settings...' button.
6. Select 'Monitor' tab
 - If the 'Properties' button is inactive, it means your monitor is properly configured. Please stop this installation.
 - If the 'Properties' button is active, click on the 'Properties' button. Please follow the steps below.
7. Click on the 'Continue' button.
8. Click on the 'Driver' tab and then click on the 'Update Driver...' button.
9. Select the 'Browse my computer for driver software' button.
10. Click on the 'Browse...' button, select the appropriate driver F: (CD-ROM Drive) then click on the 'OK' button.
11. Click on 'Next' button.
12. Select your monitor model and click on the 'Next' button.
13. Click on the 'Finish' button then the 'Close' button.

If your Windows® 95/98/2000/Me/XP/Vista version is different or you need more detailed installation information, please refer to your Windows® 95/98/2000/Me/XP/Vista user's manual.

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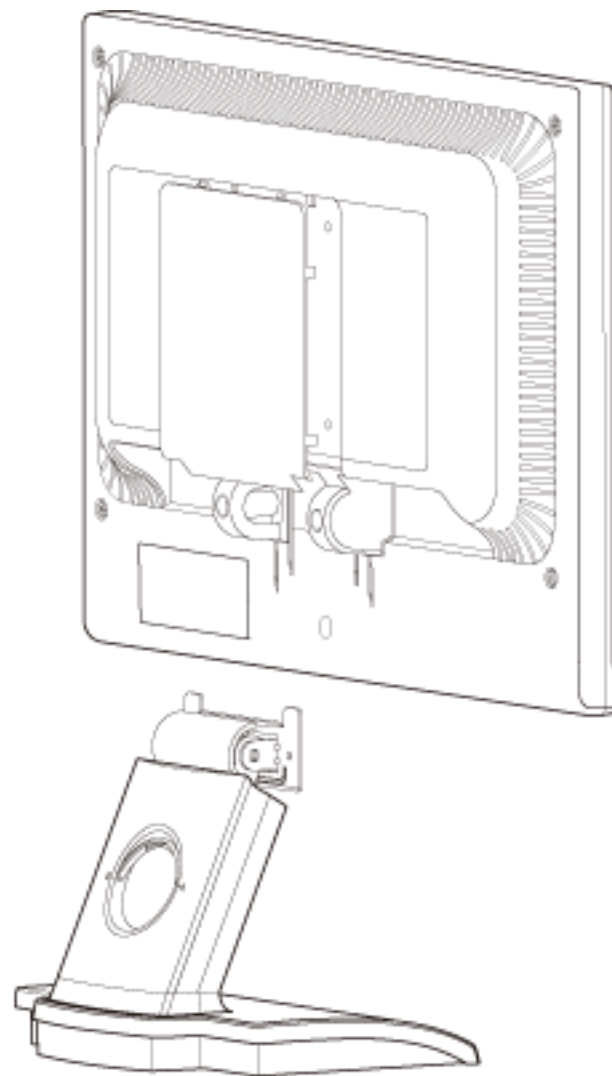
- [Front View Product Description](#)
- [Accessory Pack](#)
- [Connecting to your PC](#)
- [Getting Started](#)
- [Optimizing Performance](#)
- [Remove the Base](#)

The Base

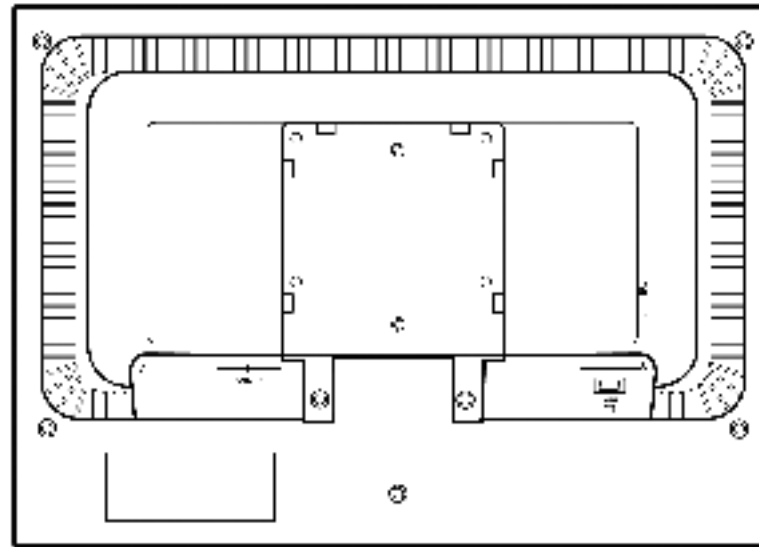
Remove the Base

Condition:

- for VESA standard mounting applications
1. Remove the 2 screws and then remove the base from the LCD monitor.
 2. Remove the cover.



