# **Product Information**

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

## **Product Features**

## 170B4MG

- 17-inch color LCD monitor with excellent display performance
- Dual input accepts DVI-D digital and VGA analog inputs
- Embedded AC power supply
- Front firing speakers with 2x2W RMS stereo sound output
- Advanced AUTO adjustment optimizes picture quality
- Rotation for both portrait and landscape display
- Liner height adjustment for best viewing position
- Adjustable tilt and swivel function
- Optional self-powered USB hub

### RETURN TO TOP OF THE PAGE

# **Technical Specifications\***

LCD PANEL			
• Туре	TFT LCD		
Screen size	17" / 43.2cm diagonal		
Pixel Pitch	0.264 x 0.264mm		
LCD Panel type	1280 x 1024 pixels R.G.B. vertical stripe Anti-glare polarizer, hard coated		
<ul> <li>Effective viewing area</li> </ul>	337.9 x 270.3 mm		
Display Colors	16M colors		
SCANNING			
Vertical refresh rate	56Hz-76Hz		
Horizontal Frequency	30kHz-82kHz		
VIDEO			
<ul> <li>Video dot rate</li> </ul>	135MHz		
<ul> <li>Input impedance</li> </ul>			
- Video 75 ohm			

- Sync	2.2K ohm
<ul> <li>Input signal levels</li> </ul>	0.7 Vpp
Sync input signal	Separate sync Composite sync Sync on green
<ul> <li>Sync polarities</li> </ul>	Positive and negative
Video interface	Dual input: D-Sub (analog) and DVI-D (digital) are available and user selectable
AUDIO	
<ul> <li>Input signal level</li> </ul>	0.7 Vpp
<ul> <li>Headphone out signal level</li> </ul>	32 ohm 20+20mW
<ul> <li>Input signal connector</li> </ul>	3.5mm mini jack
Loudspeaker	4W Stereo Audio (2W/channel RMS x2, 200 Hz-12 kHz, 8 ohm, THD=10%)
MICROPHONE	
Sensitivity	-55dB re 1V/ubar at 1kHz
Output impedance	2.2K ohm max.
Directivity	-5dB at 180°
Frequency range	300Hz-3kHz
Optical characteristics	
Contrast ratio:	400 (typ.)
Brightness:	260 cd/m <sup>2</sup> (typ.)
Peak contrast angle	6 o'clock
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 $\geq 80^{\circ}$ (typ.) Lower $\geq 80^{\circ}$ (typ.) Left $\geq 80^{\circ}$ (typ.) Right $\geq 80^{\circ}$ (typ.)
Response time	≤25ms (typ.)

\* These information are subject to change without notice.

#### RETURN TO TOP OF THE PAGE

# **Resolution & Preset Modes**

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

### 33 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	1280*1024	75

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

#### **Automatic Power Saving**

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

Power Management Definition							
VESA Mode	Video	H-sync	V-sync	Power Used	LED color		
ON	Active	Yes	Yes	< 40 W (typ.)	Green		
OFF	Blanked	No	No	< 1 W	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

## RETURN TO TOP OF THE PAGE

# **Physical Specifications**

Dimension (WxHxD)	375 x 413 x 184 mm (incl. Pedestal)
Weight	6.3 Kg
Tilt / Swivel	0° ~ 35° / + - 175°
<ul> <li>Height adjustment rang</li> </ul>	50mm
Portrait display	90° rotation counter clockwise
Power supply	100 — 240 VAC, 50/60 Hz
Power consumption	40 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 40K hrs)

\* These information are subject to change without notice.

\* Resolution 1280x1024, standard size, contrast max., brightness 50%, 9300° K, full white pattern, without audio/USB.

#### **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:

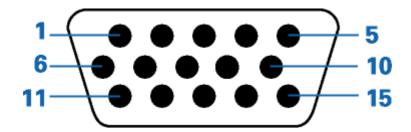
Pin	Signal	Pin	Signal	Pin	Signal
No.	Assignment	No.	Assignment	No.	Assignment
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2/4 Shield	11	T.M.D.S. Data1/3 Shield	19	T.M.D.S. Data0/5 Shield
4	No connect	12	No connect	20	No 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-
---------------------------------	--------------------

