

APPENDIX F

USER'S MANUAL

User's Guide

L1530TM

Make sure to read the **Safety Precautions** before using the product.
Keep the User's Guide(CD) in an accessible place for future reference.

See the label attached on the back cover and quote this information to your dealer when you require service.



Regulatory Information

FCC Compliance Statement

This equipment has been tested and found to comply within the limits of 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 on and off), the user is encouraged to try to correct the interference by using one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the 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.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's (or your) authority to operate the equipment. Only peripherals (digital input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this monitor. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Only shielded signal cables may be used with this System.

NOTICE

The regulations are applied only to the products with the ID LABEL indicating specific requirements.

Canadian DOC Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

NOTICE

The regulations are applied only to the products with the ID LABEL indicating specific requirements.

CE Conformity Notice (for Europe)

Products with the "CE" Marking comply with the EMC Directive(89/336/EEC) and LOW VOLTAGE Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms :

- EN 55022:1998 ; Radio Frequency Interference
- EN 55024:1998 ; Electromagnetic Immunity
- EN 61000-3-2 ; Power Line Harmonics
- EN 61000-3-3 ; Voltage Fluctuations
- EN 60950 ; Product Safety

NOTICE

The regulations are applied only to the products with the ID LABEL indicating specific requirements.

Low Radiation Compliance (MPR II)

This monitor meets one of the strictest guidelines available today for low radiation emissions, offering the user extra shielding and an antistatic screen coating. These guidelines, set forth by a government agency in Sweden, limit the amount of emission allowed in the Extremely Low Frequency (ELF) and Very Low Frequency (VLF) electromagnetic range.

TCO95



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 to the further development of environmentally-adapted electronic 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 electronic equipment are concerned is that environmentally harmful substances are used both in the products and during their manufacture. Since it has not been possible so far for the majority of electronic 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 both the working and natural environment viewpoints. Since all types of conventional electricity generation have a negative effect on the environment (acidic- and climatic-influencing emissions, radioactive waste, etc.), it is vital to conserve energy. Electronic equipment in offices consumes an enormous amount of energy, since it is often routinely left running continuously.

What does the environmental labelling involve?

This product meets the requirements for the TCO'95

Regulatory Information cont.

scheme, which provides for international environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Naturkyddsforeningen (The Swedish Society for Nature Conservation), and NUTEK (The National Board for Industrial and Technical Development in Sweden), and SEMKO AB (an international certification agency).

The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands concern, among other things, restriction on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons), and chlorinated solvents. The product must be prepared for recycling, and the manufacturer is obliged to have an environmental plan, which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level, in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labeled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, along with physical and visual ergonomics and good usability.

The following is a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development Unit
Lindegatan 14, S-11494 Stockholm, Sweden
FAX +46-8 782 92 07
E-mail (Internet): development@tco.se

Current information regarding TCO'95 approved and labelled products may also be obtained on the Internet using the address: <http://www.tco-info.com/>

TCO'95 is a co-operative project between:



Naturkydds
foreningen



NUTEK

SEMKO

Närings- och teknikutvecklingsverket

Environmental requirements

Brominated flame retardants are present in printed circuit boards, cabling, casings, and housings, and are added to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame-retardant substances. These are related to another group of environmental toxins, PCBs, and are suspected of giving rise to similar harm, including reproductive damage in fish-eating birds and mammals. Flame retardants have been found in human blood, and researchers fear that they can disturb fetus development.

Bio-accumulative¹ TCO'95 demands require that plastic components weighing more than 25 grams must not contain flame retardants with organically bound chlorine or bromine.

Lead can be found in picture tubes, display screens, solder, and capacitors. Lead damages the nervous system and in higher doses causes lead poisoning. The relevant bio-accumulative TCO'95 requirement permits the inclusion of lead, as no replacement has yet been developed.

Cadmium is present in rechargeable batteries and in the color-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant bio-accumulative TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of cadmium. The color-generating layers of display screens must not contain any cadmium.

Mercury is sometimes found in batteries, relays and switches. Mercury damages the nervous system and is toxic in high doses. The relevant bio-accumulative TCO'95 requirement states that batteries may not contain more than 25 ppm of mercury and that no mercury is present in any of the electrical or electronic components concerned with the display unit.

CFCs (freons) are sometimes used for washing printed circuit boards and in the manufacture of expanded foam for packaging. CFCs break down ozone and thereby damage the ozone layer in the atmosphere, causing increased reception on Earth of ultra-violet light with consequent increased risks of skin cancer (malignant melanoma). The relevant TCO'95 requirement: Neither CFCs nor HCFCs may be used during the manufacture of the product or its packaging.

¹ Bio-accumulative means that the substance accumulates within living organisms.

Shipping Package

The packaging material can be recycled, or you can save it to return the monitor to a service center for repair or disposal.

CFC Compounds in Distribution Packaging

Cushioning material used for shipping finished monitors are not manufactured with nor do they contain any CFC compounds.

Design for Disassembly/Recycling

These monitors have been designed for easy end-of-life disassembly and recycling. Fasteners are generally of the same type for efficient disassembly. Components made of different materials can be easily separated and plastics have been identified using international symbols to aid in recycling.

Monitor Disposal

WARNING

If you need to dispose of a monitor, ask a qualified service representative for the proper procedure. Improper disposal could result in personal injury from implosion.

Regulatory Information cont.

TCO'99



Congratulations!

You have just purchased a TCO'99 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 their manufacture. Since it is not so far possible to satisfactorily recycle the majority of electronics equipment, 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 electricity generation have a negative effect on the environment (e.g. acidic and climate-influencing emissions, radioactive waste), it is vital to save energy. Electronics equipment in offices is often left running continuously and thereby consumes a lot of energy.

What does labelling involve?

This product meets the requirements for the TCO'99 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), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration).

Approval requirements cover a wide range of issues: environment, ergonomics, usability, emission of electric and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands impose restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental policy which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, physical and visual ergonomics and good usability.

