

# Installstion and Operating instructions

## Product Information

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## Product Features

### 170W4P

- 17-inch color LCD monitor with excellent Wide-Screen display performance
- Dual input - accepts DVI-D digital and VGA analog inputs
- Embedded AC power supply
- Advanced AUTO adjustment optimizes picture quality.
- Adjustable tilt and swivel function
- Rotation for both portrait and landscape display

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## Technical Specifications\*

| LCD PANEL                |  |
|--------------------------|--|
| • Type                   | TFT LCD  |
| • Screen size            | 17.1" / 43.4cm visual  |
| • Pixel Pitch            | 0.291 x 0.291mm  |
| • LCD Panel type         | 1280 x 768 pixels<br>R.G.B. vertical stripe<br>Anti-glare polarizer hardness |
| • Effective viewing area | 372.48 x 223.49 mm   |
| • Display Colors         | 8 bits (16M colors)  |
| SCANNING                 |  |
| Vertical refresh rate    | 56Hz-70Hz  |
| Horizontal Frequency     | 30kHz-61kHz  |
| VIDEO                    |  |
| • Video dot rate         | 75MHz  |
| • Input impedance        |  |
| - Video                  | 75 ohm   |
| - Sync                   | 2K ohm   |
| • Input signal levels    | 0.7 Vpp  |
| • Sync input signal      | Separate sync<br>Composite sync<br>Sync on green                             |

|                                |   |
|--------------------------------|---|
| • Sync polarities              | Positive and negative   |
| • Video interface              | Dual input (two connectors): D-Sub (analog) and DVI-D (digital) are available and user selectable |
| <b>Optical characteristics</b> |   |
| • Contrast ratio:              | 350 (typ.)  |
| • Brightness:                  | 450 cd/m <sup>2</sup> (typ.)  |
| • Peak contrast angle:         | 6 o'clock   |
| • White Chromaticity:          | x: 0.283 y: 0.297 (at 9300°K)<br>x: 0.313 y: 0.329 (at 6500°K)                                    |
| • Viewing Angle:<br>(C/R>5)    | Upper ≥50° (typ.)<br>Lower ≥70° (typ.)<br>Left ≥75° (typ.)<br>Right ≥75° (typ.)                   |
| • Viewing Angle:<br>(C/R>10)   | Upper >45° (typ.)<br>Lower >45° (typ.)<br>Left >60° (typ.)<br>Right >60° (typ.)                   |
| • Response time                | ≤25ms (typ.)  |

\* This data is subject to change without notice.

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## Resolution & Preset Modes

- Maximum 1280 x 768 at 70Hz
- Recommended 1280 x 768 at 60Hz

## 28 user definable modes

### 15 factory preset modes:

|      |          |    |
|------|----------|----|
| 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 |

|      |          |    |
|------|----------|----|
| 44.4 | 1280*768 | 56 |
| 47.7 | 1280*768 | 60 |
| 56.0 | 1280*768 | 70 |
| 52.5 | 1280*720 | 70 |

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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 |
| ON                          | Active  | Yes    | Yes    | < 40 W     | Green     |
| Stand-by                    | Blanked | No     | Yes    | < 1W       | Amber     |
| Suspend                     | Blanked | Yes    | No     | < 1W       | Amber     |
| OFF                         | Blanked | No     | No     | < 1W       | Amber     |

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

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## Physical Specifications

|                     |  |
|---------------------|--|
| • Dimension (WxHxD) | 417 x 374 x 180 mm (incl. Pedestal)                    |
| • Weight            | 6 kg   |
| • Tilt / Swivel     | - 5° ~ 35° / + - 175°                                  |
| • Power supply      | 100 — 240 VAC, 50/60 Hz                                |
| • Power consumption | 35 W (typ.)  |
| • Temperature       | 5° C to 35° C (operating)<br>-20° C to 60° C (storage) |
| • Relative humidity | 20% to 80%   |
| • System MTBF       | 50K hrs (including CCFL 50K hrs)                       |

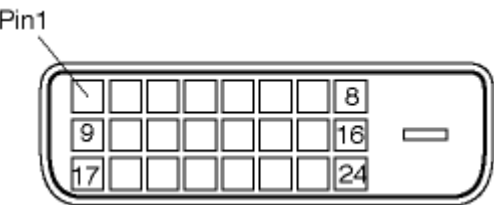
\* This data is subject to change without notice.