Note: This monitor accepts a 100mmx100mm VESA-Compliant mounting interface.



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- [Installing your LCD monitor driver](#)
- [Download and Printing Instructions](#)
- [Installing FPadjust Program](#)

Download and Print

Installing Your LCD monitor driver

System requirements:

- PC running Windows 95, Windows® 98, Windows® 2000 , Windows® Me, Windows® XP, Windows® Vista or later
- Find your driver ".inf/.icm/.cat" at : /PC/drivers/

Read the "Readme.txt" file before installing.

This page provides an option to read the manual in .pdf format. PDF files can be downloaded into your hard disk, then viewed and printed with Acrobat Reader or through your browser.

If you do not have Adobe® Acrobat Reader installed, click on the link to install the application. [Adobe® Acrobat Reader for PC](#) / [Adobe® Acrobat Reader for Apple Macintosh](#).

Download instructions:

To download the file:

1. Click-and-hold your mouse over the icon below. (Windows® 95/98/2000/Me/XP/Vista users right-click)

[Download](#)



[190EW8.pdf](#)

2. From the menu that appears, choose 'Save Link As...', 'Save Target As...' or 'Download Link to Disk'.

3. Choose where you would like to save the file; click 'Save' (if prompted to save as either 'text' or 'source', choose 'source').

Printing instructions:

To print the manual:

With the manual file open, follow your printer's instructions and print the pages you need.

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Installing FPadjust Program

The FP Adjust program generates alignment patterns which will help you adjust monitor settings such as CONTRAST, BRIGHTNESS, HORIZONTAL & VERTICAL POSITION, PHASE and CLOCK.

System requirements:

- PC running Windows® 95, Windows® 98, Windows® 2000, Windows® Me, Windows® XP, Windows® Vista or later

To install [FPadjust Program](#):

- Click on the link or icon to install FPadjustment Program.
- **or**
- Click-and-hold your mouse over the icon. (Win95/98/2000/Me/XP/Vista users right-click)

Download



[FP_setup4.3.exe](#)

- From the menu that appears, choose 'Save Link As...', 'Save Target As...' or 'Download Link to Disk'.
- Choose where you would like to save the file; click 'Save' (if prompted to save as either 'text' or 'source', choose 'source').
- Exit your browser and install the FPadjust Program.

Read the "FP_Readme4.3.txt" file before installing.

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- Description of the On-Screen Display
- The OSD Tree



On-Screen Display

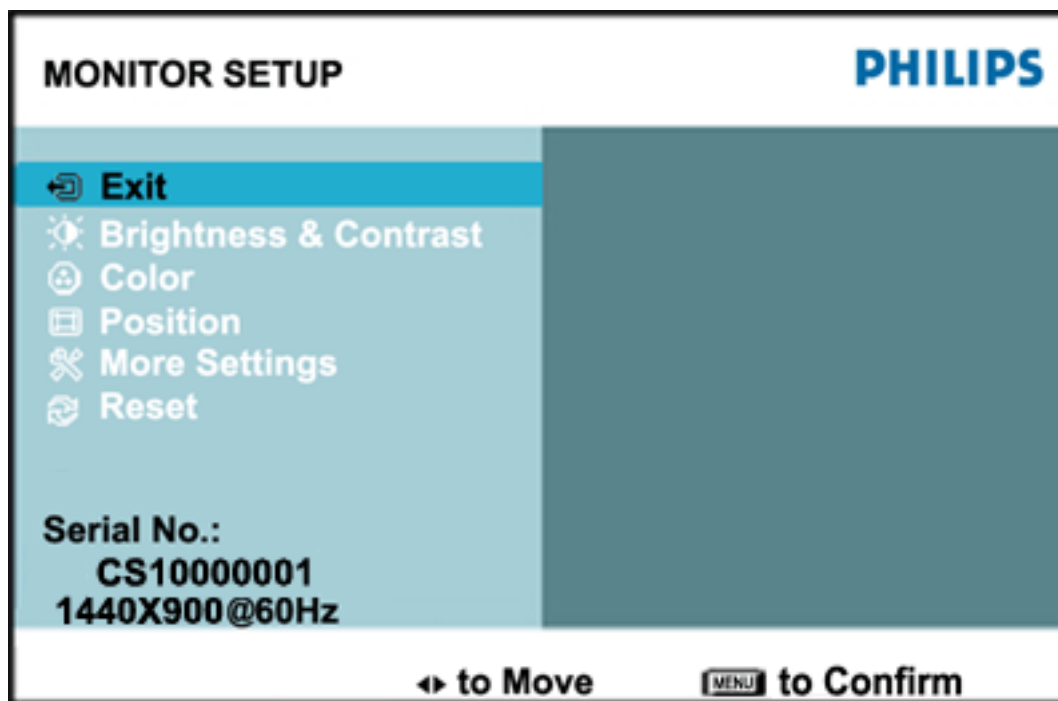
Description of the On Screen Display

What is the On-Screen Display?

