# **Installstion and Operating instructions**

# **Product Information**

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

### **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

### RETURN TO TOP OF THE PAGE

## **Technical Specifications\***

TFT LCD
17.1" / 43.4cm visual
0.291 x 0.291mm
1280 x 768 pixels R.G.B. vertical stripe Anti-glare polarizer hardness
372.48 x 223.49 mm
8 bits (16M colors)
56Hz-70Hz
30kHz-61kHz
75MHz
75 ohm
2K ohm
0.7 Vpp
Separate sync Composite sync 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		
Optical characteristics			
Contrast ratio:	350 (typ.)		
Brightness:	450 cd/m <sup>2</sup> (typ.)		
Peak contrast angle:	6 o'colock		
White Chromatcity:	x: 0.283 y: 0.297 (at 9300°K) x: 0.313 y: 0.329 (at 6500°K)		
Viewing Angle: (C/R>5)	Upper ≥50° (typ.) Lower ≥70° (typ.) Left ≥75° (typ.) Right ≥75° (typ.)		
Viewing Angle: (C/R>10)	Upper >45° (typ.) Lower >45° (typ.) Left >60° (typ.) Right >60° (typ.)		
Response time	<25ms (typ.)		

<sup>\*</sup> This data is subject to change without notice.

## RETURN TO TOP OF THE PAGE

## **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

### **RETURN TO TOP OF THE PAGE**

## **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	Power Used	LED color		
ON	ON Active Yes Yes				Green	
Stand-by	Blanked No Yes		Yes	< 1W	Amber	
Suspend	Blanked	Yes	No	< 1W	Amber	
OFF	Blanked	No	No	< 1W	Amber	

This monitor is ENERGY STAR $^{\circledR}$  compliant. As an ENERGY STAR $^{\circledR}$  Partner, PHILIPS has determined that this product meets the ENERGY STAR $^{\circledR}$  guidelines for energy efficiency.

### RETURN TO TOP OF THE PAGE

## **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) -20° C to 60° C (storage)		
Relative humidity	20% to 80%		
System MTBF	50K hrs (including CCFL 50K hrs)		

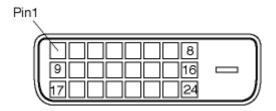
\* This data is subject to change without notice.

### RETURN TO TOP OF THE PAGE

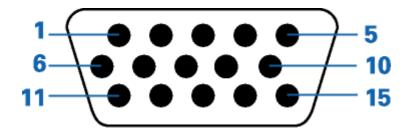
## **Pin Assignment**

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:

	Signal Assignment		Signal Assignment		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
		l		

4	Identical output - connected to pin 10
5	Cable detect
6	Red video ground
7	Green video ground
Ω	Blue video ground

12	Serial data line (SDA)
13	H. Sync / H+V
14	V. Sync
15	Data clock line (SCL)

## RETURN TO TOP OF THE PAGE

## **Product Views**

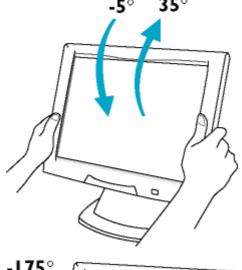
Follow the links to see various views of the monitor and its components.

## **Front View Product Description**

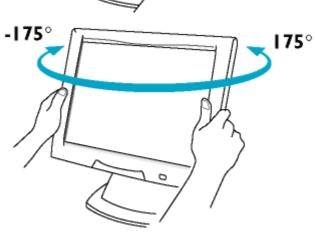
### RETURN TO TOP OF THE PAGE

# **Physical Function**





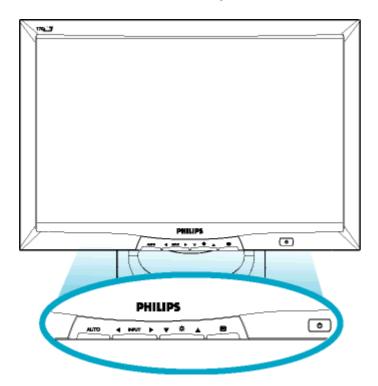
# 2) Swivel



# **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

### **Front View Product Description**





UP and DOWN buttons are used when 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.

## **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 installtion process. Click on the link to know more
about this program.

More about FP\_setup03.exe

RETURN TO TOP OF THE PAGE

# **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

<u>Safety and Troubleshooting</u> • <u>Troubleshooting</u> • <u>Other Related Information</u> • <u>Frequently Asked Questions</u> (FAQs)

#### **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

#### **RETURN TO TOP OF THE PAGE**

### **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 Position A1	Suspend	Amber	< 1 W
Power Saving	OFF	Amber	< 1 W



As an ENERGY STAR  $^{(\!R\!)}$  Partner, PHILIPS has determined that this product meets the ENERGY STAR  $^{(\!R\!)}$  guidelines for energy efficiency.



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

#### RETURN TO TOP OF THE PAGE



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.

### RETURN TO TOP OF THE PAGE

## Commission Federale de la Communication (FCC Declaration)



Cet équipement a été testé et déclaré conforme auxlimites des appareils numériques de class B,aux termes de l'article 15 Des règles de la FCC. Ces limites sont conçues de façon à fourir 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.

#### RETURN TO TOP OF THE PAGE

## **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 štřítku 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 užívatel povinnen provést taková opatřgní, aby rušení odstranil.

### RETURN TO TOP OF THE PAGE

### **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。