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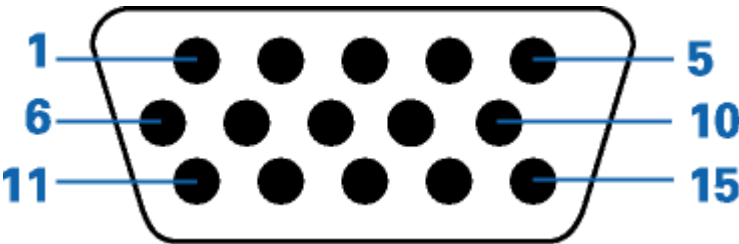
Pin Assignment

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       | DDC +5V                                |
| 2       | Green video input | 10      | Logic ground                           |
| 3       | Blue video input  | 11      | Identical output - connected to pin 10 |

|   |  |    |                        |
|---|--|----|------------------------|
| 4 | Identical output - connected to pin 10 | 12 | Serial data line (SDA) |
| 5 | Cable detect                           | 13 | H. Sync / H+V          |
| 6 | Red video ground                       | 14 | V. Sync                |
| 7 | Green video ground                     | 15 | Data clock line (SCL)  |
| 8 | Blue video ground                      |    |                        |

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## Product Views

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

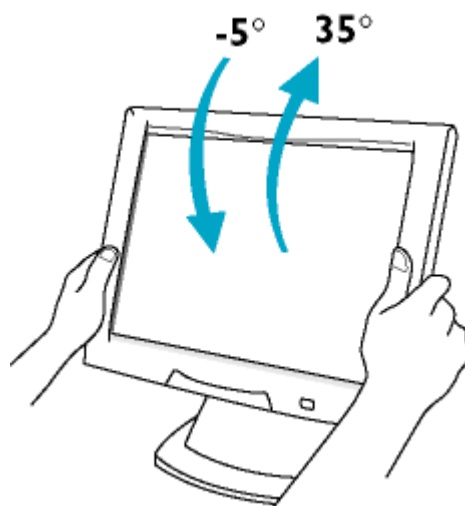
[Front View Product Description](#)

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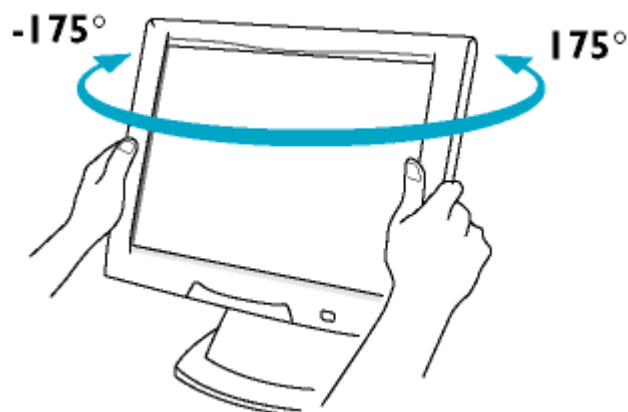
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## Physical Function

