

Philips LCD Monitor Electronic User's Manual

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Multitainment
Monitor **190G6**



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Safety and Troubleshooting Information

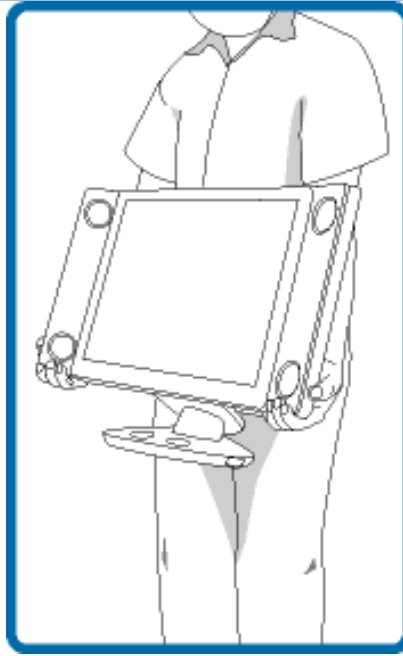
Safety precautions and maintenance



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:

- 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 alcohol, solvents or ammonia-based liquids.
- Consult a service technician if the monitor does not operate normally when you have followed the instructions in this manual.
- The casing cover should be opened only by qualified service personnel.
- Keep the monitor out of direct sunlight and away from stoves or any other heat source.
- Remove any object that could fall into the vents or prevent proper cooling of the monitor's electronics.
- Do not block the ventilation holes on the cabinet.
- Keep the monitor dry. To avoid electric shock, do not expose it to rain or excessive moisture.
- 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.
- To avoid the risk of shock or permanent damage to the set, do not expose the monitor to rain or excessive moisture.
- **IMPORTANT:** Always activate a screen saver program during your application. If a still image in high contrast remains on the screen for an extended period of time, it may leave an 'after-image' or 'ghost image' on front of the screen. This is a well-known phenomenon that is caused by the shortcomings inherent in LCD technology. In most cases, the afterimage will disappear gradually over a period of time after the power has been switched off. Be aware, that the afterimage symptom cannot be repaired and is not covered under warranty.
- Warning for lifting monitor - **Do not** use the area underneath the logo cover to grip or lift the monitor. Placing weight on the logo cover can cause it to break away from the body and cause the monitor to fall. When lifting the monitor, place one hand under the monitor's frame.



Consult a service technician if the monitor does not operate normally when the operating instructions given in this manual have been followed.

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Installation Locations

- Avoid exposure to heat and extreme cold.
- Do not store or use the LCD monitor in locations exposed to heat, direct sunlight or extreme cold.
- Avoid moving the LCD monitor between locations with large temperature differences. Choose a site that falls within the following temperature and humidity ranges.
 - Temperature: 5-35°C 41-95°F
 - Humidity: 20-80% RH
- Do not subject the LCD monitor to severe vibration or high impact conditions. Do not place the LCD monitor in the trunk of a car.
- Take care not to mishandle this product by either knocking or dropping it during operation or transportation.
- Do not store or use the LCD monitor in locations where there is a high level of humidity or in dusty environments. Do not allow water or other liquids to spill on or into the LCD monitor.

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- [About This Guide](#)
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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 Information

Product Features

190G6

- **Outstanding front of screen performance**
 - ActiveBright for brilliant colors and razor sharpness
 - Ready to display SDTV and HDTV formats
 - 8-ms response time for outstanding display of moving images
- **Superior sound**
 - 20-watt active subwoofer for deeper bass experience
 - 3D virtual surround sound
 - Easy-to-use Sound Agent 2™ optimizes the audio experience
 - Digitally transmitted PC audio
- **Maximum comfort for computainment**
 - High-speed USB 2.0 hub for easy connections
 - Displays video signals from a variety of AV sources
 - You control the settings for your favorite sound environment
- **Radically cool design**
 - Concave design surrounds you with awesome entertainment

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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" / 48.3 cm diagonal
• Pixel Pitch	0.098 x 0.294 mm

• LCD Panel type	1280 x 1024 pixels R.G.B. vertical stripe High gloss, hard coated
• Effective viewing area	376.3 x 301.1 mm
• Display Colors	16.2M colors

SCANNING

Vertical refresh rate	56 Hz-76 Hz
Horizontal Frequency	30k Hz-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 on green
• Sync polarities	Positive and negative
• Video interface	PC: D-Sub (analog) and DVI-D (digital) are available and user selectable. AV: Audio (L/R) for CVBS & S-Video. Audio (L/R) for YPbPr, composite (CVBS), component (YpbPr), S-video, SCART (Europe only)

Audio

• Loudspeaker	10W Stereo Audio (5W/channel RMSx2, 250 Hz-15 kHz, 8 ohm, THD=10%, PMPO 80 Watts)
• Headphone connector	3.5mm mini jack
• Input signal connector	3.5mm mini jack
• Stand-alone audio output	Whether there is a video display or not as long as there is an audio input, the audio output is always functional.

Optical characteristics

• Contrast ratio	700:1 (typ.)
• Brightness	420nits
• Peak contrast angle	6 o'clock
• White Chromaticity	x: 0.283 y: 0.297 (at 9300°K) x: 0.313 y: 0.329 (at 6500°K) x: 0.313 y: 0.329 (at sRGB)

• Viewing Angle (C/R _≥ 5)	Upper 85° (typ.) Lower 85° (typ.) Left 85° (typ.) Right 85° (typ.)
• Response time	8 ms(typ.)

* This data is subject to change without notice.

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Resolution & Preset Modes

- Maximum 1280 x 1024 at 75 Hz
- Recommended 1280 x 1024 at 60 Hz

16 user definable modes

15 factory preset modes:

H. freq (kHz)	Resolution	V. freq (Hz)
31.5	640*350	70
31.5	720*400	70
31.5	640*480	60
35.0	640*480	67
37.5	640*480	75
35.2	800*600	56
37.9	800*600	60
46.9	800*600	75
49.7	832*624	75
48.4	1024*768	60
60.0	1024*768	75
69.0	1152*870	75
71.8	1152*900	76
63.9	1280*1024	60
80.0	1280*1024	75

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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	Without Subwoofer <62W	With Subwoofer <100W	Green
Sleep	OFF	No	No	<2 W	<2 W	Amber
Switch Off	OFF	-	-	<1W	<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) *	590 x 451 x 262.5mm (in lowest position)
• Weight	9.5 kg
• Tilt	-5° ~ 20°
• Power supply	100 — 240 VAC, 60 — 50 Hz
• Power consumption	62W without subwoofer, 100W with subwoofer
• Temperature	5° C to 35° C (operating) -20° C to 60° C (storage)
• Relative humidity	20% to 80%
• System MTBF	50K hours (including CCFL 40K hours)
• Cabinet color	Black

* This data is subject to change without notice.

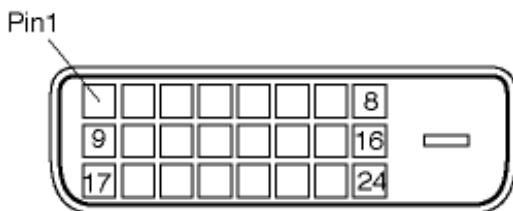
* Resolution 1280x1024, standard size, brightness max., contrast 50%, 6500° K, full white pattern, without audio/USB.

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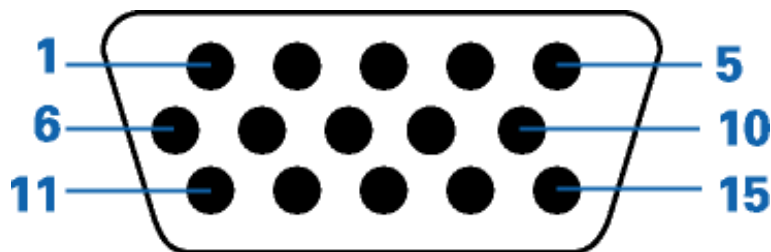
Pin Assignment

1. The digital only connector contains 24 signal contacts organized in three rows of eight contacts. Signal pin assignments are listed in the following table:

Pin No.	Signal Assignment	Pin No.	Signal Assignment	Pin No.	Signal Assignment
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2/4 Shield	11	T.M.D.S. Data1/3 Shield	19	T.M.D.S. Data0/5 Shield
4	No connect	12	No connect	20	No connect
5	No connect	13	No connect	21	No connect
6	DDC Clock	14	+5V Power	22	T.M.D.S. Clock Shield
7	DDC Data	15	Ground (for +5V)	23	T.M.D.S. Clock+
8	No connect	16	Hot Plug Detect	24	T.M.D.S. Clock-



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



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

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

1) Tilt



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Philips Sound Agent 2™

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EAX™ and Environmental Audio Extensions are trademarks of Creative Technology Ltd. In the United States and other countries.

Microsoft™ and Windows™ are registered trademarks of Microsoft Corporation.

DirectX™ and DirectSound™ are trademarks of Microsoft Corporation.

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Minimum System Requirements

350 MHz CPU
64 MB RAM
One CD ROM drive
One available USB port
20 MB of available hard drive space
Windows® 2000 or Windows® XP operating system.

Please Note : *Each operating system has its own minimum requirements which should be observed. In addition, various games and DVD applications may require higher limits than listed above.*

PSA2™ Software

Please install Philips SoundAgent 2™ program for audio optimization. This is included on this CD. Step-by-step instructions are provided to guide you through the installation process. Double check on the file to start download.

1. Introduction

The Philips Sound Agent 2 (PSA2) is a computer graphical audio control center, designed to work with Philips Multitainment Monitors. The PSA2 utilizes the computing power of any compatible personal computer to enhance the quality of the audio that is played either by the Audio System, or by PC resident audio players. PSA2 includes a full suite of studio quality audio DSP processor that adds features, depth and richness to all

audio sources.

1.1. KEY FEATURES

- **QInteractive3D** technology offers precise 3D sound positioning with headphone and speaker output and is compatible with DirectSound3D, EAX 1.0, EAX 2.0/13D Level 2, and A3D enabled games.
- **QXpander** converts ANY ordinary stereo input to virtual 3D surround sound with headphones or speakers.
- 15 unique reverb environments using the exclusive **QSound Environmental Modeling (QEM)** algorithms for totally immersive gaming and dramatic musical performances.
- Active Dynamic Filtering found in the new **QSizzle** and **QRumble** components feature low, mid and high frequency enrichment algorithms that help restore sonic fidelity for highly compressed digital audio files such as MP3s and WMAs. Simply put, it makes MP3's sound great.
- **QSurround** creates virtual 3D surround from most of DVD movies over a two-speaker setup.
- **Normalization** smoothes out the volume differences within audio files and reduces the volume variations for all audio sources - automatically.
- Professional style **10-Band Equalizer** for precise sound tailoring of all digital audio media.
- **Default** and user defined **Presets** for most settings to personalize all your games, music, and movies - exactly the way you like it.

2. Software Installation

Note: To enjoy the 3D sound features the PSA2 drivers must be installed on the PC.

2.1. Installation Procedure

If you have not installed the PSA2 drivers yet, you should do so now. Insert the Installation CD that is included in the package into the CD ROM drive. The operating system should detect the CD and automatically start the installation process. Follow the on screen instructions to complete the installation process.

After the installation is complete, you may be asked to reboot the computer. After reboot, the Sound Agent icon will appear in the Notification Area of the Windows Taskbar. See **Figure 1**. Please note that the number and types of icons in the Notification Area varies from computer to computer.



Figure 1. Notification Area

3. Philips Sound Agent 2 Interface Operation

The following sections provide a detailed description of the PSA2 features.

3.1. Launching PSA2

Ensure that the Philips Multitainment Monitor is on and connected to the USB port of the PC. Otherwise the PSA2 icon in the Taskbar Notification Area (normally the lower right hand corner of the screen) will indicate that it is unavailable with a red "void" mark. See **Figure 2**.

If the monitor is on and connected to the PC USB Port, there should be no void mark on the PSA2 icon, and you can double click the icon to launch the interface. See **Figure 3**.

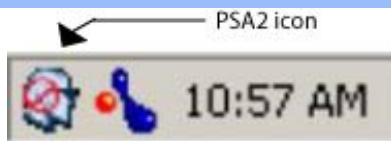


Figure 2.

If PSA2 cannot launch it might be that the hardware is not connected, or the operating system cannot recognize the Philips Multitainment Monitor.

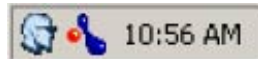


Figure 3.

If the Philips Multitainment Monitor is connected to the PC by a USB cable and the red void mark still present, unplug the USB cable from the Monitor, wait two or three seconds and plug it back. It usually takes a few seconds for the operating system to recognize and register the USB audio device.

When you first launch the PSA2 it appears as partially expanded form as shown in **Figure 4**. To reveal the Main Control Panel click on the Drop-down arrow at the bottom side of the Visualization panel.

The panel contains three distinct sections, Compact, Main and Visual. You can reduce the expanded form to a compact form using the **Resize** button. The **Compact** control Panel takes up very little space on the screen and it contains the top-level controls. However, to set or change some of the settings, you need to expand to the **Main** control panel. Use the **Resize** button when you need to expand the Main control panel again.

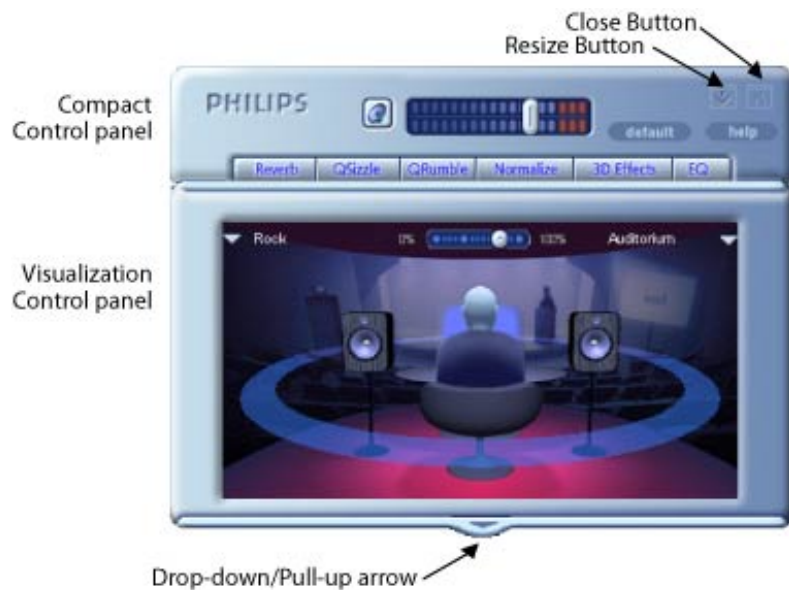


Figure 4.