Below you will find a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development

SE-114 94 Stockholm, Sweden

Fax: +46 8 782 92 07

Email (Internet): development@tco.se

Current information regarding TCO'99 approved and labelled products may also be obtained via the Internet, using the address: <http://www.tco-info.com/>

Environmental requirements

Flame retardants

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. Their purpose is to prevent, or at least to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride, and those flame retardants are chemically related to another group of environmental toxins, PCBs. Both the flame retardants containing bromine or chloride and the PCBs are suspected of giving rise to severe health effects, including reproductive damage in fish-eating birds and mammals, due to the bio-accumulative* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

The relevant TCO'99 demand requires that plastic components weighing more than 25 grams must not contain flame retardants with organically bound bromine or chlorine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.

Cadmium**

Cadmium is present in rechargeable batteries and in the colour-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries, the colour-generating layers of display screens and the electrical or electronics components must not contain any cadmium.

Regulatory Information cont.

Mercury**

Mercury is sometimes found in batteries, relays and switches. It damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries may not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit.

CFCs (freons)

The relevant TCO'99 requirement states that neither CFCs nor HCFCs may be used during the manufacture and assembly of the product. CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on earth of ultraviolet light with e.g. increased risks of skin cancer (malignant melanoma) as a consequence.

Lead**

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning. The relevant TCO'99 requirement permits the inclusion of lead since no replacement has yet been developed.

* Bio-accumulative is defined as substances which accumulate within living organisms

** Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.

EPA (U.S.A only)

ENERGYSTAR is a set of power-saving guidelines issued by the U.S. Environmental Protection Agency(EPA).



EPA POLLUTION PREVENTER

As an ENERGY STAR Partner LG Electronics U.S.A.,Inc. has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

NOM MARK (Mexico only)



GOST MARK



BZ03

Internet Address:<http://www.lg.ru>

Информационная служба LG


Electronics (095)742-77-77


Table of Contents

Installation and Connection	Safety Precautions	K1
	Accessories	K4
	Major Monitor Features	K5
	How to Use a Stand	K6
	Connecting to a PC	K8
	Using a Tablet Monitor	K10
	Installing USB Tablet Manager (tablet running driver)	K10
	Using a Pen	K12
Tablet Application Software	K13	
Input Selection and Tracking	Screen Selection and Adjustment	K15
	Adjustment on the OSD (On Screen Display) Screen	K17
	OSD(On Screen Display) Screen Adjustment	K19
	Adjusting Screen Picture/Color/Position	K20
	Track/Factory Reset/Setup	K21
	Lightview	K22
Miscellaneous	Troubleshooting	K23
	Product Specifications	K26

Safety Precautions

Please read these safety precautions carefully before using the monitor.

 **Warning** If you ignore the warning message, you may be seriously injured or there is a possibility of accident or death.

 **Caution** If you ignore the caution message, you may be slightly injured or the product may be damaged

Precautions in installing the Monitor

Warning

- **Keep away from heat sources like electrical heaters.**
 - Electrical shock, fire, malfunction or deformation may occur.
- **Keep the packing anti-moisture material or vinyl packing out of the reach of children.**
 - Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.
- **Do not put heavy objects on the monitor or sit upon it.**
 - If the monitor collapses or is dropped, you may be injured. Children must pay particular attention.
- **Do not leave the power or signal cable unattended on the pathway.**
 - The passerby can falter, which can cause electrical shock, fire, product breakdown or injury.
- **Install the monitor in a neat and dry place.**
 - Dust or moisture can cause electrical shock, fire or product damage.
- **If you can smell smoke or other odors or hear a strange sound unplug the power cord and contact the service center.**
 - If you continue to use without taking proper measures, electrical shock or fire can occur.
- **If you dropped the monitor or the case is broken, turn off the monitor and unplug the power cord.**
 - If you continue to use without taking proper measures, electrical shock or fire can occur. Contact the service center.
- **Do not drop metallic objects such as coins, hair pins, chopsticks or wire into the monitor, or inflammable objects such as paper and matches. Children must pay particular attention.**
 - Electrical shock, fire or injury can occur. If a foreign object is dropped into the monitor, unplug the power cord and contact the service center.

Caution

- **Make sure the monitor ventilation hole is not blocked. Install the monitor in a suitably wide place (more than 10cm from the wall)**
 - If you install the monitor too close to the wall, it may be deformed or fire can break out due to internal heat.
- **Do not block the ventilation hole of the monitor by a tablecloth or curtain.**
 - The monitor can be deformed or fire can break out due to overheating inside the monitor.
- **Install the monitor on a flat and stable place that has no risk of dropping the monitor.**
 - If the monitor is dropped, you may be injured or the monitor may be broken.
- **Install the monitor where no EMI occurs.**
- **Keep the monitor away from direct sunlight.**
 - The monitor can be damaged.

Electrical Power Related Precautions

Warning

- **Make sure to connect the power cable to the grounded current.**
 - You may be electrocuted or injured.
- **Use the rated voltage only.**
 - The monitor can be damaged, or you may be electrocuted.
- **During a thunder or lightning storm, unplug the power cable or signal cable.**
 - You may be electrocuted or a fire can break out.
- **Do not connect several extension cords, electrical appliances or electrical heaters to a single outlet. Use a power bar with a grounding terminal designed for exclusive use with the computer.**
 - A fire can break out due to overheating.
- **Do not touch the power plug with wet hands. Additionally, if the cord pin is wet or covered with dust, dry the power plug completely or wipe dust off.**
 - You may be electrocuted due to excess moisture.
- **If you don't intend to use the monitor for a long time, unplug the power cable from the monitor.**
 - Covering dust can cause a fire, or insulation deterioration can cause electric leakage, electric shock or fire.
- **Fix the power cable completely.**
 - If the power cable is not fixed completely, a fire can break out.
- **Hold the plug when pulling out the power cable. Do not bend the power cord with excessive force or put heavy objects on the power cord.**
 - The power line can be damaged, which may cause electric shock or fire.
- **Do not insert a conductor (like a metal chopstick) into one end of the power cable while the other end is connected to the input terminal on the wall. Additionally, do not touch the power cable right after plugging into the wall input terminal.**
 - You may be electrocuted.

Caution

- **Do not unplug the power cord while the monitor is in use.**
 - Electrical shock can damage the monitor.

Precautions in Moving the Monitor

Warning

- **Make sure to turn off the monitor.**
 - You may be electrocuted or the monitor can be damaged.
- **Make sure to remove all cables before moving the monitor.**
 - You may be electrocuted or the monitor can be damaged.