### 1) Tilt



### 2) Swivel

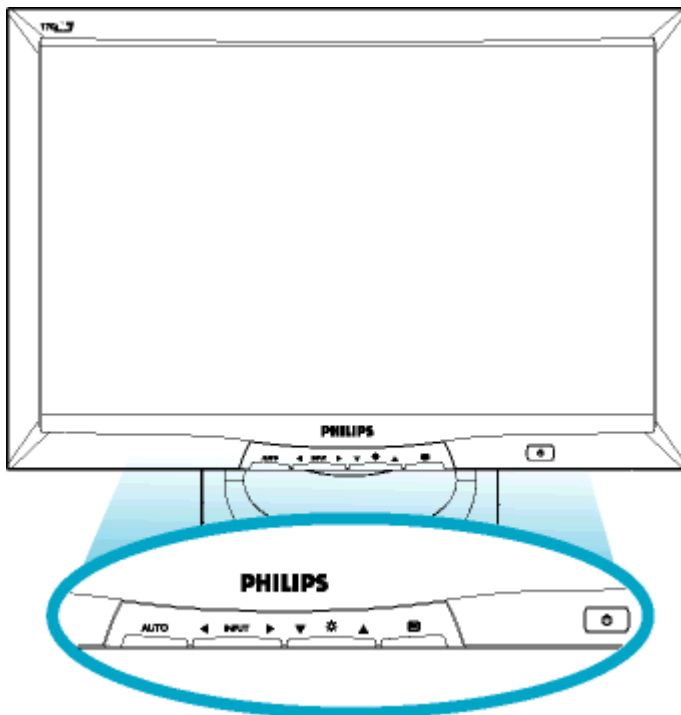


# Installing your LCD Monitor

**Your LCD Monitor :** [Front View Product Description](#) • [Connecting to Your PC](#) • [Remove and re-install the base](#) • [Getting Started](#) • [Optimizing Performance](#)

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## Front View Product Description



UP and DOWN buttons are used when adjusting the OSD of your monitor



LEFT and RIGHT buttons, like the UP and DOWN buttons, are also used in adjusting the OSD of your monitor.



BRIGHTNESS hotkey. When the UP and DOWN arrow buttons are pressed, the adjustment controls for the BRIGHTNESS will show up.



OK button which when pressed will take you to the OSD controls



POWER button switches your monitor on

**AUTO**

Automatically adjust the horizontal position, vertical position, phase and clock setting.

**INPUT**

Signal inputs selective hotkeys. Allows user to switch between two video connectors (D-Sub & DVI-D), e.g. D-Sub <-> DVI-D digital inputs.

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## Optimizing Performance

- For best performance, ensure that your display settings are set at 1280x768@60Hz.



**Note:** You can check the current display settings by pressing the "OK" button once. Go into the Product Information. The current display mode is shown on the item called RESOLUTION.

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

More about



[FP\\_setup03.exe](#)

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# Regulatory Information

[TCO '95 Information](#) • [TCO '95 Environmental Requirements](#) • [TCO '99 Information](#) • [TCO '99 Environmental Requirements](#) • [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 Information](#) • [BSMI Notice \(Taiwan Only\)](#) • [Ergonomie Hinweis \(nur Deutschland\)](#) • [Philips End-of-Life Disposal](#) • [Information for UK only](#)

[Safety and Troubleshooting](#) • [Troubleshooting](#) • [Other Related Information](#) • [Frequently Asked Questions \(FAQs\)](#)

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## TCO '95 Information

(For 170W4P, 180P2G, 180B2P, 180B2W, 170B2T, 200P3G)



## Congratulations!

You have just purchased a TCO'95 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also, to the further development of environmentally adapted electronics products.

## Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during the manufacturing. Since it has not been possible for the majority of electronics equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter Nature. There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Since all methods of conventional electricity generation have a negative effect on the environment (acidic and climate-influencing emissions, radioactive waste, etc.), it is vital to conserve energy. Electronics equipment in offices consume an enormous amount of energy since they are often left running continuously.

## What does labelling involve?

This product meets the requirements for the TCO'95 scheme which provides for international and environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees),



- EN55022:1998 (Radio Disturbance requirement of Information Technology Equipment)
- EN55024:1998 (Immunity requirement of Information Technology Equipment)
- EN61000-3-2:1995 (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)
- TCO95, TCO99 (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 170W4P

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. From indicated inactivity to Power Saving Position A2, the total time must not be set to more than 70 minutes.

| NUTEK                       | VESA State | LED Indicator | Power Consumption |
|-----------------------------|------------|---------------|-------------------|
| Normal operation            | ON         | Green         | < 40 W            |
| Power Saving<br>Position A1 | Suspend    | Amber         | < 1 W             |
| Power Saving<br>Position A2 | OFF        | Amber         | < 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 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.

Class B ITE



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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