The Visualization Panel provides a graphic representation of the advanced audio processing features of the PSA2. It also includes controls to enable the environmental effects. The Visualization Panel appears only in the expanded mode as a sliding cover for the Main Control Panel.

The following sections contain detailed descriptions of the features of each panel.

3.2. Compact Control Panel

The Compact Control Panel contains the following controls:



Figure 5.

Master Volume

Master Volume controls the overall output level of the sound system. This volume control works independent of the volume knob on the set. However, the bar code volume level indicator in the display screen of the Audio System reflects any increase or decrease in volume produced by moving the master volume slider. Volume can also be adjusted using the control on the Multitainment Monitor.

Mute

This button toggles the sound on or off to the speakers or headphones. Activating it mutes the output but does not stop the playing of the music, regardless of the source of music. See **Figure 5**.

Resize

Resize Toggles between the compact mode (basic controls) and the expanded mode (for more advanced options).

Close

Closes the PSA2 control panel without affecting audio operation.

Default

Pushing the *Default* button resets most PSA2 controls to a predefined functional state. All features except 3D Effects are off.

Help

This button launches the on-line help system. It contains detail descriptions of all features of the PSA2 interface and its operation.

Reverb

This button toggles the QSound Environmental Modeling (QEM) on or off. However, some games apply their own environmental effects, which are not controlled by this button. Environmental modeling uses reverb (reflected sound) and delay to create the impression that the listener is in a particular environment.

QEM provides a wide range of high-quality environmental modeling effects that are selectable from the Visualization panel. By selecting a default environment, you impose the effects of that environment for music, movies, or games that do not use the EAX feature.

PSA2 responds automatically to games that use the EAX and EAX2.0 commands. These games automatically control the selection of environments (regardless of what is selected from the Visualization panel) to match various scenes and locations, and change these selections as the environment changes. The applied intensity of reverb is controllable by a slider in the Visualization panel. If the level of Reverb is not as expected, check the slider in the Visualization panel and adjust properly.

QSizzle

Toggles the QSizzle effect. When on, enhances the mid/high frequency range of a digitally compressed audio stream. The button label illuminates when QSizzle is enabled.

QRumble

Toggles the QRumble effect. When on, it enhances the low frequency range of the audio stream. The button label illuminates when QRumble is enabled.

Normalize

Toggles Normalization (automatic volume leveling) on or off. The button label illuminates when Normalization is enabled.

3D Effects

Toggles 3D Effects on or off. This does not affect 3D audio games, but does affect non-3D audio games utilizing the 2D to 3D remixing feature. The button label illuminates when 3D Effects are enabled. To enable automatic audio features such as QSurround, and QXpander this feature must be enabled

EQ

Toggles the 10-band Equalizer on and off. The button label lights up when the Equalizer is enabled. When the button is not activated the EQ remains inoperative.

3.3. Main Control Panel

The Main Control Panel is in the center of the expanded mode, and it provides access to advanced settings for most PSA2 controls, which are grouped in five separate tabs. See **Figure 6**.

If only the **Compact** control panel is visible, you must expand it by clicking on the Resize button on the right hand corner, next to the Close icon.

If the Visualization Panel is covering the Main Control Panel, slide the Visualization Panel cover down to reveal the Main Control Panel by clicking on the arrow at the middle of the lower edge of the Visualization Panel.



Figure 6. Effects Tab

Once the Main Control Panel is open, you can choose any of the tabs to select the desired set of controls. The following is a description of each tab from left to right:

3.3.1. Effects Tab

The Effects Tab is the first of the Main Control Panel tabs. Below is a description of all the features on the Effects tab.

QSizzle

QSizzle is a mid and high frequency (treble) enhancement algorithm that helps to compensate for the loss of presence, punch and signal detail that often results from compressed digital media, such as MP3 and WMA formats.

QSizzle self-adjusts in real time according to frequency response of the input signal. This is different from the Equalizer, which is a fixed frequency processor. The Equalizer does not monitor the input signal or perform self-adjustment. The label **QSizzle Active** appears in illuminated text when QSizzle is enabled, and **QSizzle Off** when disabled.

QRumble

QRumble is a powerful low frequency enhancement algorithm that helps to compensate for loss of bass that may result from compressed digital media such as MP3's or WMA formats.

QRumble responds in real time to the varying nature of the input signal, automatically adjusting itself accordingly. This is very different from the Equalizer, which is a static frequency processor. The Equalizer does not monitor the input signal or perform self-adjustment.

The label **QRumble Active** appears in illuminated text when QRumble is enabled, and **QRumble Off** when disabled.

Normalization

Normalization automatically adjusts the volume variations in various audio files or streams. Quieter signals are amplified to match the level of louder ones, so that the listening volume maintains a consistent level. This means that when playing files with various output levels, the need to constantly adjust your speaker volume is minimized.

The label **Normalization Active** appears in illuminated text when Normalization is enabled, and **Normalization Off** when disabled.

3D Effects

Three separate 3D audio enhancement algorithms are provided to maximize the spatial experience no matter what the combination of signal type and output hardware.

When 3D Effects are enabled, the audio processor will automatically choose the appropriate algorithm (3D mode) according to your output configuration and the type of input signal. The 3D Effects indicator LED's on front panel and the indicators on the Effects Tab illuminate to show which algorithm is active at any given time.

QXpander

Optimizes stereo input played over speakers or headphones. When QXpander is active it provides a wider sound field far exceeding physical position of the speakers.

QSurround

Optimizes a multi-channel source (e.g. a 5.1 channel DVD) to create "virtual" speakers and immerse the listener in surround sound.

3.3. 2. Equalizer Tab

The Equalizer (EQ) controls the frequency response of the system by increasing or decreasing the frequency response of ten independent frequency bands.

This Equalizer works very much the same as the equalizers in high quality sound systems. Each slider controls the relative level of a band (range) of frequencies. The number listed above each slider column is the center frequency of the band controlled by that slider. When a slider is set to the center position, frequencies within this band left flat and the gain is 0dB. See **Figure 7**.



Figure 7.

To boost the level of a given band, move its slider above the centerline. To cut the relative level of a given band, move its slider below the centerline. Maximum boost or cut is ± 12 dB on each frequency level.

Sliders can be individually centered by right clicking anywhere within the slider area, or collectively by clicking the Reset button on top right corner of the panel. Clicking the default button on the compact panel can also collectively center the sliders. Please note that the default button resets several other features as well.

3.3.3. Setup Tab



Figure 8.

Speaker Test Utility

The Speaker Test Utility can be used to verify that speakers and/or headphones are operating properly.

The test utility highlights each speaker that is being tested. See **Figure 8**. Click any speaker icon to send the test sound to the corresponding speaker. If headphones are plugged in, the speaker icons are grayed out and you can click the left or right headphone icon instead.

The **Loop** test button allows the test to repeat until the **Stop** button is pressed. If the **Loop** is off, the sound will play once for each click of a speaker or headphone icon.

The **Auto** button sends the test sound to each output once and then moves to the next one automatically. If the **Loop** and the **Auto** buttons are used in conjunction, the test signal will loop through the available outputs until the **Stop** button is pressed.

Preamp Slider

The Preamp Level control allows you to boost the input audio signal before it is processed by the PSA2. It has a similar effect as the master volume, but should not be used instead of it.

NOTE: Increasing the PreAmp may cause audio distortion on some high level input signals. In some cases, an input signal can be of such amplitude that audio distortion can occur at the preamp default level. If this is the case simply lower the preamp level to help eliminate any distortion.

Subwoofer Slider

The Subwoofer Level control enables you to set the level of the derived Subwoofer output relative to the left and right speakers.

Balance Slider

This slider allows you to adjust the balance between left and the right speakers or headphones. For best 3D effects it should normally be left in the center. Right-click the slider to center it.

3.3.4. Mixer Tab

The Mixer Tab allows you to control playback and recording sources. Two sub-tabs at the bottom of the Mixer screen provide access to Playback or Recording controls.

3.3.4.1. Source controls

When the **Playback** Sub-tab is selected, you can individually **mute** or un-mute as many playback sources as you wish using the Mute buttons.

When the **Recording** Sub-tab is selected, you must **select** the single source you wish to record by clicking its Select button. See **Figure 9**.

Volume sliders set the level for each source.

Balance sliders adjust the relative left and right output levels for each stereo source. Balance sliders should normally be left in the center, the default position. Right-click any of the balance sliders to center it.

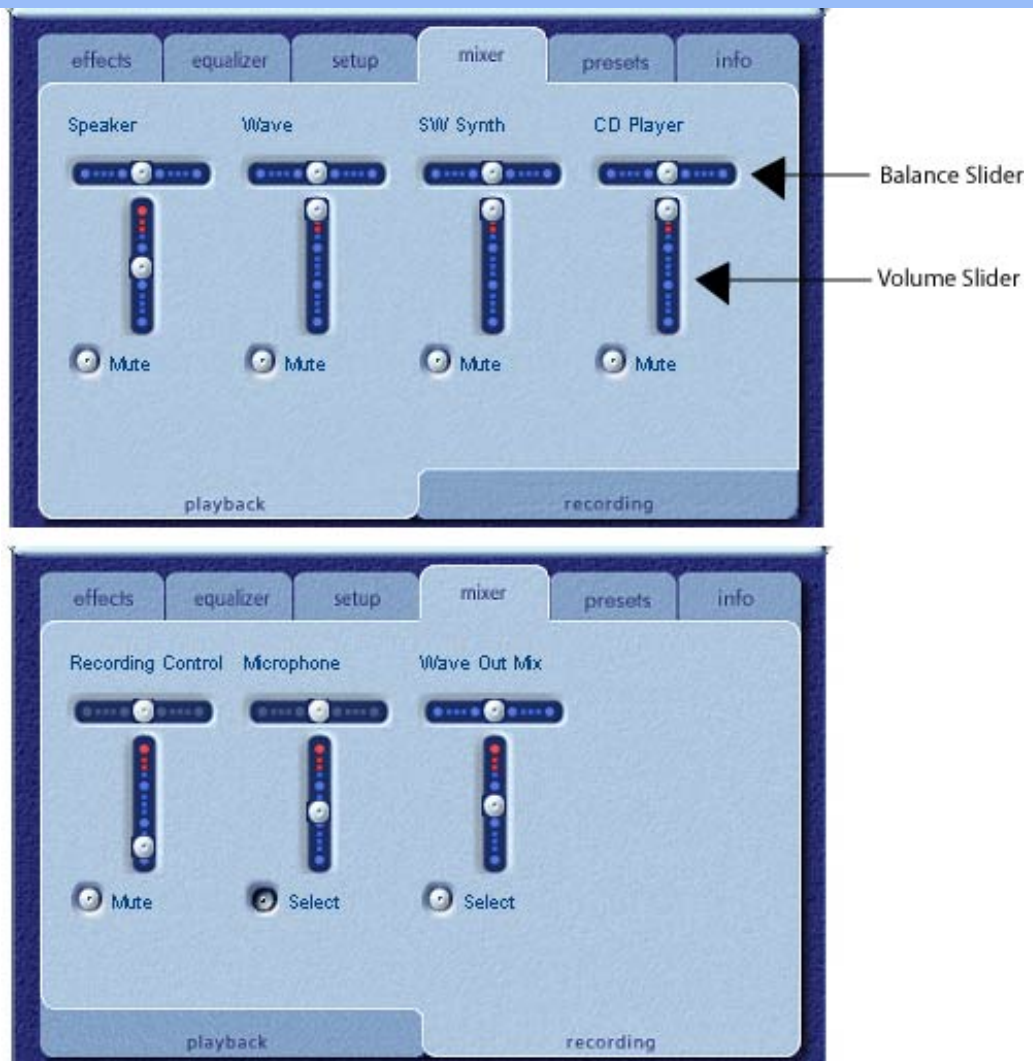


Figure 9.

When playing audio CD's using the CD ROM driver of the PC, one should enable the digital audio extraction in the system device manager. If you need more information refer to the **TroubleShooting** section in **Appendix C** of this document.

3.3.5. Presets Tab

The Preset functions enable you to make snapshots of the state of all Philips Sound Agent 2 controls, so that you can conveniently reload the same settings at any time.



Figure 10.

The Preset system enables you to save the state of PSA2 controls once you have made adjustments to customize your listening experience, so you can recall settings for any source and playback environment.

For example, if you have been listening to music with predominant drums and bass and have adjusted the controls to suit your taste, you can quickly save a preset called “Drums’n’Bass”. Whenever you listen to this type of music again, simply load this preset, and all the controls will return to the settings you had in effect when you saved it.

Sound Agent 2 comes with four factory presets as listed on the Presets tab. The Multitainment Monitor has four buttons that also enable you to select the factory Presets. The following is a description of each feature on the Presets tab.

Load

Clicking on this button loads an existing preset. To load another preset, highlight it on the list and click the **Load**.

Save

When you load one of your presets and make changes to it, you can save it by clicking on the **Save** button. If you have selected one of the factory presets and made changes to it, you will have to save it under a different name. Sound Agent 2 will not overwrite factory presets, but you can overwrite your own unique presets.

Save As

You can load an existing preset (factory or one of yours), modify it to your taste, and save it as a new preset.

Delete

Deletes the selected preset permanently from the list. When you select one of your presets and click on this button, a confirmation dialog box will appear and when you confirm by clicking the OK button, the preset will be removed from the list. This button will not delete any of the factory presets.

3.3.6. Info Tab

This tab contains useful information regarding the product. It includes the software driver's version number, manufacturer's name, and web page addresses.



Figure 11.

3.4. Visualization Panel

The Visualization Panel provides a graphical representation of the environments and effects that are created by Sound Agent 2. It also contains two drop-down menus and the Reverb Intensity Slider.

The drop-down menu on the right contains sixteen different reverb environmental effects to select. To select a reverb environment, the Reverb button located on the Compact Control Panel must be enabled.

The drop-down menu on the left contains all factory and user defined presets for various types of music. This menu allows easy preset access via the Visualization Control Panel.

The top center horizontal slider controls the intensity of the reverb effect that is being applied. Adjust as necessary to achieve the right amount of Reverb based on individual content.

The Visualization Panel may be moved up and down to conceal or reveal the Main Control Panel by clicking the arrow at the bottom center of the panel.



Figure 12.

4. Uninstalling PSA2

If for any reason it becomes necessary to uninstall the PSA2 drivers, you can choose one of two available methods. You may go to the system control panel and launch the "Add/Remove Programs" utility. From the list of programs find PSA2 (or Philips Sound Agent 2) and click on it so it is highlighted. Click the "Change/Remove" button.

Or, you may choose the uninstall program that comes with PSA2 program. For this you click on the Windows Start button, click on the "Programs", ("All Programs" in XP), click on the Philips folder, then select and execute the Philips Uninstall program.