Safety Precautions

Caution

- **Do not shock the monitor when moving it.**
 - You may be electrocuted or the monitor can be damaged
- **Do not dispose the product-packing box. Use it when you move.**
- **Make the panel face forward and hold it with both hands to move.**
 - If you drop the monitor, the damaged monitor can cause electric shock or fire. Contact with the service center for repair.

Precautions in Using the Monitor

Warning

- **Do not disassemble, repair or modify the monitor at your own discretion.**
 - Fire or electric shock accident can occur.
 - Contact the service center for check, calibration or repair.
- **Do not spray water on the monitor or scrub with an inflammable substance (thinner or benzene). Fire or electric shock accident can occur**
- **Keep the monitor away from water.**
 - Fire or electric shock accident can occur.

Caution

- **Do not put or store inflammable substances near the monitor.**
 - There is a danger of explosion or fire due careless handling of the inflammable substances.
- **When cleaning the brown tube surface, unplug the power cord and scrub with soft cloth to prevent scratching. Do not clean with a wet cloth.**
 - The water can sink into the monitor, which can cause electric shock or serious malfunction.
- **Take a rest from time to time to protect your vision.**
- **Keep the monitor clean at all times.**
- **Take a comfortable and natural position when working with a monitor to relax the muscles.**
- **Take a regular break when working with a monitor for a long time.**
- **Do not press strongly upon the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it.**
- **Keep the proper distance from the monitor.**
 - Your vision may be impaired if you look at the monitor too closely.
- **Set the appropriate resolution and clock by referring to the User's Manual.**
 - Your vision can be impaired.
- **Use authorized detergent only when cleaning the monitor. (Do not use benzene, thinner or alcohol.)**
 - Monitor can be deformed.

Accessories

Please check all accessories are included in the monitor.

* The actual monitor and accessories may look differently than shown in this manual.



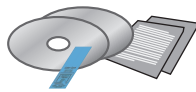
Monitor



Pen/Pen Content (2 ea.)/
Battery (1 ea.)



Pen Holder



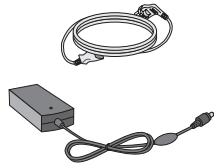
User's Manual
CD/Cards/Software CD



15-pin D-Sub Signal
Cable



DVI-D Signal Cable



Power Cord/Adapter



USB Cable

Major Monitor Features

● **Tablet Function**

- The monitor's tablet function enables you to write down a letter or draw a picture on the screen, using the electronic pen writing recognition software with a touch screen. Handwriting can also be saved as an image file, which allows intuitive use of the computer.
- Extending the handwriting recognition function, you can directly add a letter or a picture on the various document types including MS Word or PDF. Therefore, you can communicate with others while maintaining the current document format.

● **Stand Angle Adjustment Function**

A stand can be conveniently separated or adjusted to various angles according to your needs. Refer to the next page for details of the stand adjustment method, which allows intuitive use of the computer.

How to Use a Stand

● Basic connection – using a stand

- 1** You can adjust a stand angle by taking the following steps. Set your preferences. **Make sure to hold the monitor panel with both hands when adjusting the stand angle.**



Lift up the monitor panel to face upwards.
* Maximum tilt angle: 20°



Pull out and hold down the monitor



If necessary, you can adjust the monitor panel only while folding the monitor.



Hold down the monitor until it reaches to a stand and the bottom.
* Maximum tilt angle: 113°



Cautions




Do not force the monitor panel up with excessive force. It may do damage to the monitor.

How to Use a Stand

2 You can separate a stand according to your own requirements.

■■■ To separate a stand

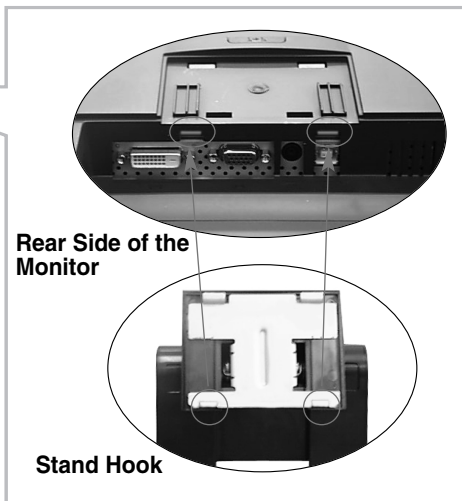


1. Make the front side face downward and lay the monitor on a cushion or soft cloth.
2. Press down the () button at the rear of the monitor until you can hear a click and then, pull down the stand down to separate it.

■■■ To attach a stand



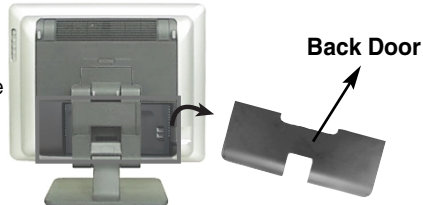
1. Make the front side face downward and lay the monitor on a cushion or soft cloth.
2. Hold down the stand with both hands and fix the lower stand hooks into the lower monitor holes. Then, push the stand upward. You will hear a click when it is in place.