This is a feature in all Philips LCD monitors. It allows an end user to adjust screen performance of the monitors directly through an on-screen instruction window. The user interface provides user-friendliness and ease-of-use when operating the monitor.

Basic and simple instruction on the control keys.

When you press the  button on the front control of your monitor, the On-Screen Display (OSD) Main Controls window will pop up and you can then start making adjustments to your monitor's various features. Use the  keys to make your adjustments.

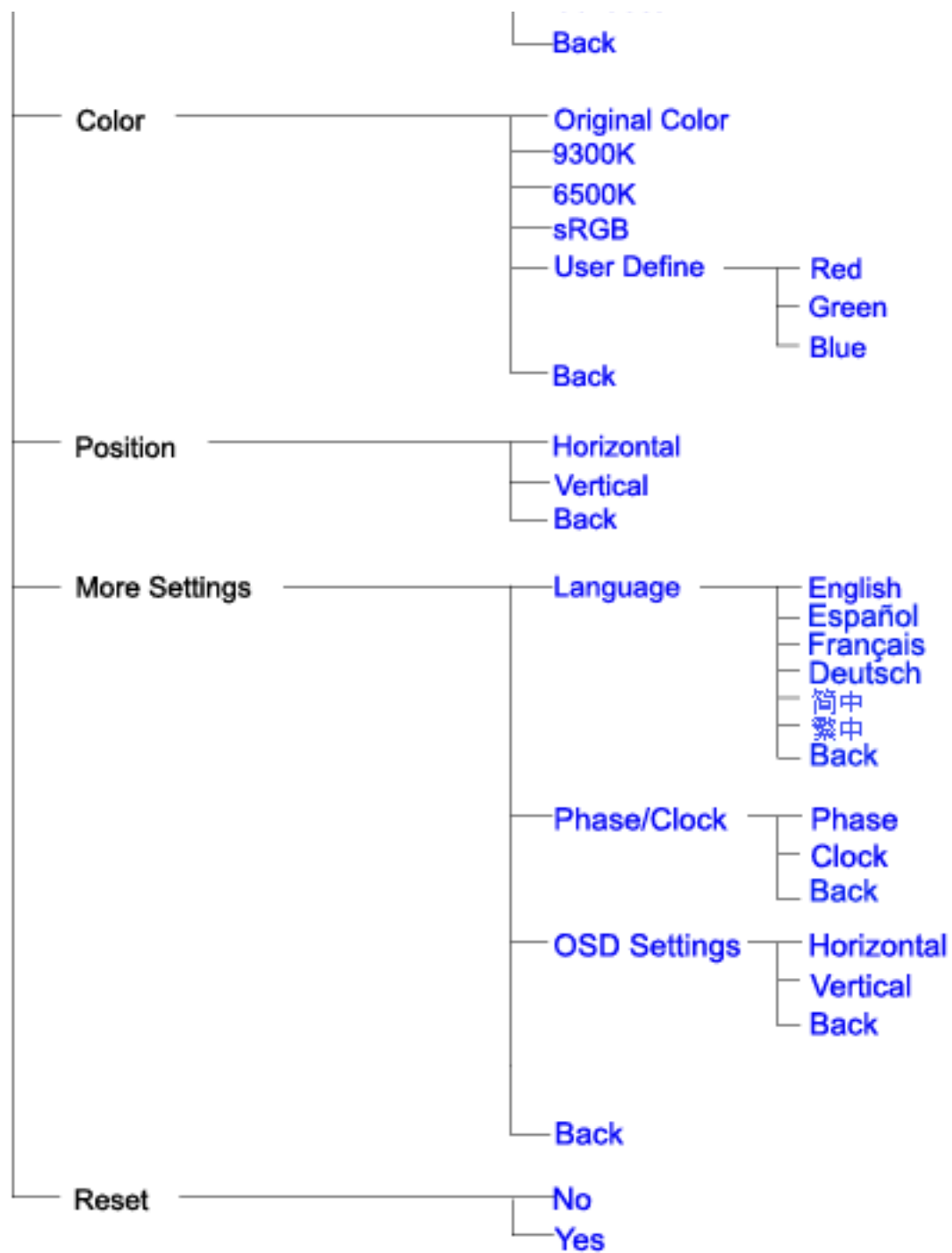


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The OSD Tree

Below is an overall view of the structure of the On-Screen Display. You can use this as a reference when you want to work your way around the different adjustments later on.