5. Technical Support And Warranty

Before calling the technical support number please make sure you have the following information available:

- Model number and date of purchase.
- Computer type, processor speed, and memory available.
- Computer operating system (IE; Windows® 2000, or XP).
- On-screen error information.

5.1. Internet Address:

Useful information such as the latest drivers and products can be found at:

The web site for Europe is:

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

Philips general web site is:

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

5.2. Technical Support Information:

Refer to the Product Warranty card provided for technical support contact information.

6. Appendix A, TroubleShooting

This appendix covers some of the basic mistakes and pitfalls you might encounter.

No Sound is coming out

1. Check the mute button to ensure it is deactivated.
2. Check the volume knob and turn it up.
3. Click on default button on the PSA2 compact panel.

System Error Message

When attempting to launch an audio player application, on a rare occasion you may see one of the following error messages depending on the operating system of the PC. This error message also causes no audio to be played.



Windows XP



Windows 2000

Figure 13

This error message is generated due to lack of sufficient bandwidth on the USB hub that the Audio System is plugged into. If you have a USB imaging device (such as a webcam or a scanner) and you have an imaging application open, and try to open an audio player application such as Winamp or Windows Media Player.

Solution

Click "Close" or "No" depending of which error message you have.

Close the audio player application.

Close the imaging application.

Reopen the audio player application and play the audio stream.

No Audio When Playing Audio CD in the CD Drive

The system CD ROM drive could be used to play audio CD's. However, the Audio Digital Extraction feature of the PC should be enabled. Here are the steps to enable this feature:

Windows 2000

1. Right click on "My Computer". On Windows 2000 this icon on desktop. On Windows XP it is in the upper right portion of the Start menu.
2. Scroll down to "Properties" and click on it.
3. Click on "Hardware" tab.
4. Click on "Device Manager" button at the middle of panel.
5. Click on the + sign next to the DVD/CD-ROM Drives.
6. Right click on the CD ROM drive that appears. If there are more than one CD ROM drives, click on the one that is being used for audio CD playing.
7. Scroll down to "Properties" and click on it.
8. A new panel opens. **See Figure 14**
9. Click on the Properties tab
10. Click to select the box with the label "Enable digital CD for this CD-ROM device"
11. Click the OK button and close all the relating windows.

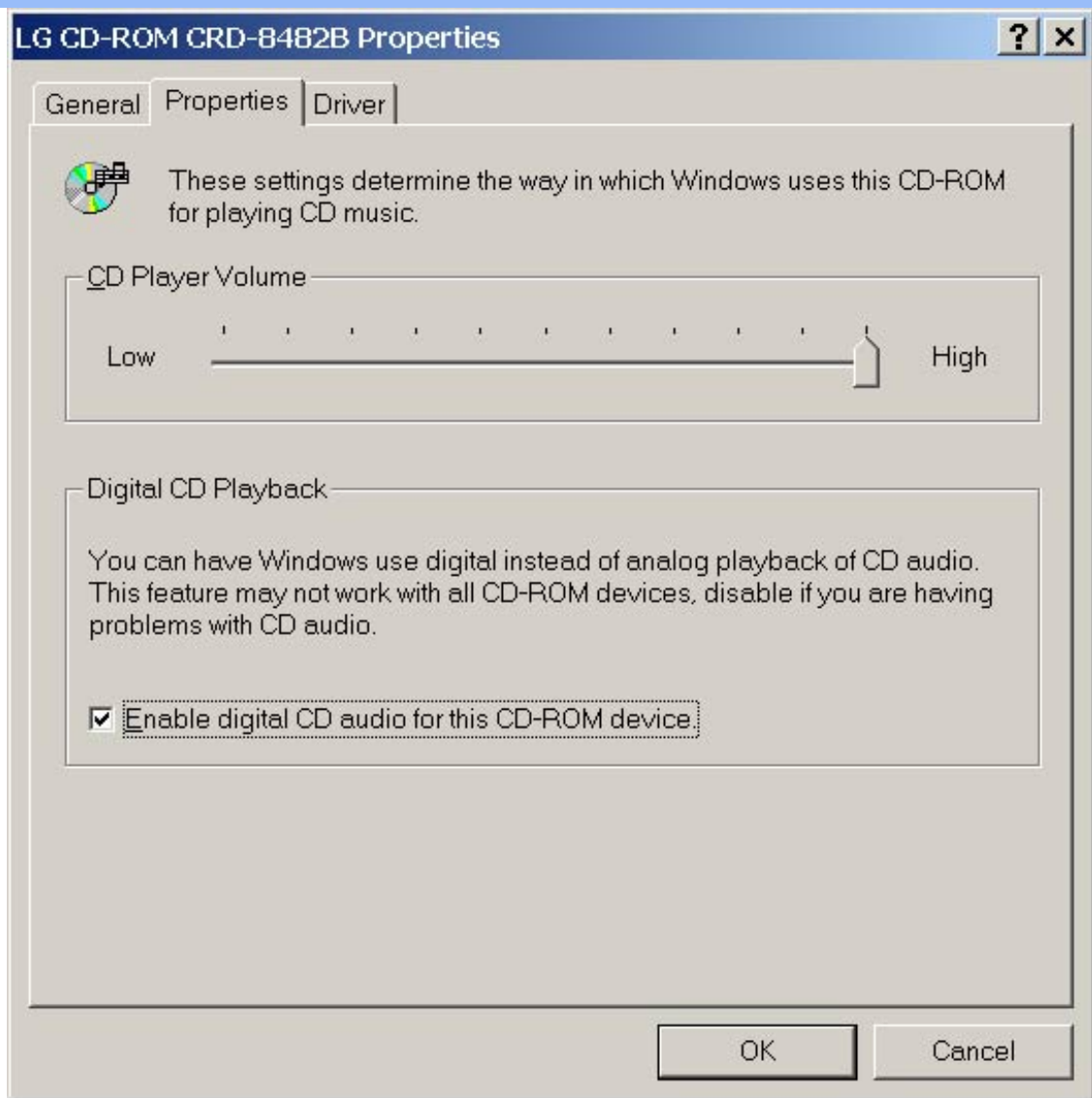


Figure 14.

CD Player Control in the mixer playback tab does not have any effects on the output when Playing Audio CD in the CD Drive

Because the CD player sends the audio streams via the digital data lines, Windows treats this source like other digital audio sources such as MP3 files. Therefore, to control the volume and balance use the controls for "wave".

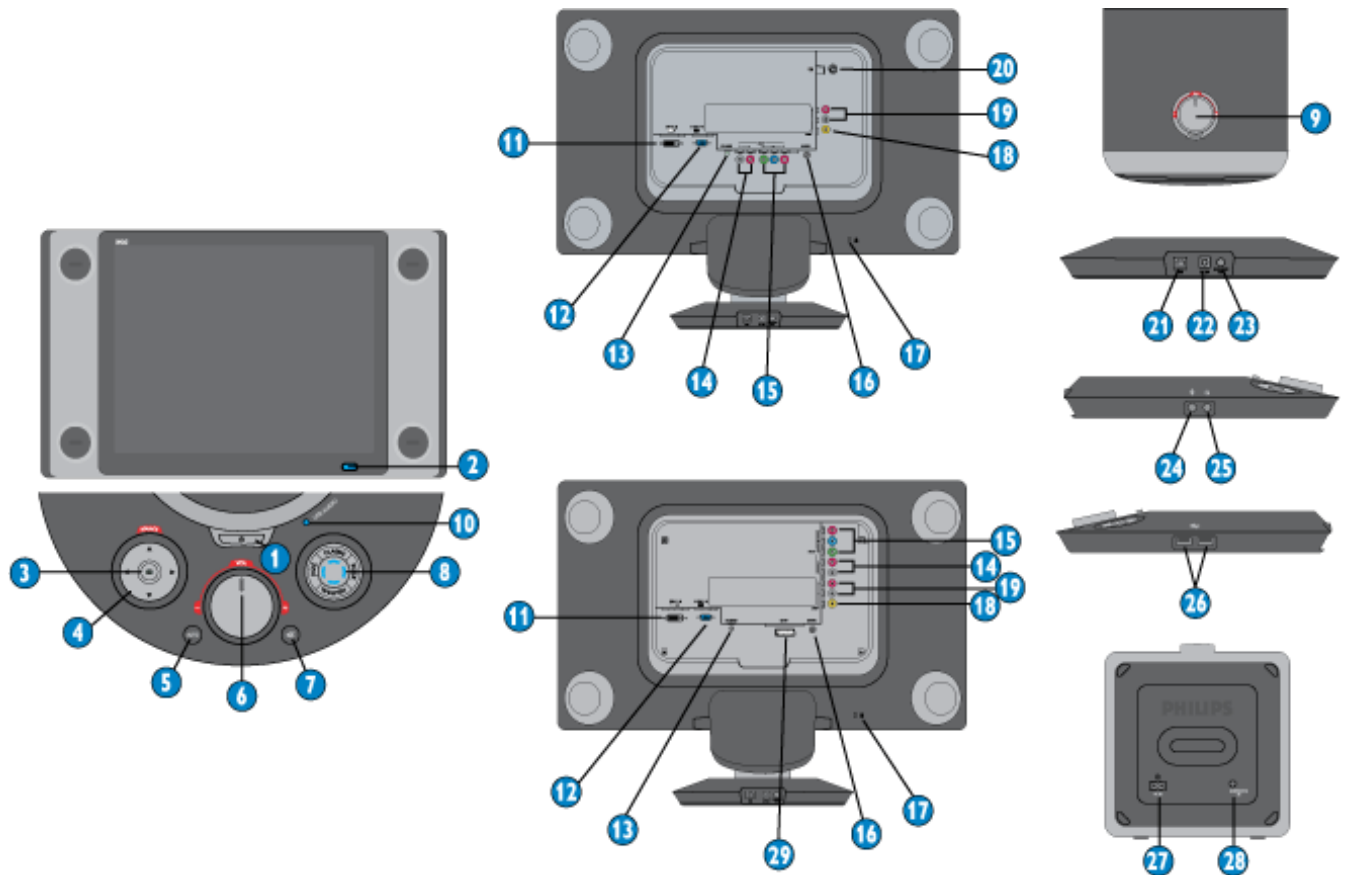
No PSA2 Icon in the Notification Area

After you have installed PSA2 from the installation CD, if the PSA2 icon disappears from the Notification Area, go to the start menu, click on Programs (Windows 2000 or Windows XP), click on Philips, then click on Sound Agent 2, then click on Control Panel.

Installing Your LCD Monitor

- product
- Description
- Connecting to Your PC
- Getting Started
- Optimizing Performance

Product Description



- | | |
|----|--|
| 1 | To switch display's power On & Off |
| 2 | Power LED |
| 3 | To access OSD menu |
| 4 | To adjust the OSD (Up, Down, Left, Right) |
| 5 | Automatically adjust horizontal position, vertical position, phase and clock setting in D-sub only |
| 6 | To adjust the speaker volume |
| 7 | To mute the audio |
| 8 | Preset hotkeys to optimize audio performance |
| 9 | To adjust the subwoofer bass |
| 10 | USB Audio LED |
| 11 | DVI-D |
| 12 | D-Sub |
| 13 | PC audio |
| 14 | |
| 15 | |
| 16 | |
| 17 | |
| 18 | |
| 19 | |
| 20 | Antenna |
| 21 | USB upstream port |
| 22 | Monitor DC in |
| 23 | Subwoofer out |
| 24 | |
| 25 | |
| 26 | |
| 27 | |
| 28 | |

- | | | | |
|----|-----------------|----|-----------------|
| 14 | HD audio jack | 24 | Microphone in |
| 15 | YPbPr | 25 | Headphone out |
| 16 | S-Video | 26 | USB hub |
| 17 | Kensington lock | 27 | Subwoofer power |
| 18 | CVBS | 28 | Subwoofer in |
| 19 | Audio jack | 29 | SCART |

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Optimizing Performance

For best performance, ensure that your display settings are set at 1280x1024, 60Hz.

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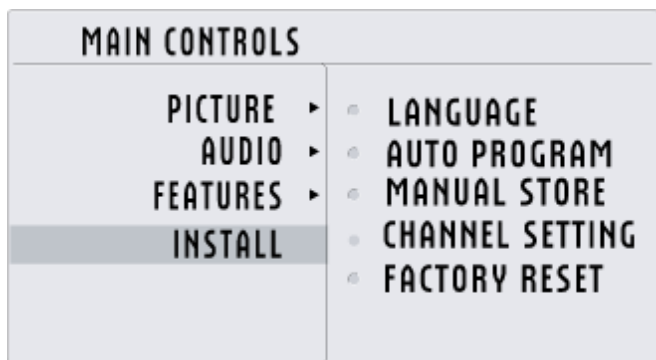
- Description of the On-Screen Display
- The OSD Tree
- SmartControl
- Q&A

On-Screen Display






Description of the On Screen Display

What is the On-Screen Display?

On-Screen Display (OSD) is a feature in all Philips LCD monitors. It allows an end user to adjust screen performance or select functions of the monitors directly through an on-screen instruction window. A user friendly on screen display interface is shown as below :



Basic and simple instruction on the control keys.