Connecting to a PC

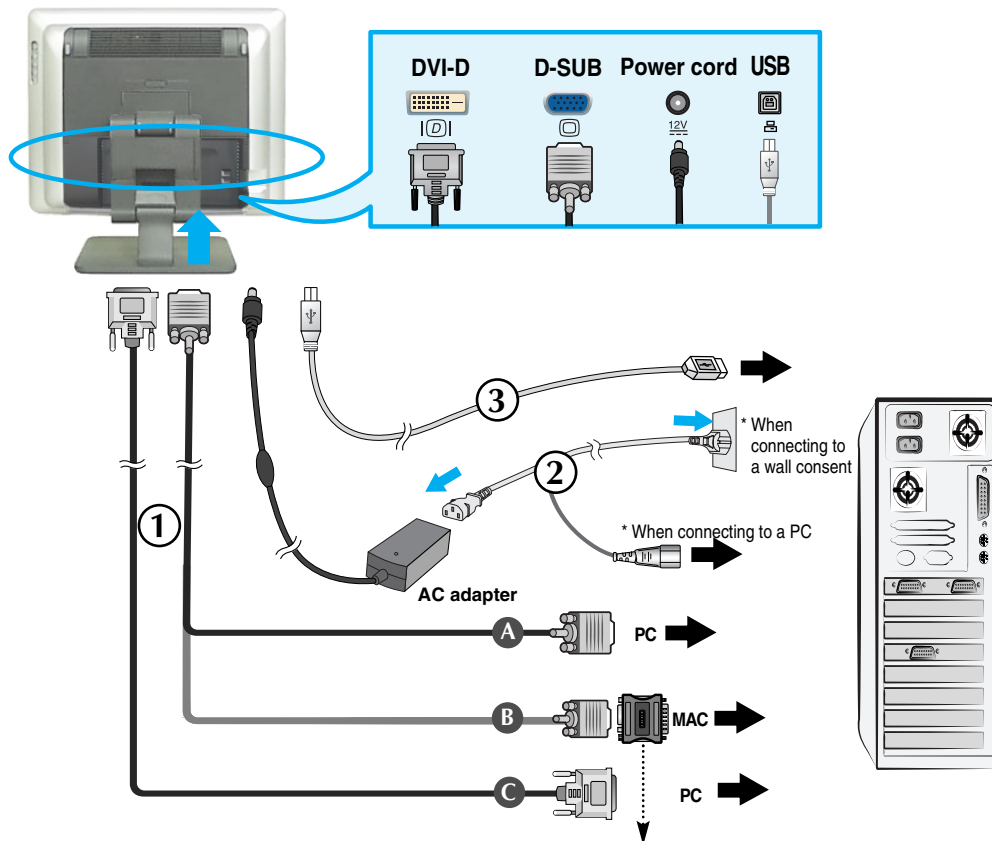
Basic connection – connecting a signal input cable/power cord

- 1 First, open the back door at the rear side of the monitor. Make sure that the computer monitor and peripheral power are off. Then, connect the monitor as described below.



- 2 Connect the signal input cable ① first and then, power cord ② and USB cable ③.

- A When connecting with a D-Sub signal input cable/For IBM.
- B When connecting with a D-Sub signal input cable/For Macintosh.
- C When connecting with a DVI signal input cable.

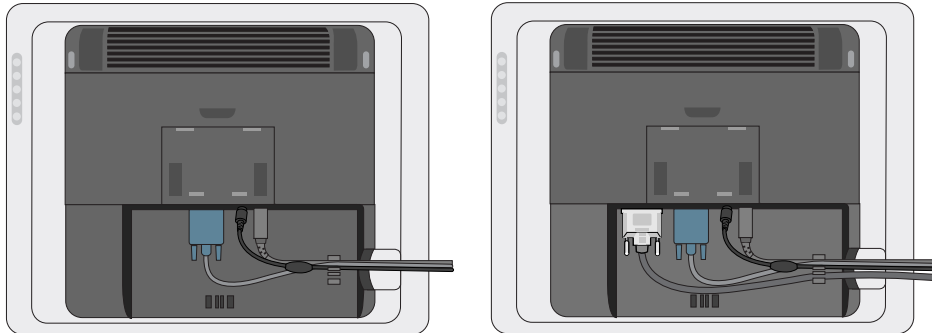



Macintosh adapter(Adapter)
 The adapter available in the market may not be compatible with this monitor (if the signaling system is different). Please use the standard Macintosh adapter or the one provided by LG.

Connecting to a PC

Connect the cables as described below !

Please refer to the following figure to tie up the cables.
Once the cable is connected up as shown in the figure, it will be arranged properly,
which facilitates stand angle adjustment.



- 3 Close the back door when the connection is complete
- 4 Press the Power button  on the front side of the monitor to turn it on.
When the power is on, “Self Image Setting Function” function will start automatically. (Supported for the analog signal only.)

PROCESSING SELF
IMAGE SETTING



Note

What is the “Self Image Setting Function” function?

This function provides the optimal screen state for the user. When you connect the monitor for the first time, automatic screen adjustment will begin for each type of signal. If you want to adjust the screen while it is in use or execute this function manually, press the AUTO button at the front side of the monitor.

Alternatively, execute the “Preset Mode” menu in the OSD menu. However, note that all other menus except the language menu will be initialized at the same time if you execute the “Preset Mode” menu.

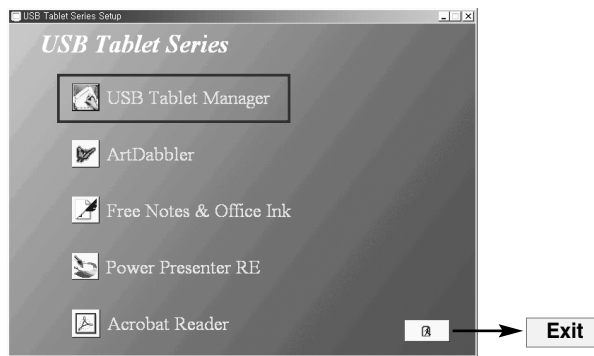
- To connect to two PCs
Connect the signal cables (DVI and D-Sub) to each computer respectively.
You can select the computer to use using the SOURCE button on the front of the monitor.
- Directly connect to the multi tab integrated with a conductor, or an earthed wall power outlet.
- You cannot use tablet drive and application software on Macintosh.

Using a Tablet Monitor

● Installing USB Tablet Manager (tablet running driver)


You should install the tablet running driver before using the tablet function.

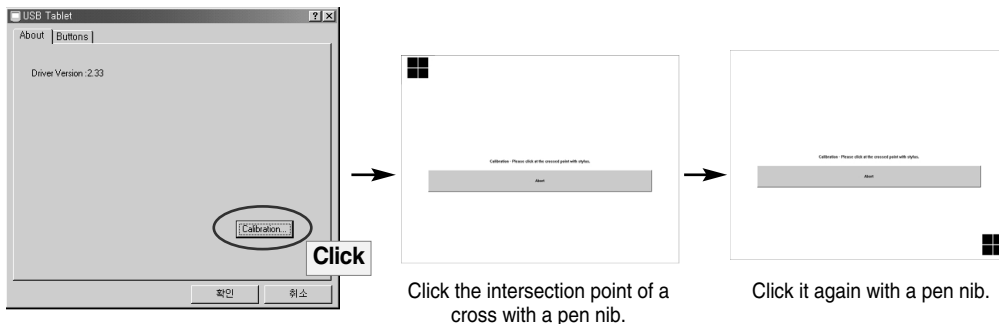
- 1 First, see if the signal input cable, power cord and USB cable are connected properly. Then, install the driver as described below.
- 2 The main window will be automatically displayed when you insert the software CD into your CD-ROM driver, which is included in the User's Manual. Install the “**USB Tablet Manager**” driver first and set your preferred options.