Pin1

>	
	Ŋ
9 9 1 6	
	J

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



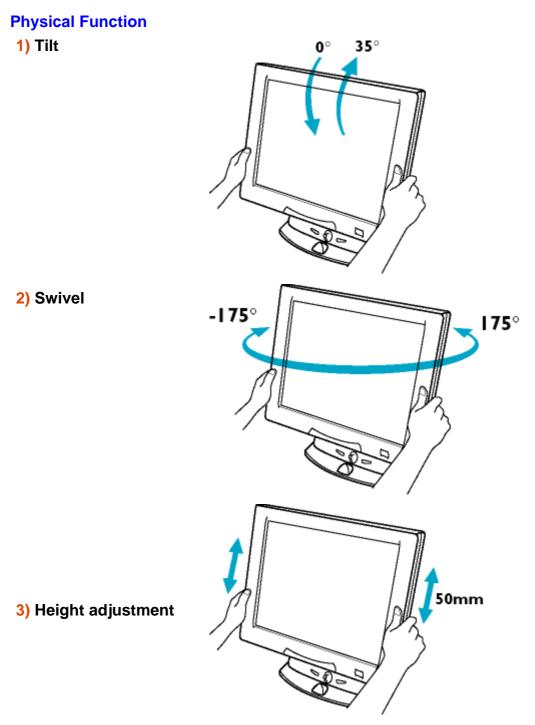
Pin No.	Assignment	Pin No.	Assignment
1	Red video input	9	+5V
2	Green video input/SOG	10	Logic ground
3	Blue video input	11	Identical output - connected to pin 10
4	Sense (GND)	12	Serial data line (SDA)
5	Not connected	13	H. Sync / H+V
6	Red video ground	14	V. Sync (VCLK for DDC)
7	Green video ground	15	Data clock line (SCL)
8	Blue video ground		

#### RETURN TO TOP OF THE PAGE

# **Product Views**

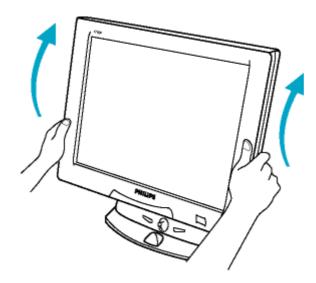
Follow the links to see various views of the monitor and its components.

Front View Product Description

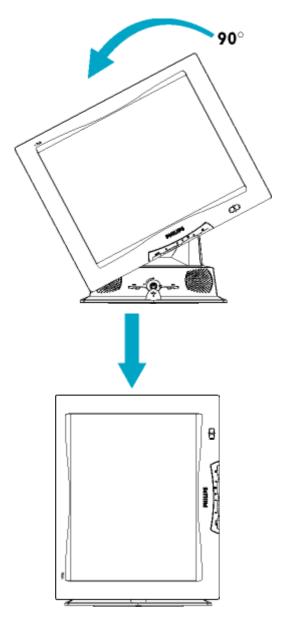


# 4) Portrait display

Turn monitor from landscape view to portrait view



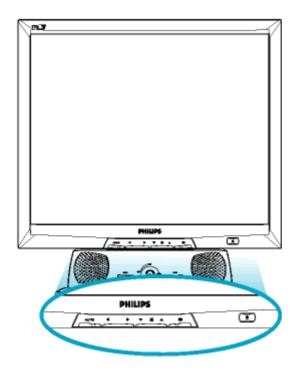
**4.2)** Rotate the monitor body 90 degrees counter clockwise.



# **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 • Accessories (optional)

### **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.

Signal inputs selective hotkeys. Allows user to switch between two video connectors (D-Sub & DVI-D)



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



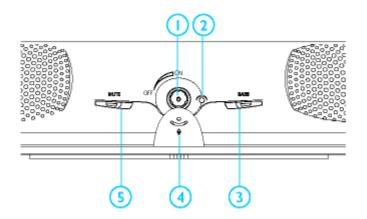
OK button which when pressed will take you to the OSD controls



POWER button switches your monitor on



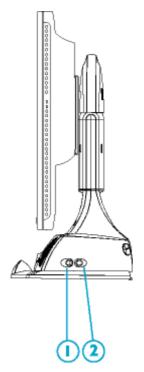
Automatically adjust the horizontal position, vertical position, phase and clock setting.



- 1. Audio power on/off and volulme adjustment
- 2. Audio power LED
- 3. BASS on/off
- 4. Built-in Mic
- 5. Mute on/off

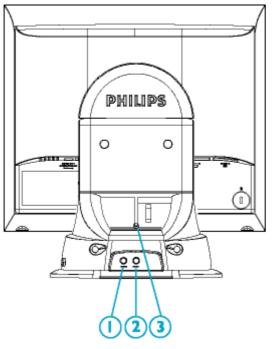
#### **RETURN TO TOP OF THE PAGE**

# **Side View**

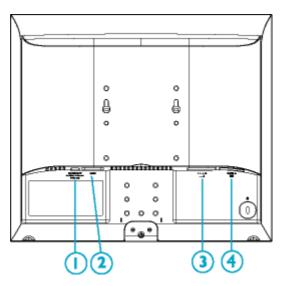


- 1. Headphone Jack
- 2. Microphone Jack

# **Rear View**



- 1. Audio in
- 2. Mic out
- 3. DC 12V in



1. DC 12V out for Philips Multimedia Base only

- 2. AC power in
- 3. DVI-D Connector
- 4. D-SUB Connector

#### RETURN TO TOP OF THE PAGE

## **Optimizing Performance**

• For best performance, ensure that your display settings are set at 1024x768@60Hz (for 14"/15") or 1280x1024, 60Hz (for 17"/18").