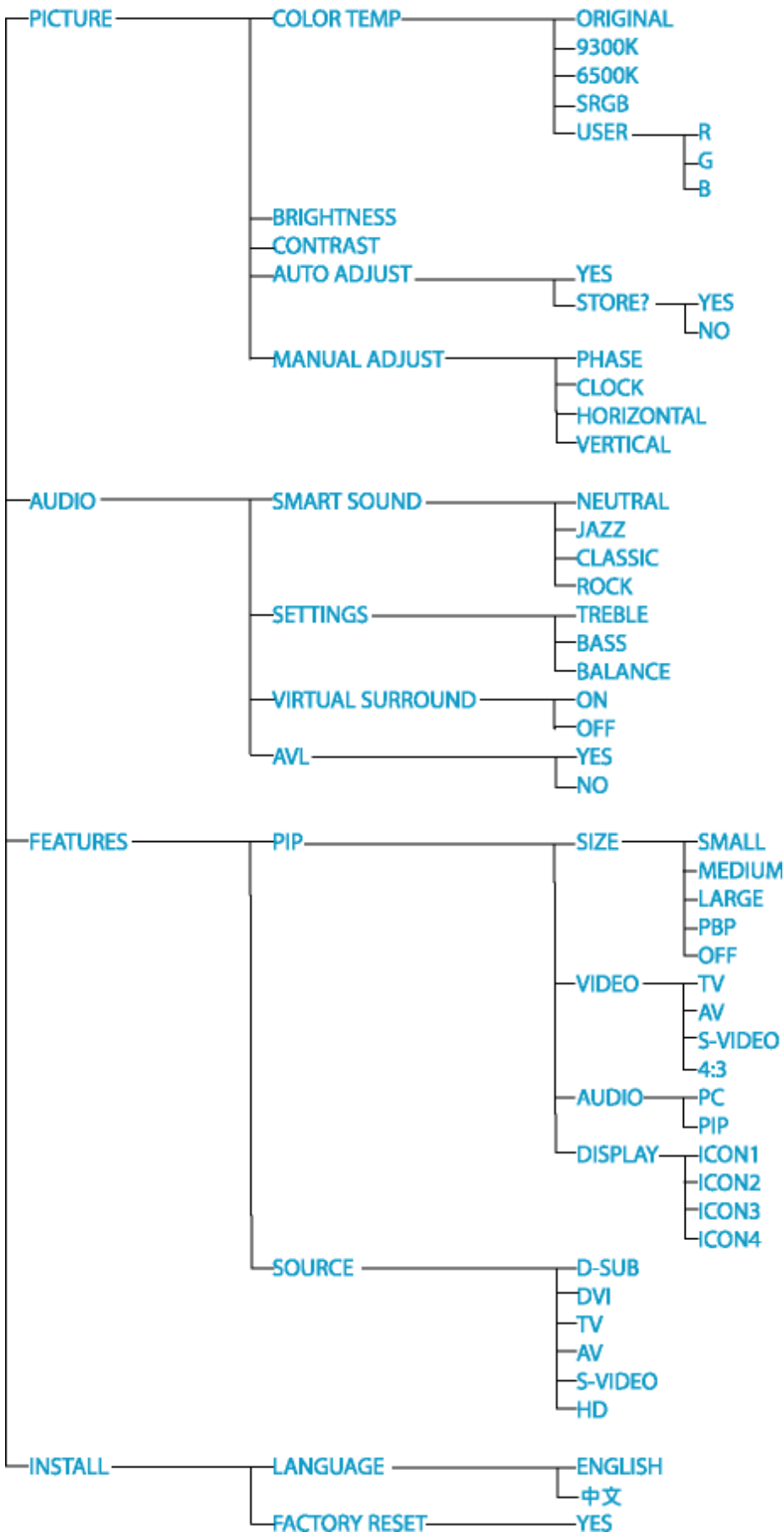
In the OSD shown above users can press   buttons at the base of the monitor to move the cursor,  to confirm the choice or change, and   to adjust/select the change.

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The OSD Tree

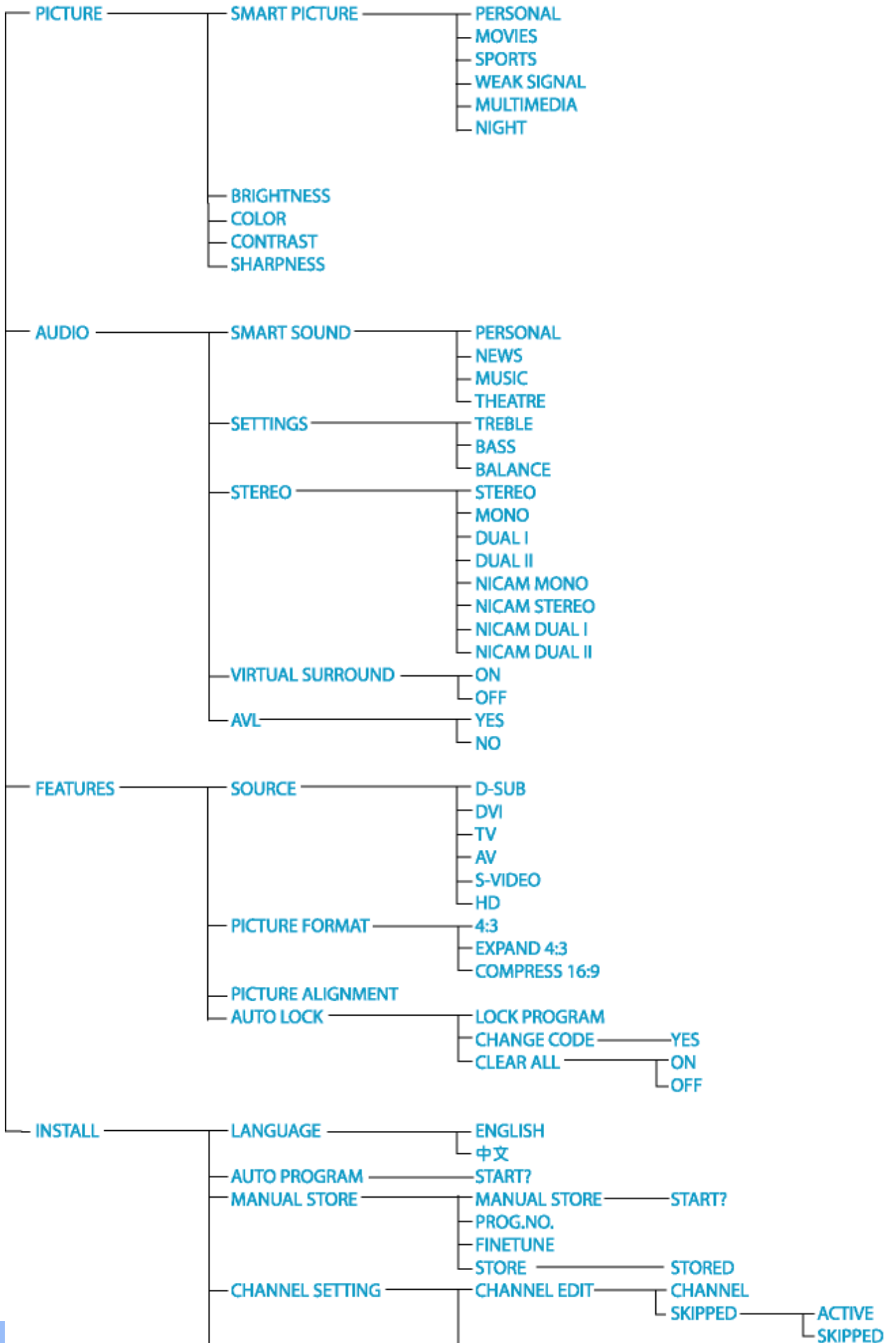
Below is an overall view of the structure of the On-Screen Display. You can use this as a reference when you want to work your way around the different adjustments later on.

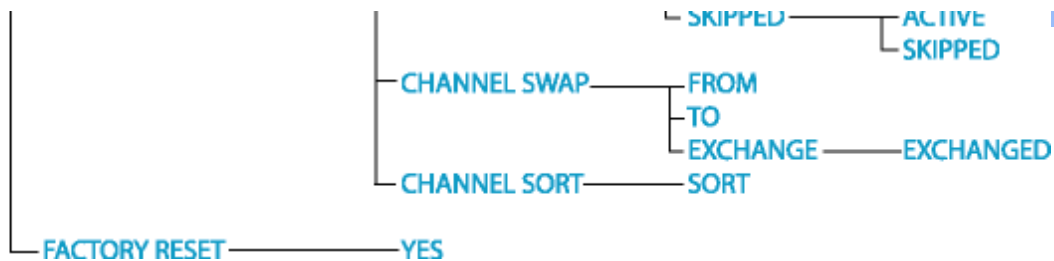
Asia Pacific (PC Mode)



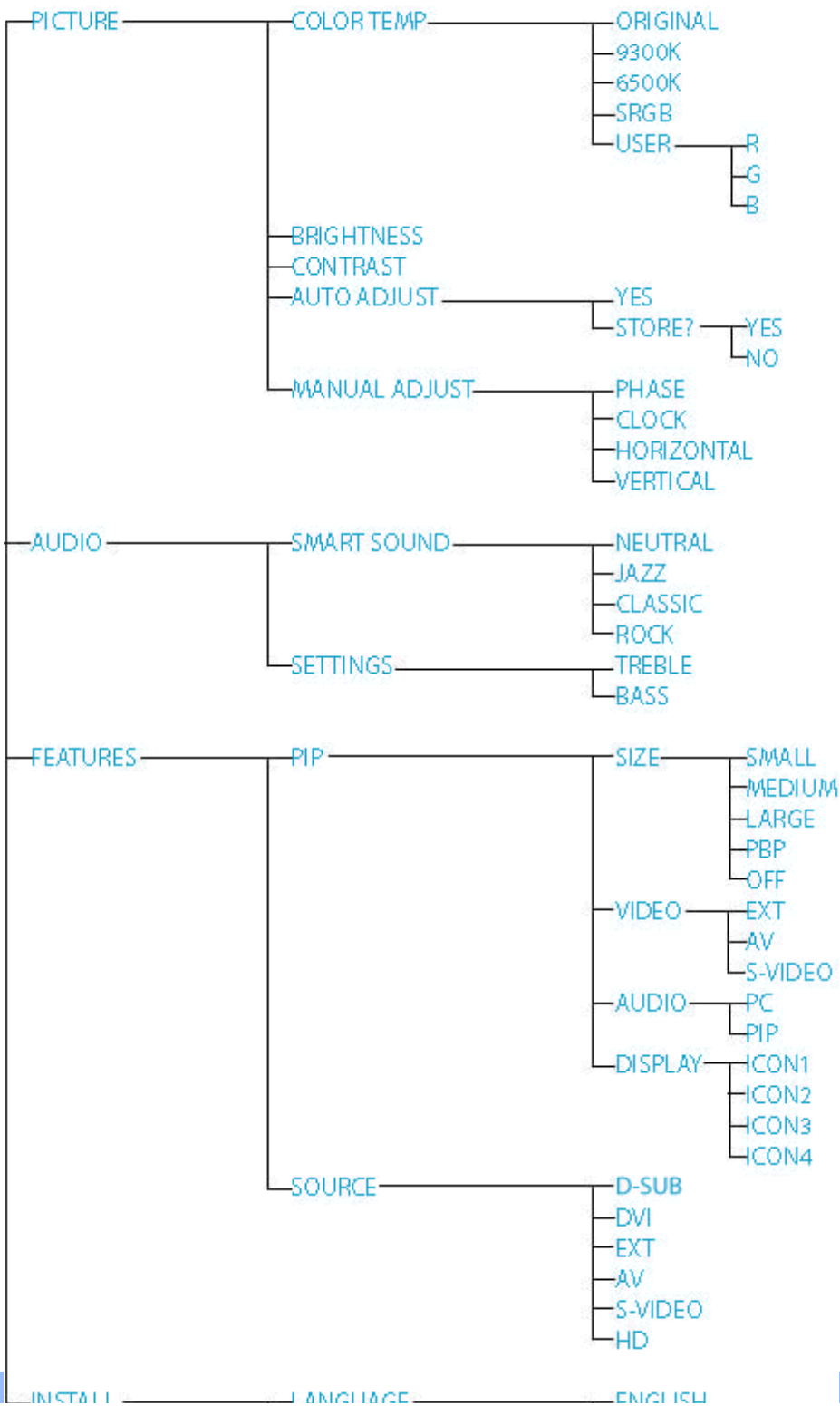
Asia Pacific (TV/AV/S-VIDEO/HDTV Mode)

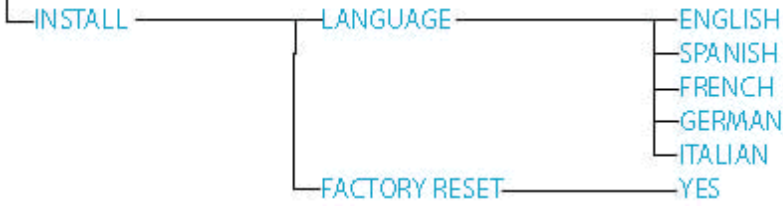
Asia Pacific (TV/AV/S-VIDEO/HDTV Mode)



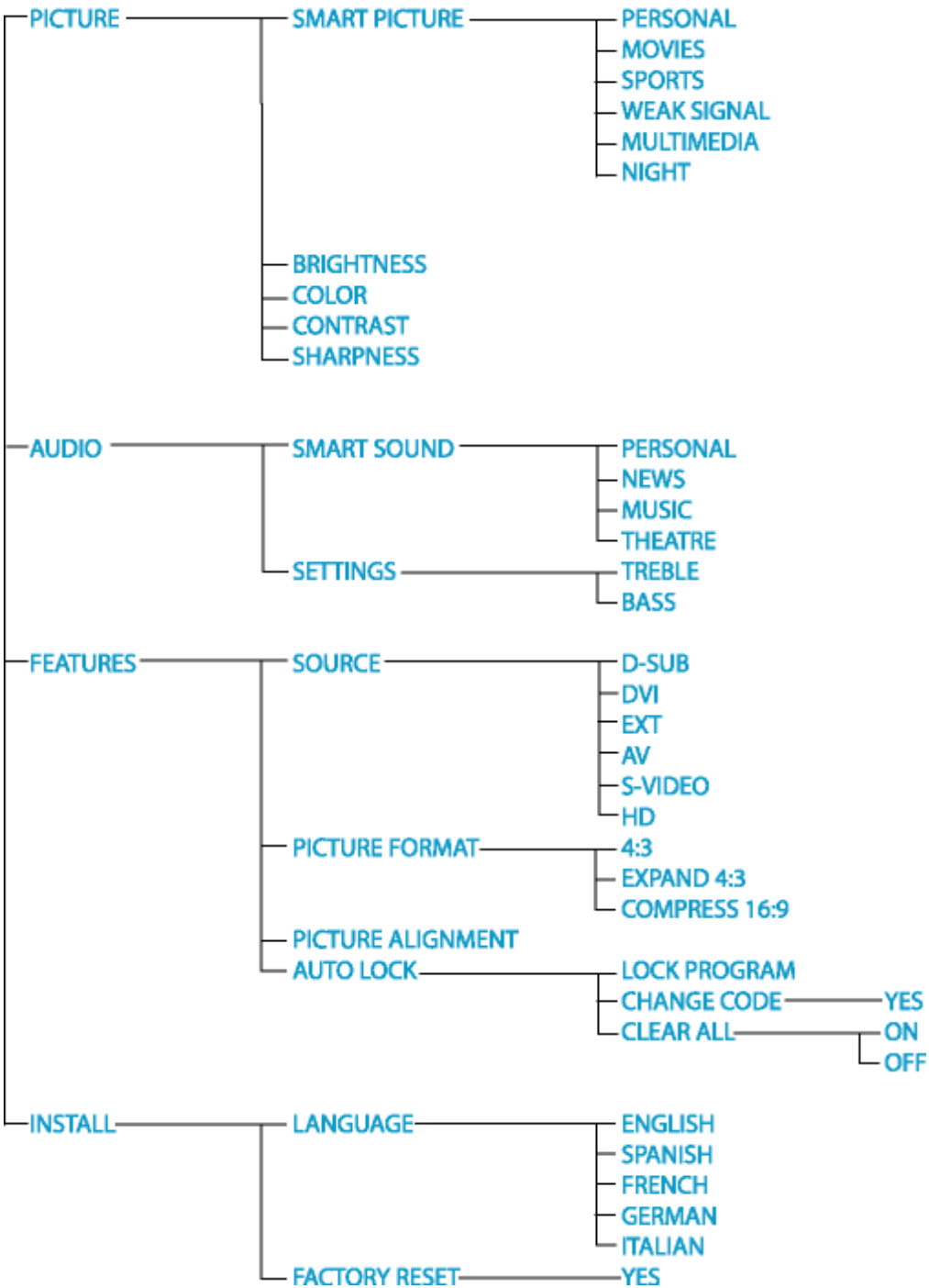


Europe (PC Mode)





Europe (EXT/AV/S-VIDEO/HDTV Mode)



Note: 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 side 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.