■ ■ ■ USB Tablet Manager

■ About

- Click the USB Tablet Manager icon and follow the driver installation instructions. Then, restart your computer. When installation is completed, the USB Tablet icon() will appear on the Windows Task Bar. Click the icon. When you install the tablet monitor for the first time, the pen touch position may be different from that of the cursor. To adjust the touching position, click the **Calibration** button and take the following steps.

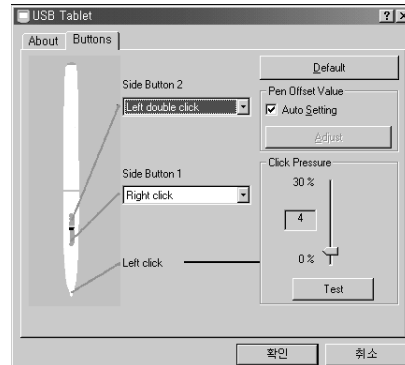


Using a Tablet Monitor

■ Buttons

(1) Side button

: You can set the function of the pen side button. By default, the upper side of the side button (Side Button 2) triggers a double click event, whereas the lower side (Side Button 1) triggers a right mouse click event.



(2) Pen offset value

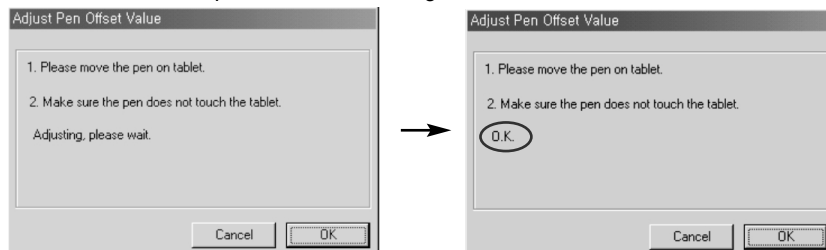
: The tablet monitor detects the power (pressure) when you touch the screen with a pen. If the pressure sensitivity is not appropriate due to pen replacement or computer restart-up, calibrate the pen offset value appropriately.

- Auto Setting: If you click on this check box, the pen offset value will be automatically adjusted.

- Adjust: You can adjust pen pressure (sensitivity) manually.

When you un-check the Auto Setting check box and click the Adjust button, the following message will be displayed. Touch the screen with a pen. Then, pressure (sensitivity) sensed by the screen will be set. Once touching is detected, the "Adjusting, please wait" message will be changed to the "OK" message.

Press the button to complete the value setting.



(3) Click Pressure

: You can set "click pressure" from 0% to 30%. You can easily select pressure sensitivity among pre-set values in the USB tablet drive. Weaker pressure will be applied as the value decreases.

(3) Test

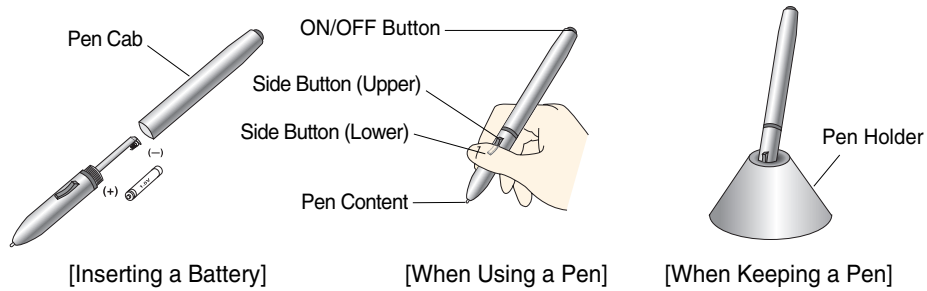
: You can test the settings. Click the Test button to pop up the window where you can test pen pressure (sensitivity)

(4) Default

: Click this button to return to the default setting values.

● Using a Pen

■ ■ ■ Name and Function of the Parts



Open the pen cab and insert the provided battery into it. Hold the pen as if you're holding a normal pen or pencil. Press the side button using your thumb or index finger.

- 1. ON/OFF button.**
- 2. Side Button:** You can set the right/left mouse button or double click function. Refer to "How to Use USB Tablet Manager" (Page K12) on the details of function setting.
- 3. Pen Content:** When the pen content is worn out, replace it with new one, which is included in the product.

■ ■ ■ Using a Pen

- 1. Pointing:** The screen point moves when you move a pen nib on the tablet screen, not touching it but moving just over it.
- 2. Click:** Clicking the screen with a pen has the same effect as that of a mouse.
- 3. Double Click:** Rapidly click the same screen position with a pen twice to imitate a mouse double click. Or press the upper side button.
- 4. Drag:** Drag the pen while holding the pen on the screen.



Note

To use the pen side button as a right mouse button, click the side button while not touching the pen on the screen.



[Using a Pen]

■ ■ ■ Replacing a Pen Content

If you use a pen for a long time, the pen content can be worn out, which causes a sharp angle and damage to the LCD surface. Make sure to replace the pen periodically.

- 1. Taking out the pen content:** Hold the pen nib and extract it using a pincette or tweezers (optional).
- 2. Inserting new pen content:** Push the replacement in softly until it is blocked.

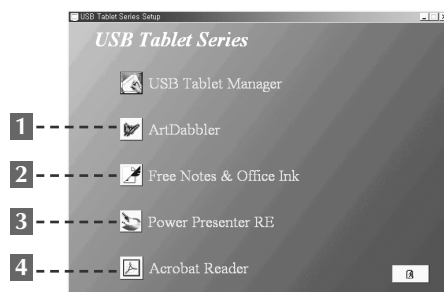
Using a Tablet Monitor

● Tablet Application Software

Install the provided software to use a tablet monitor more usefully and in various ways.