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Customer Care & Warranty

PLEASE SELECT YOUR COUNTRY/AREA TO REVIEW DETAILS OF YOUR WARRANTY COVERAGE

WESTERN EUROPE: [Austria](#) • [Belgium](#) • [Denmark](#) • [France](#) • [Germany](#) • [Greece](#) • [Finland](#) • [Ireland](#) • [Italy](#) • [Luxembourg](#) • [the Netherlands](#) • [Norway](#) • [Portugal](#) • [Sweden](#) • [Switzerland](#) • [Spain](#) • [United Kingdom](#)

EASTERN EUROPE: [Czech Republic](#) • [Hungary](#) • [Poland](#) • [Russia](#) • [Slovakia](#) • [Slovenia](#) • [Turkey](#)

LATIN AMERICA: [Antilles](#) • [Argentina](#) • [Brasil](#) • [Chile](#) • [Colombia](#) • [Mexico](#) • [Paraguay](#) • [Peru](#) • [Uruguay](#) • [Venezuela](#)

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AFRICA: [Morocco](#) • [South Africa](#)

MIDDLE EAST: [Dubai](#) • [Egypt](#)

Your Philips F1rst Choice Warranty

Thank you for purchasing this Philips monitor.



All Philips monitors are designed and manufactured to high standards and deliver high-quality performance, ease of use and ease of installation. Should you encounter any difficulties while installing or using this product, please contact the Philips helpdesk directly to benefit from your Philips F1rst Choice Warranty. This three-year service warranty entitles you to a swap model on-site if your monitor turns out to be faulty or defective. Philips aims at a swap within 48 hours of your call being received.

What is covered?

The Philips F1rst Choice Warranty applies within Andorra, Austria, Belgium, Cyprus, Denmark, France, Germany, Greece, Finland, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, the Netherlands, Norway, Portugal, Sweden, Switzerland, Spain and the United Kingdom and only for monitors originally designed, manufactured, approved and/or authorized for usage within these countries.

Warranty coverage begins as from the day you buy your monitor. *For three years thereafter*, your monitor will be swapped by at least an equivalent monitor in case of defects provided for under the warranty coverage.

The swap monitor remains yours and Philips keeps the defective/original monitor. For the swap monitor the warranty period remains equal to that of your original monitor, being 36 months as from the purchase date of your original monitor.

What is excluded?

The Philips F1rst Choice Warranty applies provided the product is handled properly for its intended use, in accordance with its operating instructions and upon presentation of the original invoice or cash receipt, indicating the date of purchase, dealer's name and model and production number of the product.

The Philips F1rst Choice Warranty may not apply if:

- The documents have been altered in any way or made illegible;
- The model or production number on the product has been altered, deleted, removed or made illegible;
- Repairs or product modifications and alterations have been executed by unauthorized service organizations or persons;
- Damage is caused by accidents including but not limited to lightning, water or fire, misuse or neglect;
- Reception problems caused by signal conditions or cable or antenna systems outside the unit;
- Defects caused by abuse or misuse of the monitor;
- Product requires modification or adaptation to enable it to comply with local or national technical standards, which apply in

countries for which the product was not originally designed, manufactured, approved and/or authorized. Therefore always check whether a product can be used in a specific country.

- Note that products that are not originally designed, manufactured, approved and/or authorized for usage within the Philips F1rst Choice countries, do not apply to the Philips F1rst Choice Warranty. In these cases the Philips global warranty terms are valid.

Just a click away

In case of any problems, we advise you to read the operating instructions carefully or go to the www.philips.com/support website for additional support.

Just a phone call away

In order to avoid unnecessary inconvenience, we advise you to read the operating instructions carefully or go to the www.philips.com/support website for additional support before contacting the Philips helpdesk.

To solve your problem quickly, please prepare the following details before contacting the Philips helpdesk:

- Philips type number
- Philips serial number
- Purchase date (copy of purchase may be required)
- PC environment Processor:
 - 286/386/486/Pentium Pro/Internal memory
 - Operating system (Windows, DOS, OS/2, Apple Macintosh)
 - Fax/Modem/Internet program?
- Other cards installed

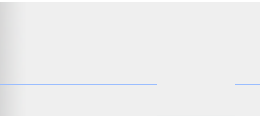
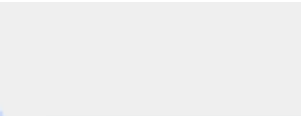
Having the following information available will also help speed up the process:

- Your proof of purchase indicating: date of purchase, dealer name, model and product serial number.
- The full address to which the faulty monitor has to be collected and the swap model should be delivered.

Philips' customer help desks are located worldwide. Click here to access the [F1rst Choice Contact Information](#).

Or you can reach us via:

Website: <http://www.philips.com/support>



Your Guarantee in Central and Eastern Europe

Dear Customer,

Thank you for purchasing this Philips product, which has been designed and manufactured to the highest quality standards. If, unfortunately, something should go wrong with this product Philips guarantees free of charge labor and replacement parts during a period of 36 months from date of purchase.

What is covered?