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Customer Care & Warranty

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

WESTERN EUROPE: Austria • Belgium • Cyprus • 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

NORTH AMERICA: Canada • USA

PACIFIC: Australia • New Zealand

ASIA: Bangladesh • China • Hong Kong • India • Indonesia • Japan • Korea • Malaysia • Pakistan • Philippines • Singapore • Taiwan • Thailand

AFRICA: Morocco • South Africa

MIDDLE EAST: Dubai • Egypt

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

ActiveBright

The ActiveBright delivers high definition TV-like quality by displaying brilliant, razor sharp colors and a wide viewing angle for the very best in multimedia entertainment.

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 or 5:4. Wide monitors or TVs have an aspect ratio of 16:9 or 16:10.

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B

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.

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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 express 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.

Component Video

Offers best possible picture quality in the analogue domain. Maximum band width through R (red), G (green) and B (blue) signals.

Composite Video

A variety of format choices in connecting video devices.

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D

Dual Input

Dual input provides connectors to accommodate input of both analog VGA and digital DVI signals.

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

Embedded Power Supply

An embedded power supply is a power adaptor built into the body of a display device that replaces a bulky external power adaptor.

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.

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H

High Brightness Panel

Allows daylight viewing even in large rooms with high ambient light conditions.

HDTV

HDTV delivers exceptional picture quality and real movie-viewing experience that makes television more dynamic, truer than anything you've seen before. It is the latest and best television signal available. It features picture quality more than twice that of traditional analog broadcasts. In order to effectively maximize the HDTV signal, a television must incorporate advanced signal input connectivity and circuitry design. To use HDTV the TV must be connected via its component video or DVI inputs to a DTV set-top box and set to operate in the DTV mode.

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.

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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.

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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.

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N

Nit

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

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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.

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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.

Response Time

Response time is the period required for a liquid crystal cell to go from active (black) to inactive (white) and back to active (black) again. It is measured in milliseconds. Faster is better: Lower response time means faster transitions and, therefore, results in fewer visible image artifacts in the display of fast-moving images.

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S

SCART

Enable connection to TV and other source (DVD+RW/VCR).

SDTV

A display device ready to display standard definition television and high definition television signals, which are commonly used by TV systems in the world.

SoundAgent2TM

Sound Agent 2 is intelligent software with a fun and easy-to-use graphical interface. The Sound Agent takes the confusion out of PC audio by automatically optimizing the sound for all popular formats. It also allows you to fine-tune the performance to fit in with your personal audio tastes.

Stand-alone audio function

Built-in advanced firmware that delivers audio output from external audio devices including a portable tape, CD or MP3 player even when there is no video input.

Subwoofer

A subwoofer is a speaker that reproduces the lower end of the audio spectrum. The monitor has a separate subwoofer that is optimized to reproduce bass frequencies and satellite speakers that are optimized for mid- and high-range frequencies. The result is a system that powerfully reproduces the full range of audio frequencies from deep bass to crystal clear high notes with the minimum of distortion.

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 side 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.

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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.

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U***USB or Universal Serial Bus***

The universal serial bus or USB is a standard protocol for linking PCs and peripherals. Because it delivers high speed at a low cost, USB has become the most popular method for connecting peripheral devices to a computer. A USB 2.0 port located on a monitor directly in the user's line of sight provides easy, high-speed connectivity for USB devices at a convenient location.

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V***Vertical refresh rate***

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

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Y***YPbPr***

Component video is a technique for recording and transmitting of video in which each color is maintained in a separate channel. RGB is an example of component video using one channel each for red (R), green (G) and blue (B). It is the way to connect a DVD player for optimum picture quality.

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Download and Print

- Installing your LCD monitor driver
- Download and Printing Instructions
- Installing FPadjust Program

Installing Your LCD monitor driver

System requirements:

- PC running Windows 95, Windows® 98, Windows® 2000 , Windows® Me, Windows® XP or later
- Find your driver ".inf/.icm/.cat" at : lcd\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 Mac](#).

Download instructions:

To download the file:

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

Download



190G6.pdf

Download



PSA2 User Guide.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:

1. 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 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 users right-click)

Download



[FP_setup04.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_Readme04.txt](#)" file before installing.

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- Safety and Troubleshooting
- General FAQs
- Screen Adjustments
- Compatibility with Other Peripherals
- LCD Panel Technology
- Ergonomics, Ecology and Safety Standards
- Troubleshooting
- Regulatory Information
- Other Related Information

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": 1280x1024 @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 1280x1024 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 1280x1024@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 OSD button, then select 'Factory 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 at the press of a single button – without the need to navigate through OSD menus and control keys.

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 to the Monitor.

Q: Will the LCD monitor accept an Interlace signal?

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. An optional protective cover with greater scratch resistance is also available.

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.

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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 1280x1024@60Hz for 19".
 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_setup04.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: Can I connect my LCD monitor to any PC, workstation or Mac?

A: Yes. All Philips LCD monitors are fully compatible with standard PCs, Macs and workstations. You may need a cable adapter to connect the monitor to your Mac system. Please contact your dealer/retailer for more information.

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

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

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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: How are LCDs made?

A: LCDs are created from two glass plates separated from each other at a distance of a few microns. The plates are filled with liquid crystal and then sealed together. The top plate is colored with an RGB pattern to make the color filter. Polarizers are then glued to both plates. This combination is sometimes called 'glass' or 'cell.' The LCD cell is assembled into a 'module' by adding the backlight, driver electronics and frame.

Q: What is polarization ?

A: Polarization is basically directing light to shine in one direction. Light is electromagnetic waves. Electric and magnetic fields oscillate in a direction perpendicular to the propagation of the light beam. The direction of these fields is called the 'polarization direction'. Normal or non-polarized light has fields in several directions; polarized light has a field in only one direction.

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: How does a TFT LCD Panel work?

A: On each column and row of the TFT LCD panel, a data source drive and a gate drive are attached, respectively. The TFT drain of each cell is connected to the electrode. The molecular arrangement of liquid crystal elements differ according to whether it is impressed with voltage or not. It varies the direction of polarized light and the amount of light by letting it through different arrays of liquid crystal elements. When two polarized filters are arranged vertically on a polarized light pole, the light that passes through the upper polarized panel is turned 90 degrees along with the spiral structure of the liquid crystal molecules and goes through the polarized filter at the bottom. When impressed with voltage, liquid crystal molecules are arranged vertically from the original spiral structure and the direction of the light is not turned through 90 degrees. In this case, light that comes through the top polarized panel may not go through the polarized panel at the bottom.

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 CRT 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 free 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: What is the CE mark?

A: The CE (Conformité Européenne) mark is required to be displayed on all regulated products offered for sale on the European market. This 'CE' mark means that a product complies with the relevant European Directive. A European Directive is a European 'Law' that relates to health, safety, environment and consumer protection, much the same as the U. S. National Electrical Code and UL Standards.

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


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Troubleshooting

- Safety and Troubleshooting
- FAQs

- Common Problems
- Imaging Problems
- Regulatory Information
- Other Related Information

This page deals with problems that can be corrected by the user. If the problem still persists after you have tried these solutions, contact your nearest Philips dealer.

Common Problems	
Having this problem	Check these items
<p>No Picture (Power LED not lit)</p>	<ul style="list-style-type: none"> • 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.
<p>No Picture (Power LED is amber or yellow)</p>	<ul style="list-style-type: none"> • Make sure the computer is turned on. • Make sure the signal cable is properly connected to your computer. • Check to see if the monitor cable has bent pins. • The Energy Saving feature may be activated
<p>Screen says</p> 	<ul style="list-style-type: none"> • 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. • The AUTO adjustment does not function when digital input is used for display.
Imaging Problems	

<p>Display position is incorrect</p>	<ul style="list-style-type: none"> ● Press the Auto button. ● Adjust the image position using the Horizontal Position and/or Vertical Position in OSD Main Controls.
<p>Image vibrates on the screen</p>	<ul style="list-style-type: none"> ● Check that the signal 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 OSD Main Controls. (The backlight of the LCD monitor has a fixed life span. When the screen becomes dark or begins to flicker, please contact your dealer).
<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.

Green, red, blue, dark, and white dots remains

- The remaining dots are normal characteristic of the liquid crystal used in today's technology.

For further assistance, refer to the [Consumer Information Centers](#) list and contact your local Philips distributor.

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- CE Declaration of Conformity
- Energy Star Declaration
- Federal Communications Commission (FCC) Notice (U.S. Only)
- Commission Federale de la Communication (FCC Declaration)
- EN 55022 Compliance (Czech Republic Only)
- VCCI Class 2 Notice (Japan Only)
- MIC Notice (South Korea Only)
- Polish Center for Testing and Certification Notice
- North Europe (Nordic Countries) Information
- BSMI Notice (Taiwan Only)
- Ergonomie Hinweis (nur Deutschland)
- Philips End-of-Life Disposal Information for UK only
- Waste Electrical and Electronic Equipment- WEEE
- Troubleshooting
- Other Related Information

Regulatory Information

CE Declaration of Conformity

Philips Consumer Electronics declare under our responsibility that the product is in conformity with the following standards

- EN60950-1:2001 (Safety requirement of Information Technology Equipment)
- EN55022:1998 (Radio Disturbance requirement of Information Technology Equipment)
- EN55024:1998 (Immunity requirement of Information Technology Equipment)
- EN61000-3-2:2000 (Limits for Harmonic Current Emission)
- EN61000-3-3:1995 (Limitation of Voltage Fluctuation and Flicker)

following provisions of directives applicable

- 73/23/EEC (Low Voltage Directive)
- 89/336/EEC (EMC Directive)
- 93/68/EEC (Amendment of EMC and Low Voltage Directive)

and is produced by a manufacturing organization on ISO9000 level.

The product also comply with the following standards

- ISO9241-3, ISO9241-7, ISO9241-8 (Ergonomic requirement for Visual Display)
- ISO13406-2 (Ergonomic requirement for Flat panels)
- GS EK1-2000 (GS specification)
- prEN50279:1998 (Low Frequency Electric and Magnetic fields for Visual Display)
- MPR-II (MPR:1990:8/1990:10 Low Frequency Electric and Magnetic fields)
- TCO'99, TCO'03 (Requirement for Environment Labelling of Ergonomics, Energy, Ecology and Emission, TCO: Swedish Confederation of Professional Employees) for TCO versions

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Energy Star Declaration

PHILIPS 190G6

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 to fulfill the requirements in the NUTEK specification 803299/94. Time settings are adjusted from the system unit by software.

NUTEK	VESA State	LED Indicator	Power Consumption
Normal operation	ON (Active)	Green	< 62 W (without subwoofer)

•Frequently
Asked
Questions
(FAQs)

Power Saving Alternative 2 One step	OFF (Sleep)	Amber	< 2 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 quite a long time.

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Federal Communications Commission (FCC) Notice (U.S. Only)



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



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

Use only RF shielded cable that was supplied with the monitor when connecting this monitor to a computer device.

To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or excessive moisture.

THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

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Commission Federale de la Communication (FCC Declaration)



Cet équipement a été testé et déclaré conforme aux limites des appareils numériques de class B, aux termes de l'article 15 Des règles de la FCC. Ces limites sont conçues de façon à fournir une protection raisonnable contre les interférences nuisibles dans le cadre d'une installation résidentielle. CET appareil produit, utilise et peut émettre des hyperfréquences qui, si l'appareil n'est pas installé et utilisé selon les consignes données, peuvent causer des interférences nuisibles aux communications radio. Cependant, rien ne peut garantir l'absence d'interférences dans le cadre d'une installation particulière. Si cet appareil est la cause d'interférences nuisibles pour la réception des signaux de radio ou de télévision, ce qui peut être décelé en fermant l'équipement, puis en le remettant en fonction, l'utilisateur pourrait essayer de corriger la situation en prenant les mesures suivantes:

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Brancher l'équipement sur un autre circuit que celui utilisé par le récepteur.
- Demander l'aide du marchand ou d'un technicien chevronné en radio/télévision.



Toutes modifications n'ayant pas reçu l'approbation des services compétents en matière de conformité est susceptible d'interdire à l'utilisateur l'usage du présent équipement.

N'utiliser que des câbles RF armés pour les connections avec des ordinateurs ou périphériques.

CET APPAREIL NUMERIQUE DE LA CLASSE B RESPECTE TOUTES LES EXIGENCES DU REGLEMENT SUR LE MATERIEL BROUILLEUR DU CANADA.

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EN 55022 Compliance (Czech Republic Only)

This device belongs to category B devices as described in EN 55022, unless it is specifically stated that it is a Class A device on the specification label. The following applies to devices in Class A of EN 55022 (radius of protection up to 30 meters). The user of the device is obliged to take all steps necessary to remove sources of interference to telecommunication or other devices.

Pokud není na typovém štítku počítače uvedeno, že spadá do třídy A podle EN 55022, spadá automaticky do třídy B podle EN 55022. Pro zařízení zařazená do třídy A (chranné pásmo 30m) podle EN 55022 platí následující. Dojde-li k rušení telekomunikačních nebo jiných zařízení je uživatel povinen provést taková opatření, aby rušení odstranil.

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VCCI Notice (Japan Only)

This is a Class B product based on the standard of the Voluntary Control Council for Interference (VCCI) for Information technology equipment. If this equipment is used near a radio or television receiver in a domestic environment, it may cause radio Interference. Install and use the equipment according to the instruction manual.



この装置は、情報処理装置等電波障害自主規制協議会 (VCCI) の基準に基づくクラス B 情報技術装置です。この装置は家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。

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MIC Notice (South Korea Only)

Class B Device

장치 종류	사용자 안내문
B급 기기	이 장치는 가정용으로 전자파 적합등록을 한 장치로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.



Please note that this device has been approved for non-business purposes and may be used in any environment, including residential areas.