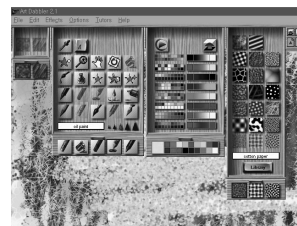
Insert the software CD-ROM included in this manual into the PC DC-ROM drive.

Then, the main window will be automatically populated. Click the icon of the software to install and follow the instructions displayed on the screen.



1 Art Dabbler

Art Dabbler from Corel, the specialized graphic tool vendor, allows you to present the graphics with rich texture selection and modification as well as various types of pens and colors. Its text input function enables you to enter the description on the picture, if necessary. The presented graphic can be saved with various formats. You can also create a simple animation using Art Dabbler.

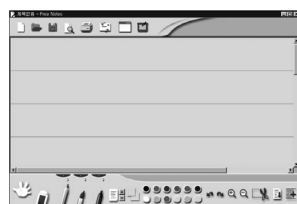


[Example of Using Art Dabbler]

2 Free Notes

Free Notes is an exclusive document handling program that enables you to import the picture like a general word processor and modify a picture or a handwritten document, using various modes displayed at the bottom of the window. The composed document or picture can be saved with the file extension of ".fns" or ".jpg". The file saved with the ".fns" extension can be opened and modified by "FreeNotes" program installed in other PC.

You can send a composed picture or a text as an e-mail attachment or print out.

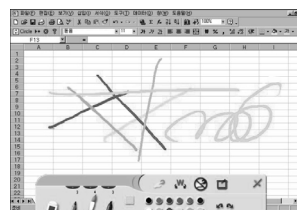


[Example of Using Free Notes]

Office Ink

Office Ink is the bundle software include in Free Notes. Unlike Free Notes, you can input a picture or handwritten letters on the background screen freely using the pen with various pen touch techniques and colors. However, Office Ink is designed for instant pen touch and the file saving function is provided like Free Notes.

However, you can use this program usefully to highlight a lecturing item or add a comment, instead of a pen.



[Example of Using Office Ink]

3 Power Presenter RE

Power Presenter RE is a program designed to be used with PowerPoint presentations. It enables you to highlight the section to emphasize, or provide supplementary description using a whiteboard or blackboard. The presented picture or text can be saved as “*.jpg”, or sent to other person as an e-mail attachment. The recording function can be used conveniently for repetitive training or presentation. Since Power Presenter RE is solely designed for presentation, instead of a picture or other purposes, only the limited number of colors is provided.

You can use Power Presenter RE with MS PowerPoint or other application programs.




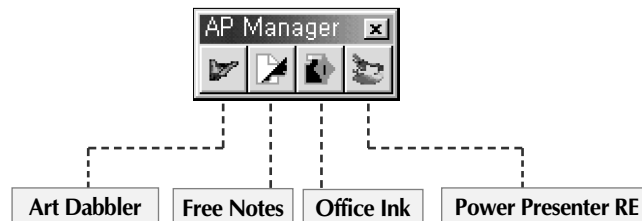
[Example of Using Power Presenter RE]

4 Acrobat Reader

User's manuals of the application programs are provided as a PDF file. Please install Acrobat Reader to retrieve the user's manual.

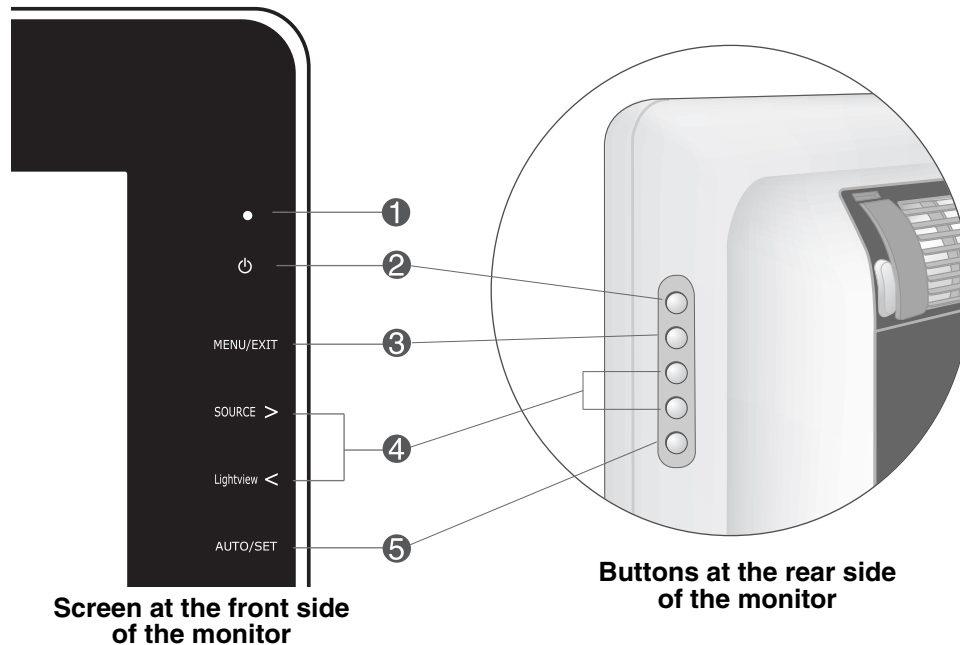
You can retrieve the user's manual by selecting Windows Start -> Programs.

- ■ ■ When the application program is successfully installed, the AP Manager icon () will appear on the Task Bar. Click the icon to pop up the AP Manager window. When the program is running, the icon can be used as a shortcut key. Click once to start the program.



Screen Selection and Adjustment

● Name of the Buttons on the Screen Adjustment Unit



1 Power LED

A green LED will be displayed in a normal operation mode, or an orange LED will be displayed in a power saving mode.

2 Power button

Press the POWER button to turn the power on. Press the button again

3 MENU/EXIT button

- Shows or hides the OSD (On Screen Display) menu.
- Lock/Unlock OSD – Locks or unlocks the OSD adjustment function.
To lock the OSD menu, press the MENU button for 5 seconds. The “**OSD Locked**” message will be displayed and the screen will be locked. To release OSD menu locking, press the MENU button for 5 seconds again. The “**OSD Unlocked**” message will appear and the OSD menu will be unlocked.