This Philips Guarantee in Central and Eastern Europe applies within Czech Republic, Hungary, Slovakia, Slovenia, Poland, Russia and Turkey and only for monitors originally designed, manufactured, approved and/or authorized for usage within these countries.

Warranty coverage begins as from the day you buy your monitor. *For 3 years thereafter*, your monitor will be serviced in case of defects provided for under the warranty coverage.

What is excluded?

The Philips guarantee applies provided the product is handled properly for its intended use, in accordance with its operating instructions and upon presentation of the original invoice or cash receipt, indicating the date of purchase, dealer's name and model and production number of the product.

The Philips guarantee may not apply if:

- the documents have been altered in any way or made illegible;
- the model or production number on the product has been altered, deleted, removed or made illegible;
- repairs or product modifications and alterations have been executed by unauthorized service organizations or persons;
- damage is caused by accidents including but not limited to lightning, water or fire, misuse or neglect.
- Reception problems caused by signal conditions or cable or antenna systems outside the unit;
- Defects caused by abuse or misuse of the monitor;
- Product requires modification or adaptation to enable it to comply with local or national technical standards, which apply in countries for which the product was not originally designed, manufactured, approved and/or authorized. Therefore always check whether a product can be used in a specific country.

Please note that the product is not defective under this guarantee in the case where modifications become necessary in order for the product to comply with local or national technical standards which apply in countries for which the product was not originally designed and/or manufactured. Therefore always check whether a product can be used in a specific country.

Just a click away

In case of any problems, we advise you to read the operating instructions carefully or go to the www.philips.com/support website for additional support.

Just a phone call away

In order to avoid unnecessary inconvenience, we advise you to read the operating instructions carefully before contacting our dealers or Information Centers

In case your Philips product is not working correctly or is defective, please contact your Philips dealer or directly the [Philips Service and Consumer Information Centers](#)

Website: <http://www.philips.com/support>

Your International Guarantee

Dear Customer,

Thank you for purchasing this Philips product which has been designed and manufactured to the highest quality standards.

If, unfortunately, something should go wrong with this product Philips guarantees free of charge labor and replacement parts irrespective of the country where it is repaired during a period of 12 months from date of purchase. This international Philips guarantee complements the existing national guarantee obligations to you of dealers and Philips in the country of purchase and does not affect your statutory rights as a customer.

The Philips guarantee applies provided the product is handled properly for its intended use, in accordance with its operating instructions and upon presentation of the original invoice or cash receipt, indicating the date of purchase, dealer's name and model and production number of the product.

The Philips guarantee may not apply if:

- the documents have been altered in any way or made illegible;
- the model or production number on the product has been altered, deleted, removed or made illegible;
- repairs or product modifications and alterations have been executed by unauthorized service organizations or persons;
- damage is caused by accidents including but not limited to lightning, water or fire, misuse or neglect.

Please note that the product is not defective under this guarantee in the case where modifications become necessary in order for the product to comply with local or national technical standards which apply in countries for which the product was not originally designed and/or manufactured. Therefore always check whether a product can be used in a specific country.

In case your Philips product is not working correctly or is defective, please contact your Philips dealer. In the event you require service whilst in another country a dealer address can be given to you by the Philips Consumer Help Desk in that country, the telephone and fax number of which can be found in the relevant part of this booklet.

In order to avoid unnecessary inconvenience, we advise you to read the operating instructions carefully before contacting your dealer. If you have questions which your dealer cannot answer or any related question please contact the [Philips Consumer Information Centers](#) or via:

Website: <http://www.philips.com>

Your Philips F1rst Choice Warranty(USA)

Thank you for purchasing this Philips monitor.



All Philips monitors are designed and manufactured to high standards and deliver high-quality performance, ease of use and ease of installation. Should you encounter any difficulties while installing or using this product, please contact Philips directly to benefit from your Philips F1rst Choice Warranty. This three-year service warranty entitles you to a swap model on-site within 48 hours of your call being received within the first year of purchase. If you have any problems with your monitor within the second or third year of purchase, we will repair it after it has been sent to the service provider at your expense and returned to you within five working days, free of charge.

LIMITED WARRANTY (Computer Monitor)

Click here to access the [Warranty Registration Card](#).

Three Years Free Labor / Three Years Free Service on Parts / One Year Exchange*

**Product will be exchanged with a new or renewed to original specifications unit within two business days for the first year. This product must be shipped in at your expense for service during years two and three.*

WHO IS COVERED?

You must have proof of purchase to receive warranty service. A sales receipt or other document showing that you purchased the product is considered proof of purchase. Attach it to this owner's manual and keep both nearby.

WHAT IS COVERED?

Warranty coverage begins the day you buy your product. *For three years thereafter*, all parts will be repaired or replaced, and labor is free. *After three years from the day of purchase*, you pay for the replacement or repair of all parts, and for all labor charges.