*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

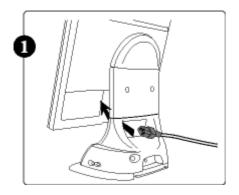
# **Connecting to Your PC**

Your LCD Monitor : Front View Product Description • Accessory Pack • Connecting to Your PC • Remove and re-install the base • Getting Started • Optimizing Performance • Accessories (optional)

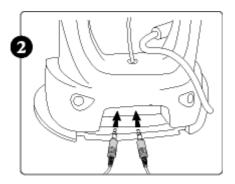
## **Accessory Pack**

Unpack all the parts.

ltem	Description	170B4B	170B4M	170S4F
	1) Audio in Cable (Option only available for Audio version)(color lime)		v	
	2) Microphone out Cable (Option only available for Audio version)(color pink)		v	
	<ol> <li>Power Cord (socket may differ for different countries)</li> </ol>	v	v	v
	<ol> <li>4) Macintosh Adapter (optional)</li> </ol>	v	v	v
	5) VGA Signal Cable	v	v	v
	6) E-DFU package with Quick Setup Guide, Using Your Monitor Manual, and CD-ROM.	v	v	v
	7) Pivot CD-ROM		v	



1) Thread power cable through the hole at the bottom of the base, and plug onto monitor firmly.



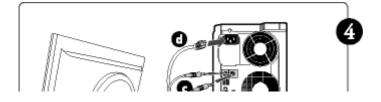
2) Connect microphone and audio cables onto the rear side of base if any

**3)** Double check all cables' connection closely. Make sure they are all connected well.



**Note:** 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



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

RETURN TO TOP OF THE PAGE

# **Remove and Re-install the Base**

Your LCD Monitor : Front View Product Description • Accessory Pack • Connecting to Your PC • Getting Started • Optimizing Performance • Accessories (optional)

Remove and Re-install the Base : Remove the base • Re-install the base

## **Condition:**

- for VESA standard mounting applications
- for optional base replacement

## **Remove the Base**

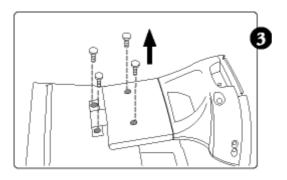


1)

(a) Tilt monitor on certain angle.
(b) Pull cables out of the hole at the bottom of base.
(c) For Multimedia base, disconnect the DC flying cable from monitor body also.

2)

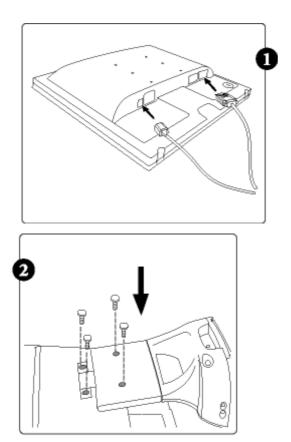
(a) Put monitor face down on the safe surface.(b) Take off the cap of base



3) Unscrew the four screws of the base

RETURN TO TOP OF THE PAGE

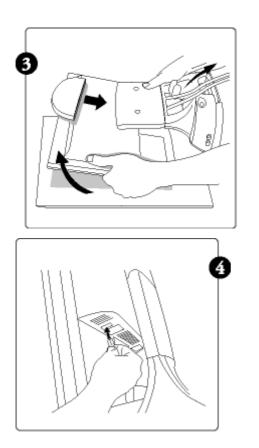
## **Re-install the Base**



1) Put monitor face down on the safe surface and plug in the cables into connectors.

2) Mount the base onto the monitor body and fix four screws securely.

3) Lift the monitor body and thread all cables through the



hole at the bottom of the base.

**4)** For Multimedia base, plug the flying DC power cable of base onto monitor.

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 (Nordic Countries) 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)

## **TCO '95 Information**

(For 170B4BB, 170S4FB)



# **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 170B4MG

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	Green	< 40 W (typ.)
Power Saving Alternative 2 One step	OFF	Amber	< 1 W



As an ENERGY STAR<sup>®</sup> Partner, PHILIPS has determined that this product meets the ENERGY STAR<sup>®</sup> 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** 

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.

#### 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 štitku počítače uvedeno, že spadá do do třídy A podle EN 55022, spadá automaticky do třídy B podle EN 55022. Pro zařizení 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.