OSD LOCKED

OSD Locked

OSD UNLOCKED

OSD Unlocked

4 > < button

Use this button to select the icon or make an adjustment in the OSD (On Screen Display) menu.

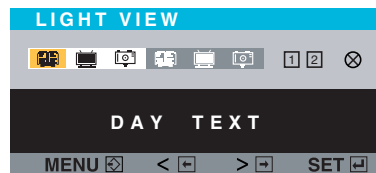
SOURCE > button

When two computers are connected, use this button to select the input signal for the destination computer.

If only one computer is connected, it will be recognized automatically.

Lightview < button

Use this button to select the optimized image conditions, depending on the surrounding environment (brightness, type of the image). See the page K24 for more details.



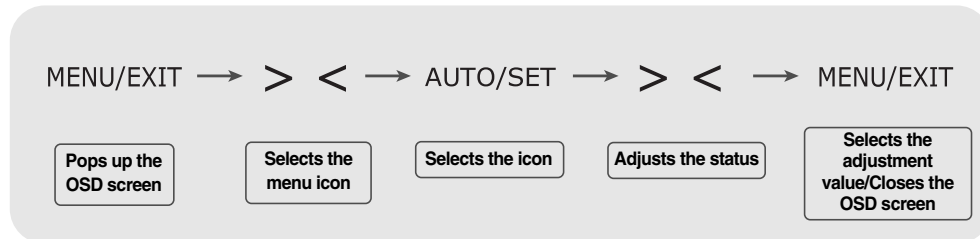
5 AUTO/SET button

- Select the icon to adjust in the OSD screen.
- ***Automatic screen adjustment function** - The screen will be automatically adjusted when you press the AUTO/SET button. (See the page K19)

PROCESSING AUTO
IMAGE ADJUSTMENT

Screen Selection and Adjustment

● Adjustment on the OSD (On Screen Display) Screen



- 1 Press the MENU button to open the OSD screen.
- 2 Adjust the OSD menu item using the > < button. When the menu icon is selected, press the AUTO/SET button
- 3 Adjust the item values using the > < button. To move down to the sub-menu or other menu, press the **AUTO/SET** button to move.
- 4 To select other functions or to return to the previous screen, press the MENU button again. Press the MENU button twice to close the OSD screen.

■■■ Automatic Saving Function


When you select another menu or close the OSD screen after changing the value while the OSD screen is open, the adjusted value will be automatically saved. Even though you don't close the screen after adjustment, the OSD will disappear automatically and the adjusted values will be saved accordingly.

● Adjusts the OSD screen easily and automatically...

You need to adjust the screen if you connect the monitor to the new computer or change the mode. Refer to the following description to keep the screen in an optimal state.

PROCESSING AUTO
IMAGE ADJUSTMENT

Press the **AUTO/SET** button to carry out automatic screen adjustment that best fits into the current screen mode. If adjustment is found to be unsatisfactory, you may need to adjust screen position, frequency or brightness manually in the OSD menu. (Supported only for the analog signal only.)

 **Note** **OSD(On Screen Display)**
The OSD screen provides graphical presentation of the screen adjustment state so that you can change the setting visually.
[Note] The language displayed in the monitor may differ from the one in the User's Manual.

● OSD Adjustment Menu

Main Menu	Sub-menu	A	D	Function Description
PICTURE	Brightness	●	●	You can adjust screen contrast and brightness
	Contrast	●	●	
	Gamma	●	●	
COLOR	PRESET	●	●	You can set the preferred screen color
	RED	●	●	
	GREEN	●	●	
	BLUE	●	●	
POSITION	H POSITION	●		You can adjust screen position
	V POSITION	●		
TRACKING	CLOCK	●		You can adjust screen clock and phase
	PHASE	●		
FACTORY RESET	FACTORY RESET	●	●	You can restore the initial monitor settings
	WHITE BALANCE	●		
SETUP	LANGUAGE	●	●	You can adjust the screen to the circumstances
	OSD H POSITION	●	●	
	OSD V POSITION	●	●	
LIGHTVIEW	DAY TEXT/MOVIE/PHOTO	●	●	You can select or adjust the image conditions according to the environment
	NIGHT TEXT/MOVIE/PHOTO	●	●	
	USER1/2	●	●	
	NORMAL	●	●	

● : Adjustable items
A : Analog signal
D : Digital signal



Note

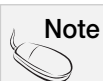
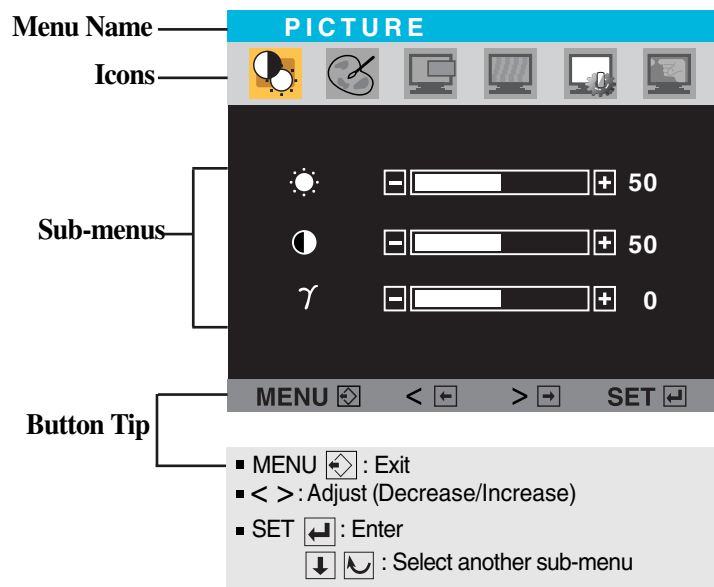
- The icon layout can be different for each model. (K21 ~ K24)
- When you set the menu in the "Light View" menu, the "Picture" and "Color" menus are automatically set. If you select the "Picture" or "Color" menu in the "Light View" menu mode, the Light View menu mode will be automatically released and changed to the "normal" mode.