All parts, including repaired and replaced parts, are covered only for the original warranty period. When the warranty on the original product expires, the warranty on all replaced and repaired products and parts also expires.

WHAT IS EXCLUDED?

Your warranty does not cover:

- labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna systems outside of the product.
- product repair and/or part replacement because of misuse, accident, unauthorized repair or other cause not within the control of Philips Consumer Electronics.
- reception problems caused by signal conditions or cable or antenna systems outside the unit.
- a product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- incidental or consequential damages resulting from the product. (Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This includes, but is not limited to, prerecorded material, whether copyrighted or not copyrighted.)
- the model or production number on the product has been altered, deleted, removed or made illegible.

Where IS SERVICE AVAILABLE?

Warranty service is available in all countries where the product is officially distributed by Philips Consumer Electronics. In countries where Philips Consumer Electronics does not distribute the product, the local Philips service organization will attempt to provide service (although there may be a delay if the appropriate spare parts and technical manual(s) are not readily available).

Where CAN I GET MORE INFORMATION?

For more information, contact the Philips Customer Care Center by calling [\(877\) 835-1838 \(U.S.A. customers only\)](tel:877-835-1838) or [\(919\) 573-7855](tel:919-573-7855).

Before Requesting Service...

Please check your owner's manual before requesting service. Adjustments of the controls discussed there may save you a service call.

TO GET WARRANTY SERVICE IN U.S.A., PUERTO RICO OR U.S. VIRGIN ISLANDS...

Contact the Philips Customer Care Center phone number listed below for product assistance and procedures for servicing:

Philips Customer Care Center

[\(877\) 835-1838 or \(919\) 573-7855](tel:877-835-1838)

(In U.S.A., Puerto Rico and U.S. Virgin Islands, all implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the duration of this express warranty. But, because some states do not allow limitations on how long an implied warranty may last, this limitation may not apply to you.)

TO GET WARRANTY SERVICE IN CANADA...

Please contact Philips at:

[\(800\) 479-6696](tel:18004796696)

Three years free parts and three years free labor will be provided at Philips Canada depot or any one of its authorized service centers.

(In Canada, this warranty is given in lieu of all other warranties. No other warranties are expressed or implied, including any implied warranties of merchantability or fitness for a particular purpose. Philips is not liable under any circumstances for any direct, indirect, special, incidental or consequential damages, howsoever incurred, even if notified of the possibility of such damages.)

REMEMBER... Please record the model and serial numbers found on the product below.

MODEL # _____

SERIAL # _____

This warranty gives you specific legal rights. You may have other rights which vary from state/province to state/province.

Before contacting Philips, please prepare the following details so we can solve your problem quickly.

- Philips type number
- Philips serial number
- Purchase date (copy of purchase may be required)
- PC environment Processor:
 - 286/386/486/Pentium Pro/Internal memory
 - Operating system (Windows, DOS, OS/2, Apple Macintosh)

- Fax/Modem/Internet program?

- Other cards installed

Having the following information available will also help speed up the process:

- Your proof of purchase indicating: date of purchase, dealer name, model and product serial number.
- The full address to which the swap model should be delivered.

Just a phone call away

Philips' customer help desks are located worldwide. Within the U.S. you can contact Philips customer care Monday-Friday from 8:00 AM-9:00 PM Eastern Time (ET) and on Saturdays from 10:00 AM-5:00 PM ET hrs by using one of the contact phone numbers.

For more information on this and more great Philips products visit our website at:

Website: <http://www.philips.com>

Glossary

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

Active matrix

This is a kind of liquid crystal display structure in which switching transistors are attached to each pixel to control the on/off voltage. It produces a brighter and sharper display with a broader viewing angle than a passive matrix display. Also refer to TFT (thin film transistor).

Amorphous silicon (a-Si)

A semiconductor material that is used to make the thin film transistors (TFTs) layer of an active matrix LCD.

Aspect ratio

The width-to-height ratio of the active area of a display. In general, most monitors have an aspect ratio of 4:3. Wide monitors or TVs have an aspect ratio of 16:9 or 16:10.

B

Backlight

The light source for a transmissive LCD. There are two techniques used in nowadays LCD designs. Most TFT LCD panels use CCFLs (cold cathode fluorescent light) and a diffuser panel directly behind the liquid crystal layer. New technology using Light Emitting Diodes (LED) are still under development.

Brightness

The dimension of color that is referred to an achromatic scale, ranging from black to white, also called lightness or luminous reflectance. Because of confusion with saturation, the use of this term should be discouraged.

C

CCFL(cold cathode fluorescent light)

These are the fluorescent light tubes providing the light for the LCD module. These tubes are generally very thin, approximately 2 mm in diameter.

Chromaticity

That part of color specification, which does not involve illuminance. Chromaticity is two-dimensional and specified by pairs of numbers such as dominant wavelength and purity.