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Polish Center for Testing and Certification Notice

The equipment should draw power from a socket with an attached protection circuit (a three-prong socket). All equipment that works together (computer, monitor, printer, and so on) should have the

same power supply source.

The phasing conductor of the room's electrical installation should have a reserve short-circuit protection device in the form of a fuse with a nominal value no larger than 16 amperes (A).

To completely switch off the equipment, the power supply cable must be removed from the power supply socket, which should be located near the equipment and easily accessible.

A protection mark "B" confirms that the equipment is in compliance with the protection usage requirements of standards PN-93/T-42107 and PN-89/E-06251.

Wymagania Polskiego Centrum Badań i Certyfikacji

Urządzenie powinno być zasilane z gniazda z przyłączonym obwodem ochronnym (gniazdo z kolkiem). Współpracujące ze sobą urządzenia (komputer, monitor, drukarka) powinny być zasilane z tego samego źródła.

Instalacja elektryczna pomieszczenia powinna zawierać w przewodzie fazowym rezerwową ochronę przed zwarciami, w postaci bezpiecznika o wartości znamionowej nie większej niż 16A (amperów).

W celu całkowitego wyłączenia urządzenia z sieci zasilania, należy wyjąć wtyczkę kabla zasilającego z gniazdka, które powinno znajdować się w pobliżu urządzenia i być łatwo dostępne.

Znak bezpieczeństwa "B" potwierdza zgodność urządzenia z wymaganiami bezpieczeństwa użytkowania zawartymi w PN-93/T-42107 i PN-89/E-06251.

Pozostałe instrukcje bezpieczeństwa

- Nie należy używać wtyczek adapterowych lub usuwać kołka obwodu ochronnego z wtyczki. Jeżeli konieczne jest użycie przedłużacza to należy użyć przedłużacza 3-żyłowego z prawidłowo połączonym przewodem ochronnym.
- System komputerowy należy zabezpieczyć przed nagłymi, chwilowymi wzrostami lub spadkami napięcia, używając eliminatora przepięć, urządzenia dopasowującego lub bezzakłóceńowego źródła zasilania.
- Należy upewnić się, aby nic nie leżało na kablach systemu komputerowego, oraz aby kable nie były umieszczone w miejscu, gdzie można byłoby na nie nadeptywać lub potykać się o nie.
- Nie należy rozlewać napojów ani innych płynów na system komputerowy.
- Nie należy wpychać żadnych przedmiotów do otworów systemu komputerowego, gdyż może to spowodować pożar lub porażenie prądem, poprzez zwarcie elementów wewnętrznych.
- System komputerowy powinien znajdować się z dala od grzejników i źródeł ciepła. Ponadto, nie należy blokować otworów wentylacyjnych. Należy unikać kładzenia luźnych papierów pod komputer oraz umieszczania komputera w ciasnym miejscu bez możliwości cyrkulacji powietrza wokół niego.

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North Europe (Nordic Countries) Information

Placering/Ventilation

WARNING:

FÖRSÄKRA DIG OM ATT HUVUDBRYTARE OCH UTTAG ÄR LÄTÅTKOMLIGA, NÄR DU STÄLLER DIN UTRUSTNING PÅPLATS.

Placering/Ventilation

ADVARSEL:

SØRG VED PLACERINGEN FOR, AT NETLEDNINGENS STIK OG STIKKONTAKT ER NEMT TILGÆNGELIGE.

Paikka/Ilmankierto

VAROITUS:

SIJOITA LAITE SITEN, ETTÄ VERKKOJOHTO VOIDAAN TARVITTAESSA HELPOSTI IRROTTAA PISTORASIESTA.

Plassering/Ventilasjon

ADVARSEL:

NÅR DETTE UTSTYRET PlassERES, MÅ DU PASSE PÅ AT KONTAKTENE FOR STØMTILFØRSEL ER LETTE Å NÅ.

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BSMI Notice (Taiwan Only)

符合乙類資訊產品之標準

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Ergonomie Hinweis (nur Deutschland)

Der von uns gelieferte Farbmonitor entspricht den in der "Verordnung über den Schutz vor Schäden durch Röntgenstrahlen" festgelegten Vorschriften.

Auf der Rückwand des Gerätes befindet sich ein Aufkleber, der auf die Unbedenklichkeit der Inbetriebnahme hinweist, da die Vorschriften über die Bauart von Störstrahlern nach Anlage III § 5 Abs. 4 der Röntgenverordnung erfüllt sind.

Damit Ihr Monitor immer den in der Zulassung geforderten Werten entspricht, ist darauf zu achten, daß

1. Reparaturen nur durch Fachpersonal durchgeführt werden.
2. nur original-Ersatzteile verwendet werden.
3. bei Ersatz der Bildröhre nur eine bauartgleiche eingebaut wird.

Aus ergonomischen Gründen wird empfohlen, die Grundfarben Blau und Rot nicht auf dunklem Untergrund zu verwenden (schlechte Lesbarkeit und erhöhte Augenbelastung bei zu geringem Zeichenkontrast wären die Folge).

Der arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 beträgt 70dB (A) oder weniger.



ACHTUNG: BEIM AUFSTELLEN DIESES GERÄTES DARAUf ACHTEN, DAß NETZSTECKER UND NETZKABELANSCHLUß LEICHT ZUGÄNGLICH SIND.

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End-of-Life Disposal

Your new monitor contains materials that can be recycled and reused. Specialized companies can recycle your product to increase the amount of reusable materials and to minimize the amount to be disposed of.

Please find out about the local regulations on how to dispose of your old monitor from your local Philips dealer.

(For customers in Canada and U.S.A.)

This product may contain lead and/or mercury. Dispose of in accordance to local-state and federal regulations.

For additional information on recycling contact www.eia.org (Consumer Education Initiative)

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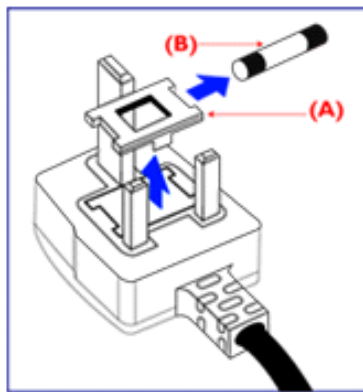
Information for UK only

WARNING - THIS APPLIANCE MUST BE EARTHED.

Important:

This apparatus is supplied with an approved moulded 13A plug. To change a fuse in this type of plug proceed as follows:

1. Remove fuse cover and fuse.
2. Fit new fuse which should be a BS 1362 5A, A.S.T.A. or BSI approved type.
3. Refit the fuse cover.



If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate 3-pin plug fitted in its place.

If the mains plug contains a fuse, this should have a value of 5A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5A.

Note: The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13A socket elsewhere.

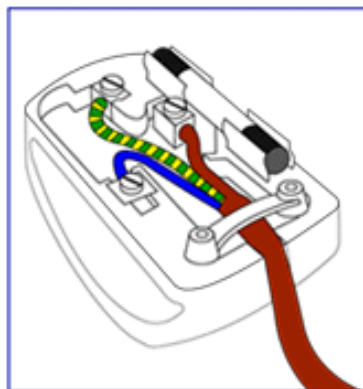
How to connect a plug

The wires in the mains lead are coloured in accordance with the following code:

BLUE - "NEUTRAL" ("N")

BROWN - "LIVE" ("L")

GREEN & YELLOW - "EARTH" ("E")



1. The GREEN AND YELLOW wire must be connected to the terminal in the plug which is marked with the letter "E" or by the Earth symbol \perp or coloured GREEN or GREEN AND YELLOW.

2. The BLUE wire must be connected to the terminal which is marked with the letter "N" or coloured BLACK.

3. The BROWN wire must be connected to the terminal which marked with the letter "L" or coloured RED.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead - not simply over the three wires.

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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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- Safety and Troubleshooting
- FAQs

Other Related Information

- Troubleshooting
- Regulatory Information
- Information for Users in the U.S
- Information for Users Outside the U.S

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.

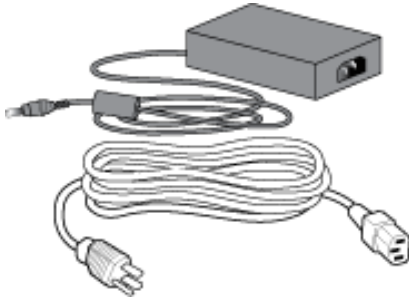
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Connecting to Your PC

- Front View Product Description
- Accessory Pack
- Connecting to Your PC
- Connect for AV functionality (Europe only)
- Connect for TV Functionality (Asia Pacific only)
- Getting Started
- Optimizing Performance

Accessory Pack

Unpack all the parts



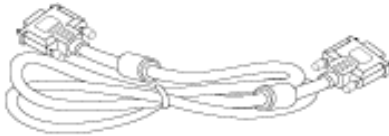
Power Cord (Monitor)



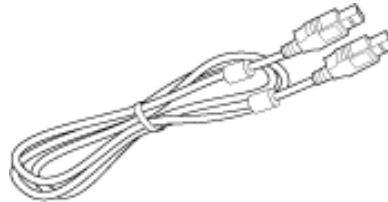
Power Cord (Subwoofer)



D-Sub



DVI-D



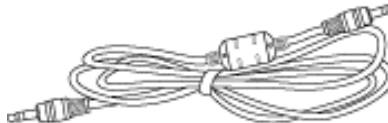
USB cable



Component (YPbPr)



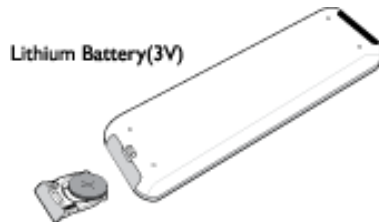
Subwoofer Cable



Subwoofer Audio



EDFU pack

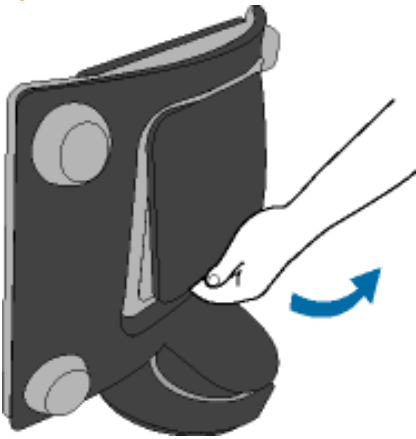


Remote Control (Not available for all model)

[RETURN TO TOP OF THE PAGE](#)

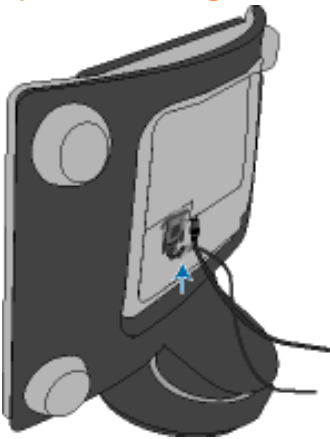
Connecting to Your PC

1)

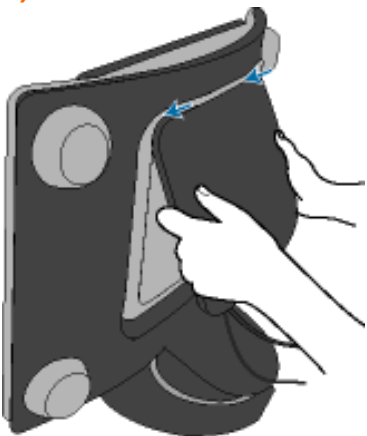


Remove backcover from vertical monitor.

2) Cable management

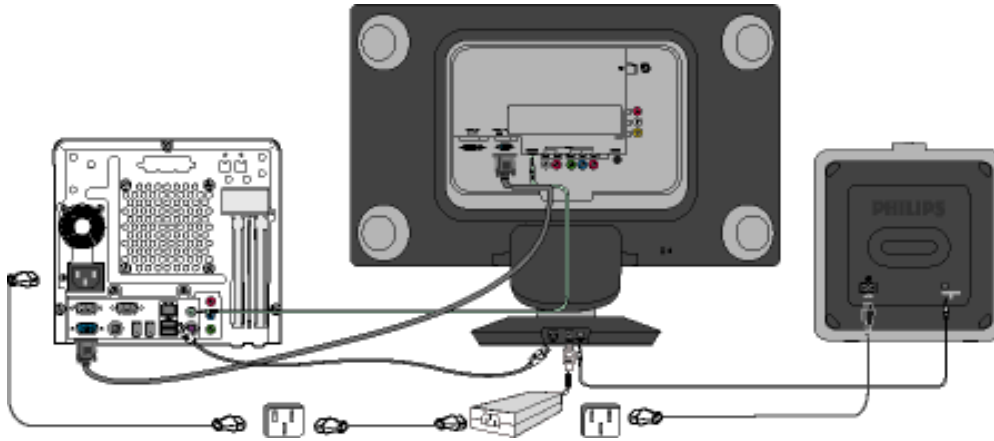


3)



If you use an Apple Macintosh, you need to connect the special Mac adapter to one end of the monitor signal cable.

4) Connect to PC



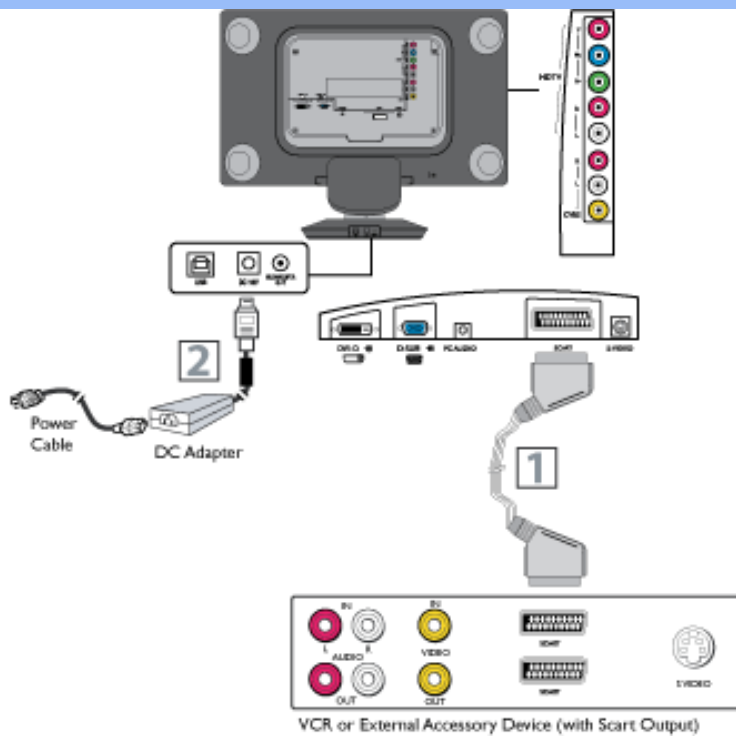
- (1) Turn off your computer and unplug its power cable.
- (2) Connect the monitor signal cable to the video connector on the back of your computer.
- (3) Plug the power cord of your computer and your monitor into a nearby outlet.
- (4) USB plug
 - (a) Connect USB upstream port on monitor and the USB port on PC with a USB cable.
 - (b) The USB downstream port is now ready for any USB device to plug in
- (5) Turn on your computer and monitor. If the monitor displays an image, installation is complete.