CIE (Commission International de l'Eclairage)

The International Commission on Illumination, the primary international organization concerned with color and color measurement.

Color temperature

A measurement of the color of light radiated by an object while it is being heated. This measurement is expressed in terms of absolute scale, (degrees Kelvin). Lower Kelvin temperatures such as 2400° K are red; higher temperatures such as 9300° K are blue. Neutral temperature is white, at 6504° K. Philips monitors generally offers 9300° K, 6500° K, and user define.

Contrast

The luminance variation between light and dark areas in an image.

Contrast ratio

The ratio of luminance between the brightest white pattern and the darkest black pattern.

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D***D-SUB***

A VGA Analog input connector. Your monitor comes with a D-Sub cable.

Digital Visual Interface (DVI)

The Digital Visual Interface (DVI) specification provides a high-speed digital connection for visual data types that is display technology independent. The interface is primarily focused at providing a connection between a computer and its display device. The DVI specification meets the needs of all segments of the PC industry (workstation, desktop, laptop, etc.) and will enable these different segments to unite around one monitor interface specification.

The DVI interface enables:

1. Reduce signal loss and video noise in signal due to less signal conversion.
2. Independent from display technology, and can be used on LCD, Plasma, LCOS, etc.
3. Plug and play through hot plug detection, EDID and DDC2B.
4. Digital and Analog support in a single connector (DVI-I only).

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E***Energy Star Computers Program***

An energy conservation program launched by the US Environmental Protection Agency (EPA), promotes the manufacture and marketing of energy-efficient office automation equipment. Companies joining this program, must be willing to commit themselves to manufacture one or more products capable of going into a low -power state (< 30 W) either after a period of inactivity, or after a predetermined time selected by the user.

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G***Gamma***

Screen luminance as a function of video voltage approximately follows a mathematical power function of the input video signal, the exponent of which is called gamma.

Grayscale

An achromatic scale ranging from black through a series of successively lighter grays to white. Such a series may be made up of steps, which appear to be equally distant from one another. If the Analog/ Digital converter is 8 bit, then the monitor can display at most $2^8 = 256$ levels. For a color monitor, R.G.B. each color has 256 levels. Thus, total color can display is $256 \times 256 \times 256 = 16.7$ million.

H

Hue

The main attribute of a color that distinguishes it from other colors. For example, a color may have a green, yellow, or purple hue. Color defined as having hue are know as chromatic colors. White, black, and grays possess no hue.

I***IPS (In Plane Switching)***

A technique of improving the viewing angle of an LCD where the liquid crystal molecules are switched in the plane of the LCD layer rather than vertical to it.

L***LCD (liquid crystal display)***

A display composed of liquid crystal suspended between two transparent sheets. The display is composed thousands of pixels which can be turned on or off with electrical stimulation. Thus, colorful images/texts can be generated.

Liquid crystal

The compound found in liquid crystal displays. Liquid crystal reacts predictably when electrically stimulated. This makes it the ideal compound to turn LCD pixels "on" or "off." Liquid crystal is sometimes abbreviated as LC.

Luminance

A measure of the brightness or luminous intensity of light, usually expressed in units of Candelas per square meter (cd/m²) or foot Lamberts. 1 fL=3.426 cd/m².

N***Nit***

A unit of luminance equal to 1 cd/m² or 0.292 ftL.

P***Pixel***

PICTure Element; the smallest element on a computerized CRT or LCD image, and hence a display.

Polarizer

A light filter which only allows light waves of a certain rotation through. Polarized material with perpendicular filtering is used in LCDs to enclose the liquid crystal. The liquid crystal is then used as the medium which twists the light waves 90° in order to allow the light to pass through or not.

R***Refresh rate***

The number of times per second the screen is refreshed or redrawn. This number is usually stated in Hz (Hertz) or cycles per second. A rate of 60 Hz is equal to 60 times per second.

S

sRGB

sRGB is a standard for ensuring correct exchange of colors between different devices (e.g. digital cameras, monitors, printers, scanners, etc.)

Using a standard unified color space, sRGB will help represent pictures taken by an sRGB compatible device correctly on your sRGB enabled Philips monitors. In that way, the colors are calibrated and you can rely on the correctness of the colors shown on your screen.

Important with the use of sRGB is that the brightness and contrast of your monitor is fixed to a predefined setting as well as the color gamut. Therefore it is important to select the sRGB setting in the monitor's OSD.

To do so, open the OSD by pressing the OK button on the front of your monitor. Move the down button to go to Color and press OK again. Use the right button to go to sRGB. Then move the down button and press OK again to exit the OSD.

After this, please do not change the brightness or contrast setting of your monitor. If you change either of these, the monitor will exit the sRGB mode and go to a color temperature setting of 6500K.

Other:

USB plug: An upstream and a downstream USB plug is provide for user's convenience.