Note: The USB plug is a pass through connection whether it can support USB 1.1 or USB 2.0 depends on your PC's specification.

5) Connect for AV functionality (Europe Only)

SCART Connections

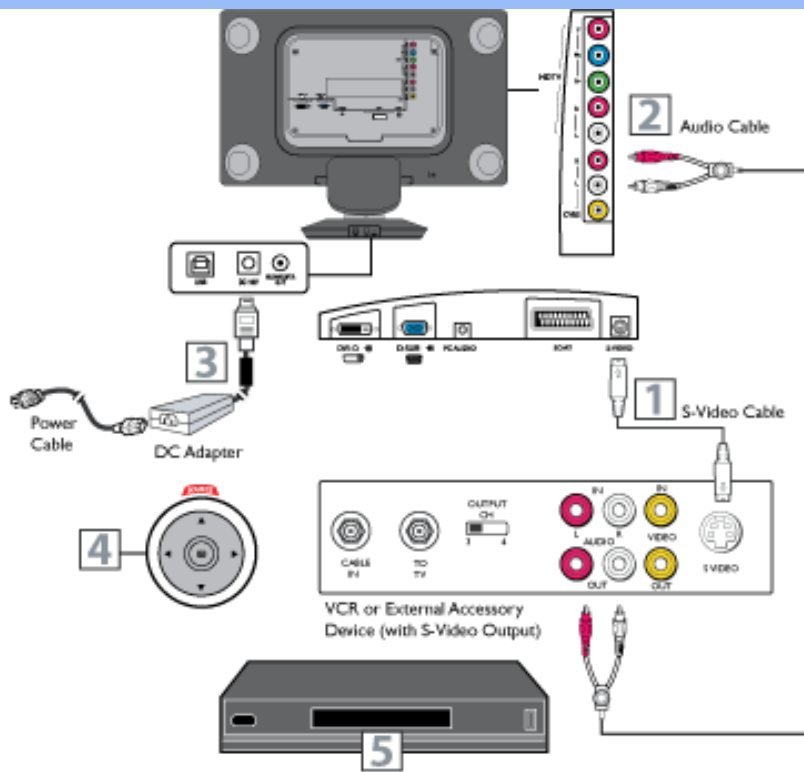
This connection will supply stereo sound to the display.



- (1) Using a scart cable (not supplied) connect one end of the scart cable to the scart jocket of the scart enabled device. Connect the other end of the scart cable to the scart jack on the bottom of the display.
- (2) Plug the DC adapter into the DC IN 16V jack on the display.
Plug the power cable into an outlet and switch the display set on.

S-Video Connections

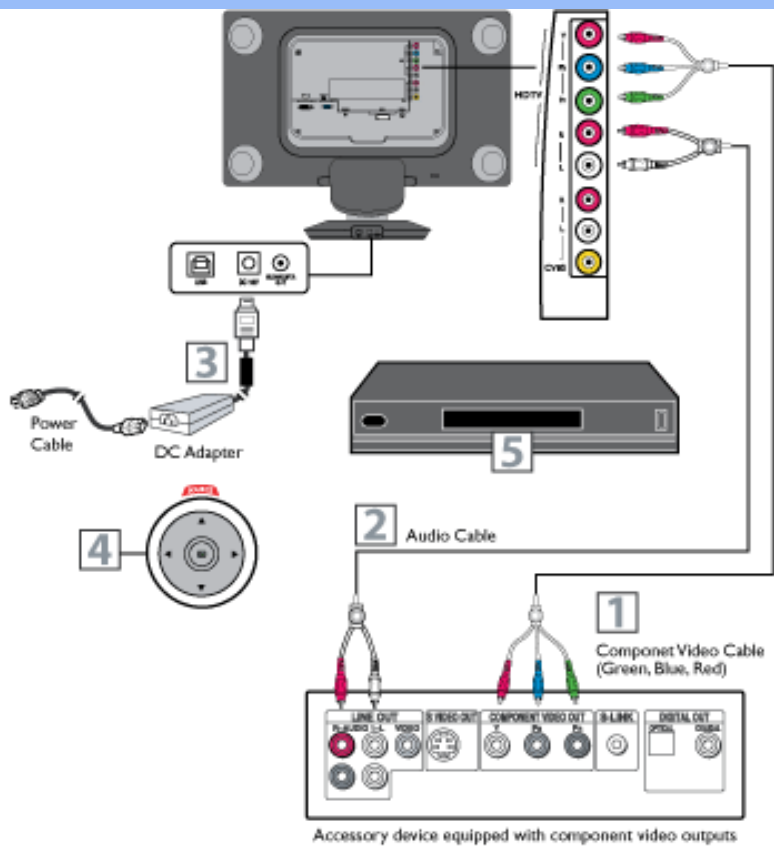
The S-Video connection on the rear of the display can provide you with better picture detail and clarity for the playback of accessory sources such as DBS (digital broadcast satellite), DVD (digital video discs), video games, and VHS VCR (video cassette recorder) tapes than the normal antenna picture connections.



- (1) Connect an S-Video cable to the S-VIDEO jack of the other equipment (DVD Player, Camcorder, etc.) and to the S-VIDEO jack on the rear of the display.
- (2) Connect RCA-style audio cables (usually red and white) to the AUDIO OUT (left and right) jacks on the other equipment. Connect the other end of the cables to the AUDIO jack on the side of the display.
- (3) Plug the DC Adapter into the DC IN 16V jack on the display. Plug the power cable into an outlet. Turn on the display and other equipment.
- (4) Press the OSD buttons until S-Video appears on the screen.
- (5) Press PLAY on the other equipment to view its material on the display.

Component (HD) Connections

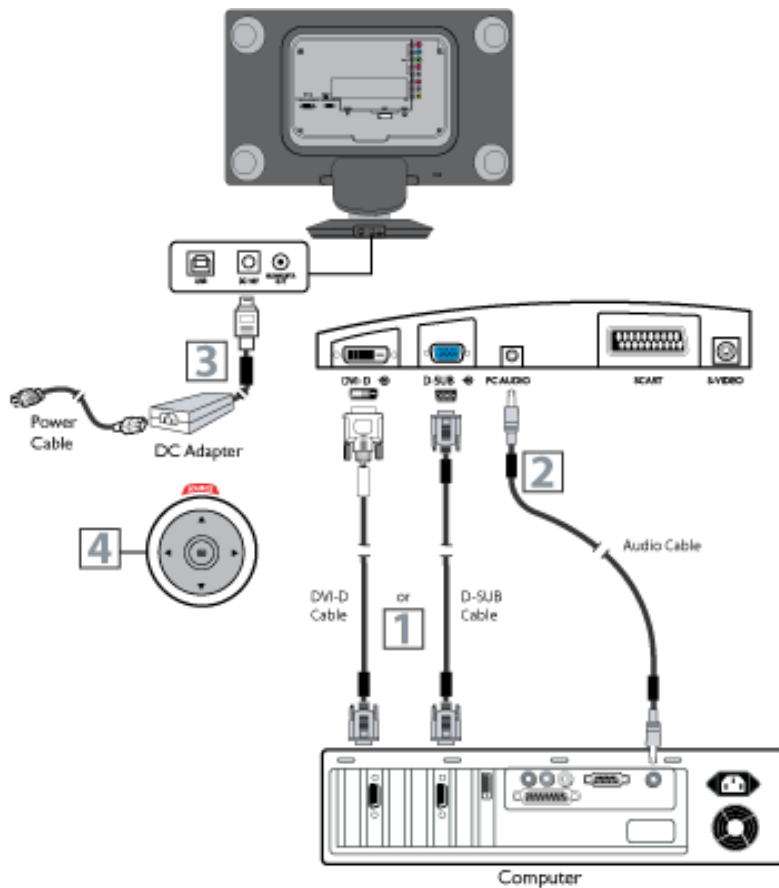
Component Video input provide the highest possible color and picture resolution in the playback of digital signal source material, such as with DVD players. If you are using a HD (High Definition) receiver that can transmit high definition programming, the display can accept those signals through the Component input located on the bottom of the display.



- (1) Connect the component (Y, Pb, Pr) Video OUT jacks from the DVD player (or similar device) to the COMP(onent) VIDEO Input jacks on the bottom of the display.
- (2) Connect the red and white AUDIO CABLES to the Audio (left and right) output jacks on the rear of the accessory device to the AUDIO IN jack. Connect the other end of the cable to the Audio jack on the rear of display.
- (3) Plug the DC Adapter into the DC IN 16 V jack on the display. Plug the power cable into an outlet. Turn on the display and other equipment.
- (4) Press the OSD button until HD appears on the screen.
- (5) Insert a DVD disc into the DVD player and press the PLAY button on the DVD Player.

PC (Monitor) Inputs

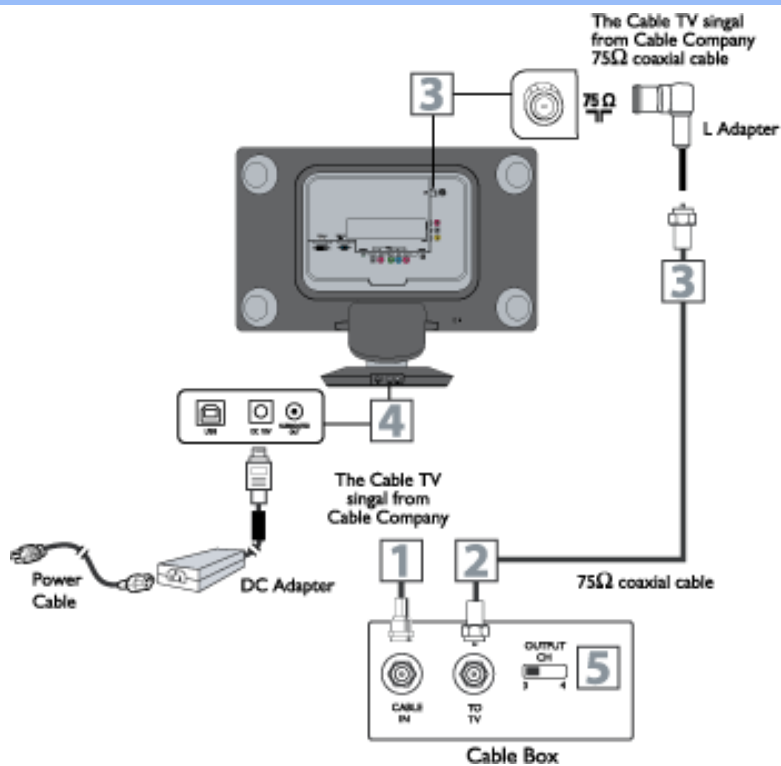
This display can be used as a PC monitor. Your computer will have to be equipped with a VGA type video output and interface cable (supplied).



- (1) Connect the VGA/DVI or DVI end of the interface cable to the computer, while connecting the other end to the D-SUB or DVI INPUT jack on the display.
- (2) Although audio connections are not required, the display can reproduce the computers audio out by an AUDIO ADAPTER to the Audio output jack on the computer (if available) while connecting the other end of the Audio cables to the PC AUDIO Jacks on the bottom of the display.
- (3) Plug the DC Adapter into the DC IN 16V jack on the display. Plug the power cable into an outlet. Turn on the display and PC.
- (4) Press the OSD button until PC MODE appears on the screen.

6) Connect for AV/TV functionality (Asia Pacific Only)

Cable Box (with RF in/outputs)



- (1) Connect the Cable TV signal to the IN jack (or RF IN or CABLE IN) on the Cable Box.
- (2) Connect an RF coaxial cable (not supplied) to the OUT jack (or TO TV or RF OUT) of the Cable Box.
- (3) Connect the other end of the coaxial cable to one end of the supplied L-Adapter as shown, and connect the other end of the adapter to the TV jack on the LCD TV.
- (4) Plug the DC adapter into the DC IN 16V jack on the LCD TV. Plug the power cable into an outlet and switch TV set on.

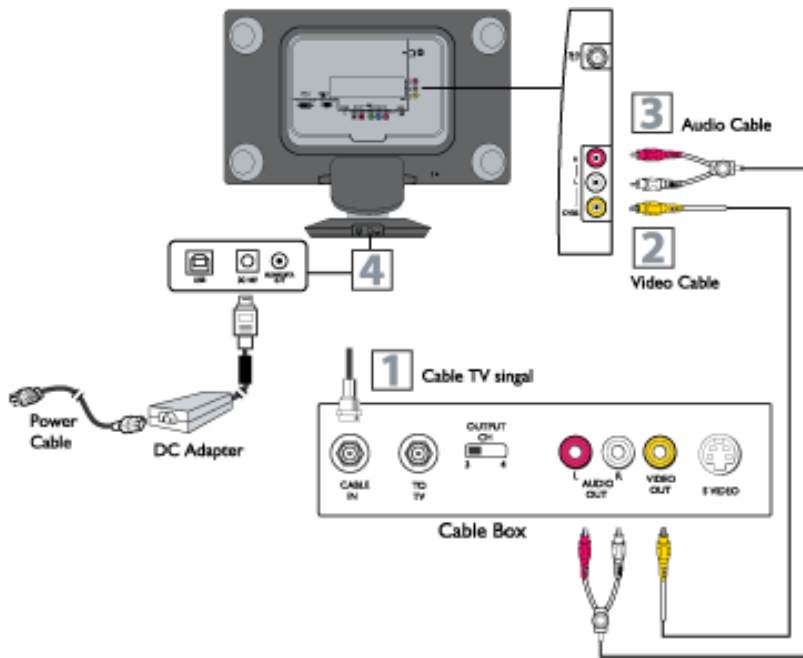
Set the Channel 3/4 (or Output channel) switch of the Cable Box to 3 or 4. Set the TV to the same channel. When watching TV programming, change channels at the Cable Box, not the LCD TV.

- (5)
 - Immediately after unpacking and plugging in your new television, run the auto program function to set up the TV for the broadcast or cable channels available in your area. If you do not run the auto program function to set up the channels, your television may not operate properly.
 - Please make sure that you have selected the TV mode with AV+ key on your remote control, before installing TV channels.

Helpful
Hint

Cable Box (with Audio/Video outputs)

This connection will supply stereo sound to the LCD TV.