T

TFT(thin film transistor)

Usually made from amorphous silicon (a-Si) and used as a switch to a charge storage device located below each sub-pixel on an active matrix LCD.

U

USB or Universal Serial Bus

[A smart plug for PC peripherals](#). USB automatically determines resources (like driver software and bus bandwidth) required by peripherals. USB makes necessary resources available without user intervention.

- USB eliminates "case anxiety" -- the fear of removing the computer case to install add-on peripherals. USB also eliminates adjustment of complicated IRQ settings when installing new peripherals.
- USB does away with "port gridlock." Without USB, PCs are normally limited to one printer, two Com port devices (usually a mouse and modem), one Enhanced Parallel Port add-on (scanner or video camera, for example) and a joystick. More and more peripherals for multimedia computers arrive on the market every day. With USB, up to 127 devices can run simultaneously on a computer.
- USB permits "hot plug-in." There's no need to shut down, plug in, reboot and run set-up to install peripherals. And no need to go through the reverse process to unplug a device.

In short, USB transforms today's "Plug-and-Pray" into true Plug-and-Play!

Hub

A Universal Serial Bus device that provides additional connections to the Universal Serial Bus.

Hubs are a key element in the plug-and-play architecture of USB. The Figure shows a typical hub. Hubs serve to simplify USB connectivity from the user's perspective providing low cost and complexity.

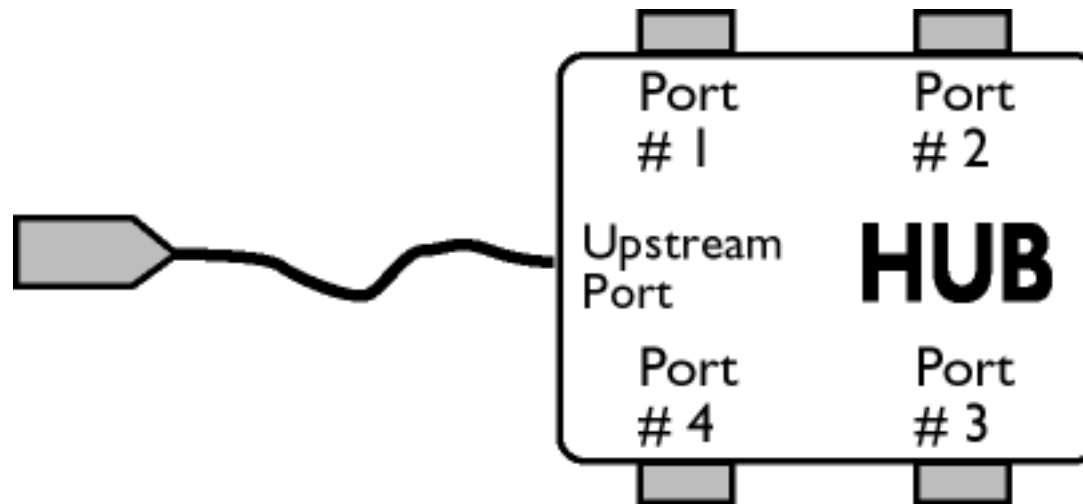
Hubs are wiring concentrators and enable the multiple attachment characteristics of USB. Attachment points are referred to as ports. Each hub converts a single attachment point into multiple attachment points. The architecture supports concatenation of multiple hubs.

The upstream port of a hub connects the hub towards the host. Each of the other downstream ports of a hub allows connection to another hub or function. Hubs can detect, attach and detach at each downstream port and enable the distribution of power to downstream devices. Each downstream port can be individually enabled and configured at either full or low speed. The hub isolates low speed ports from full speed signaling.

A hub consists of two portions: the Hub Controller and Hub Repeater. The repeater is a protocol-controlled switch between the upstream port and downstream ports. It also has hardware support for reset and suspend/resume signaling. The controller provides the interface registers to allow communication to/from the host. Hub specific status and control commands permit the host to configure a hub and to monitor and control its ports.

Device

A logical or physical entity that performs a function. The actual entity described depends on the context of the reference. At the lowest level, device may refer to a single hardware component, as in a memory device. At a higher level, it may refer to a collection of hardware components that perform a particular function, such as a Universal Serial Bus interface device. At an even higher level, device may refer to the function performed by an entity attached to the Universal Serial Bus; for example, a data/FAX modem device. Devices may be physical, electrical, addressable, and logical.



Downstream

The direction of data flow from the host or away from the host. A downstream port is the port on a hub electrically farthest from the host that generates downstream data traffic from the hub. Downstream ports receive upstream data traffic.

Upstream

The direction of data flow towards the host. An upstream port is the port on a device electrically closest to the host that generates upstream data traffic from the hub. Upstream ports receive downstream data traffic.

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Vertical refresh rate

Expressed in Hz, it is the number of frames (complete pictures) written to the screen every second.

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