- (1) Connect the Cable TV signal to the IN jack (or RF IN or CABLE IN) on the Cable Box.
- (2) Using an RCA-type video cable (not supplied) connect one end of the video cable to the Video Out jack of the Cable Box. Connect the other end of the cable to the yellow VIDEO jack on the side of the TV. Video cables are usually marked with yellow and are available from Philips or electronics retailers. Video jacks on most equipment are yellow.
- (3) Using RCA-type, stereo audio cables (not supplied), connect one end of the cables to the left and right Audio Out jacks of the Cable Box. Connect the other end of that cable to the Audio jack on the side of the LCD TV. Audio cables are usually marked with red and white and are available from Philips or electronics retailers. The right audio jack is red and the left audio jack is white. Match the cable colors to the jack colors.
- (4) Plug the DC adapter into the DC IN 16V jack on the LCD TV. Plug the power cable into an outlet and switch TV set on.

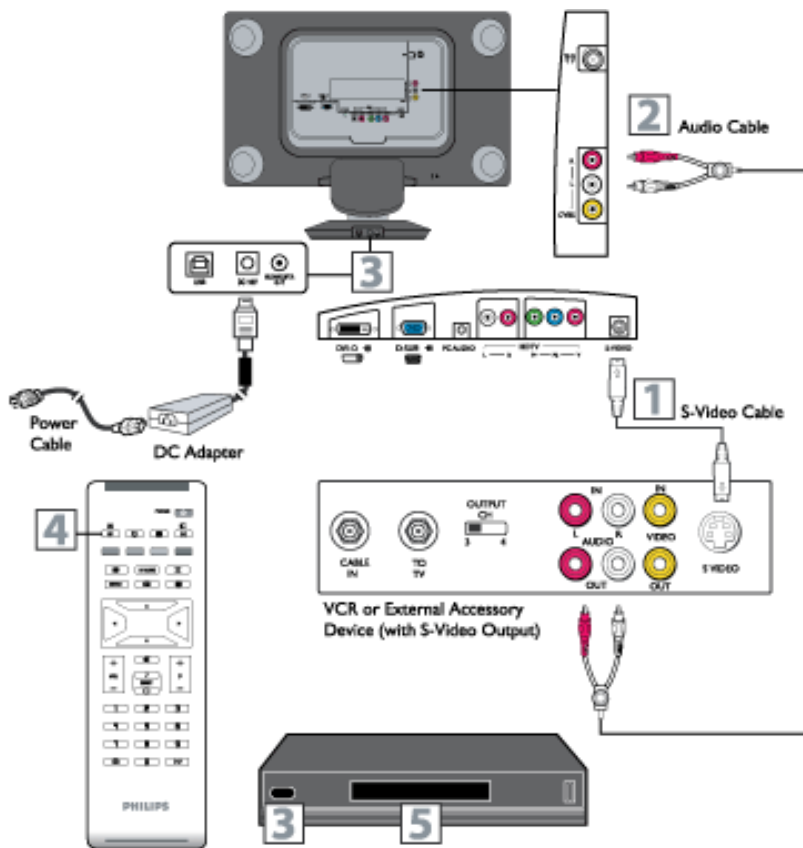


Use the AV+ button on the remote control to tune to the AV channel for the cable box

signal. Once tuned, change channels at the cable box, not the television. When you watch programs using VCR, it's recommended to select Soft Mode via Smart picture.

S-Video Connections

The S-Video connection on the rear of the LCD TV can provide you with better picture detail and clarity for the playback of accessory sources such as DBS (digital broadcast satellite), DVD (digital video discs), video games, and VHS VCR (video cassette recorder) tapes than the normal antenna picture connections.



- (1) Connect an S-Video cable to the S-VIDEO jack of the other equipment (DVD Player, Camcorder, etc.) and to the S-VIDEO jack on the rear of the LCD TV.
- (2) Connect RCA-style audio cables (usually red and white) to the AUDIO OUT (left and right) jacks on the other equipment. Connect the other end of the cables to the AUDIO jack on the side of the LCD TV.
- (3) Plug the DC Adapter into the DC IN 16V jack on the LCD TV. Plug the power cable into an outlet. Turn on the LCD TV and other equipment.
- (4) Press the AV buttons to set the LCD TV to its S-VIDEO mode.
- (5) Press PLAY on the other equipment to view its material on the LCD TV.

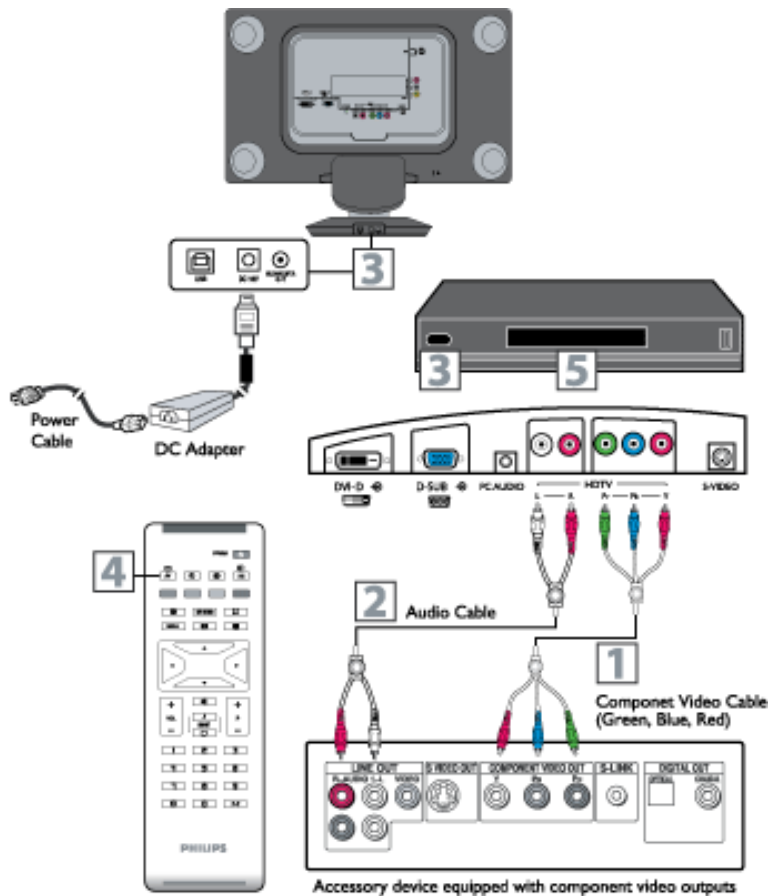


The Philips LCD TV remote control can not be used to operate other video/audio equipment.

The Audio jack of AV IN is shared between Video (CVBS) and S-Video signals. If Audio and Video is connected to S-Video input, you can still hear sound if you select Video via AV select, even there appears no image on screen.

Component (HD) Connections

Component Video input provide the highest possible color and picture resolution in the playback of digital signal source material, such as with DVD players. If you are using a HD (High Definition) receiver that can transmit high definition programming, the TV can accept those signals through the Component input located on the bottom of the TV.



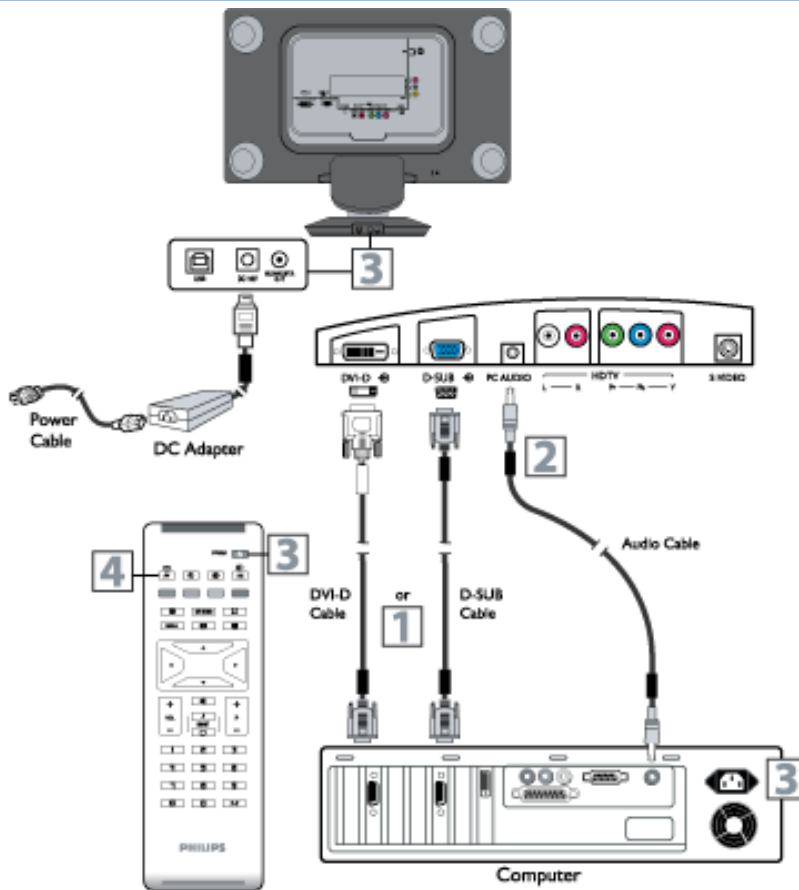
- (1) Connect the component (Y, Pb, Pr) Video OUT jacks from the DVD player (or similar device) to the COMP(onent) VIDEO Input jacks on the bottom of the LCD TV.
- (2) Connect the red and white AUDIO CABLES to the Audio (left and right) output jacks on the rear of the accessory device to the AUDIO IN jack. Connect the other end of the cable to the Audio jack on the rear of LCD TV.
- (3) Plug the DC Adapter into the DC IN 16 V jack on the LCD TV. Plug the power cable into an outlet. Turn on the LCD TV and other equipment.
- (4) Press the AV button on the remote control to select HD. HD will appear in the upper left corner on the TV screen.
- (5) Insert a DVD disc into the DVD player and press the PLAY button on the DVD Player.



The Philips LCD TV remote control can not be used to operate other video/audio equipment.

PC (Monitor) inputs

This LCD TV can be used as a PC display monitor. Your computer will have to be equipped with a VGA type video output and interface cable (supplied).



- (1) Connect the VGA or DVI end of the interface cable (supplied) to the computer, while connecting the other end to the DSUB or DVI INPUT jack on the LCD TV.
- (2) Although audio connections are not required, the LCD TV can reproduce the computers audio out by an AUDIO ADAPTER to the Audio output jack on the computer (if available) while connecting the other ends of the Audio cables to the PC AUDIO Jacks on the bottom of the TV.
- (3) Plug the DC Adapter into the DC IN 16V jack on the LCD TV. Plug the power cable into an outlet. Turn on the LCD TV and PC.
- (4) Press the AV button until PC MODE appears on the screen.

USB digital audio applicable in PC mode only.



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Your LCD Monitor :

- [Front View Product Description](#)
- [Connecting to Your PC](#)
- [Getting Started](#)
- [Optimizing Performance](#)

Getting Started

Getting Started



Philips Sound Agent2™ software is only compatible with Windows® 2000/XP. Please read the PSA2 user guide for further details.

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

The built-in VESA DDC2B feature in Philips Monitors supports Plug & Play requirements for Windows® 95/98/2000/Me/XP. 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 and the Plug & Play application can be activated. The installation procedure based on Windows® '95 OEM Release 2 , 98 , Me, XP and 2000 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® 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...'
5. Select the 'Monitor' button, then click on 'Change...' button.
6. Select 'Specify the location of the driver(Advanced)' and 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...'
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® 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...'
5. Select 'Monitor'
 - 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...'
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® XP

1. Start Windows® XP.
2. Click on the 'Start' button and then click on 'Control Panel'.
3. Select and click on the category 'Printers and Other Hardware'
4. Click on the 'Display' Item.
5. Select the 'Settings' tab then click on the 'Advanced' button.
6. 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.
7. Click on the 'Driver' tab and then click on 'Update Driver...' button.
8. Select the 'Install from a list or specific location [advanced]' radio button and then click on the 'Next' button.
9. Select the 'Don't Search. I will choose the driver to install' radio button. Then click on the 'Next' button.
10. Click on the 'Have disk...' button, then click on the 'Browse...' button and then select the appropriate drive F: (CD-ROM Drive).
11. Click on the 'Open' button, then click the 'OK' button.

12. 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.
13. Click on the 'Finish' button then the 'Close' button.
14. Click on the 'OK' button and then the 'OK' button again to close the Display_Properties dialog box.

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

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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, MAC)
 - 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(Canada/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.)
- a product used for commercial or institutional purposes.
- 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](tel:(877)835-1838) or [\(919\) 573-7855](tel:(919)573-7855)

(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:(800)479-6696)

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, MAC)
 - 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>

F1rst Choice Contact Information

Country	Telephone number	Tariff
Austria	0820 901115	€ 0.20
Belgium	070 253 010	€ 0.17
Cyprus	800 92256	Free of Charge
Denmark	3525 8761	Local call tariff
Finland	09 2290 1908	Local call tariff
France	08 9165 0006	€ 0.23
Germany	0180 5 007 532	€ 0.12
Greece	00800 3122 1223	Local call tariff
Ireland	01 601 1161	Local call tariff
Italy	199 404 042	€ 0.25
Luxembourg	26 84 30 00	Local call tariff
The Netherlands	0900 0400 063	€ 0.20
Norway	2270 8250	Local call tariff
Portugal	2 1359 1440	Local call tariff
Spain	902 888 785	€ 0.15
Sweden	08 632 0016	Local call tariff
Switzerland	02 2310 2116	Local call tariff
United Kingdom	0906 1010 017	£0.15

Consumer Information Centers

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www.ee.invia.fujitsu.com

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www.serware.hu

LATVIA

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Tel: +370 7400088
Email: servisas@servicenet.lt
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Blue Ridge Int'l Computers SRL
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SK - 831 06 Bratislava
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Email: servis@datalan.sk

SLOVENIA

PC HAND
Brezovce 10
SI - 1236 Trzin
Tel: +386 1 530 08 24
Email: servis@pchand.si

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Zolter
ul.Zytnia 1
PL - 05-500 Piaseczno
Tel: +48 22 7501766
Email: servmonitor@zolter.com.pl
www.zolter.com.pl

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Tel: 8-800-200-0880
Website: www.philips.ru

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Yukari Dudullu Org.San.Bolgesi
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Philips da Amazônia Ind. Elet. Ltda.
Rua Verbo Divino, 1400-São Paulo-SP
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Industrias Philips de Colombia
S.A.-Division de Servicio
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Av. Rca. Argentina 1780 c/Alfredo Seiferheld
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Customer Desk:
Phone: 009 800 54 1 0004

PERU

Philips Peruana S.A.
Customer Desk
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Limab18
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Fax : (01)-2136276

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