Screen Selection and Adjustment


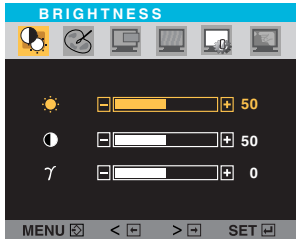




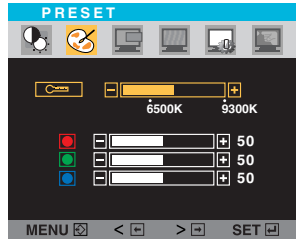




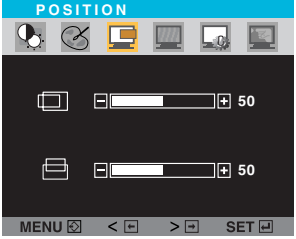


● OSD (On Screen Display) Screen Adjustment

You were introduced to the procedure of selecting and adjusting an item using the OSD system. Listed below are the icons, icon names, and icon descriptions of the all items shown on the Menu.

Press the MENU Button, then the main menu of the OSD appears.


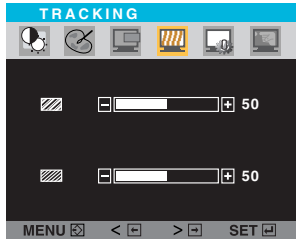







OSD (On Screen Display) menu languages on the monitor may differ from the manual.

Main menu	Sub menu	Description
	PICTURE	
	<p>BRIGHTNESS</p> <p> BRIGHTNESS</p> <p> CONTRAST</p> <p> GAMMA</p>	<p>To adjust the brightness of the screen.</p> <p>To adjust the contrast of the screen.</p> <p>Set your own gamma value. : -50/0/50 On the monitor, high gamma values display whitish images and low gamma values display high contrast images.</p>
	COLOR	
	<p>PRESET</p> <p> RED</p> <p> GREEN</p> <p> BLUE</p>	<p>Select the screen color. ... 6500K : Slightly bluish white. ... 9300K : 9300K: Slightly bluish white.</p> <p>Set your own red color levels.</p> <p>Set your own green color levels.</p> <p>Set your own blue color levels.</p>
	POSITION	
	<p> H POSITION</p> <p> V POSITION</p>	<p>To move image left and right.</p> <p>To move image up and down.</p>

■ **MENU** : Exit ■ **<** : Decrease ■ **>** : Increase ■ **SET** : Select another sub-menu

Screen Selection and Adjustment

Main menu	Sub menu	Description
 TRACKING		<p>CLOCK To minimize any vertical bars or stripes visible on the screen background. The horizontal screen size will also change.</p> <p>PHASE To adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen the image of characters.</p>
 FACTORY RESET		<p>FACTORY RESET Restore all factory default settings except "LANGUAGE."</p> <p>WHITE BALANCE If the output of the video card is different the required specifications, the color level may deteriorate due to video signal distortion. Using this function, the signal level is adjusted to fit into the standard output level of the video card in order to provide the optimal image. Activate this function when white and black colors are present in the screen.</p> <p>For example</p> 
 SETUP		<p>LANGUAGE To choose the language in which the control names are displayed.</p> <p>OSD H POSITION To adjust horizontal position of the OSD window on the screen.</p> <p>OSD V POSITION To adjust vertical position of the OSD window on the screen.</p>

■ MENU : Exit ■ < : Decrease ■ > : Increase ■ SET : Select another sub-menu

■ ■ ■ Press the LIGHTVIEW(<) Button, then the main menu of the OSD appears.

Main menu	Sub menu	Description
LIGHTVIEW		
	DAY NIGHT	This feature lets you easily select the best desired image condition optimized to the environment (ambient illumination, image types etc). ... DAY : Bright ambient illumination ... NIGHT : Dark ambient illumination TEXT : For text images (Word processing etc.) MOVIE : For animation images in videos or movies PHOTO : For pictures or drawings



	<ol style="list-style-type: none"> USER 1 USER 2 	User can preset the BRIGHTNESS , CONTRAST , GAMMA , and PRESET levels and save them for later use.
<p>To adjust the USER1/USER2 sub-menu function, Press the SET Button</p>		Select the sub-menu using the SET button and save the YES value using the -/+ buttons.

	NORMAL	This is under normal operating conditions.
--	---------------	--

■ **MENU** : Exit ■ **<** : Decrease ■ **>** : Increase ■ **SET** : Select another sub-menu

Troubleshooting

The monitor is not working

- Power cord is properly connected to the monitor?
 - Power LED is on?
 - The power is on, the power LED is green, and the screen is extremely dark?
 - Power LED is orange?
 - “Out of Range” message appears?
 - “Check Signal Cable” message appears?
- Make sure to connect the power cord to the monitor.
 - See if the power switch is on.
 - Adjust brightness () and contrast () again.
 - If the monitor is in the power saving mode, move the mouse or press any key to activate the screen again.
 - The signal from the PC (video card) is out of the horizontal or vertical frequency range supported by the monitor. Adjust the frequency again by referring to the “Product Specification” in this manual.
***Maximum resolution**
D-Sub: 1024x768@75 Hz
DVI-D: 1024x768@75 Hz
 - The signaling cable connecting PC and monitor is not connected. See if the signal cable is firmly connected.

“OSD Locked” message appears

- The “OSD Locked” message appears when you press the MENU button?
- The OSD locking function prevents unintentional change of the OSD settings. Press the MENU button for about 5 seconds to unlock then, the “OSD Unlocked” message appears.

Afterimage appears

- Afterimage appears when the monitor is turned off?
- If you use the same specific screen for a long time, the monitor pixel can be damaged quickly. To use the monitor longer, use the screen saver program.



Note

Vertical frequency : Tens of images should be replaced within a second on the monitor to make you to see images on the screen. The rate of changing the images within a second is called by “vertical frequency” or “refresh rate” with the unit of Hz.

Horizontal frequency : The horizontal period is a time needed to display one horizontal line. When the horizontal period is divided by one, the number of horizontal lines can be figured out that can be displayed for a second, which is called by “horizontal frequency” with the unit of kHz.

Screen image is displayed abnormally

- Screen position is wrong?
 - Press the AUTO/SET button to adjust the screen automatically with the optimal state that fits into the currently selected mode.
If you're not satisfied with the adjusted screen, use the "Position" OSD menu to manually adjust the screen position.
 - See if the resolution or the frequency of the video card is set within the range supported by the monitor. If not, set to the recommended resolution at "Control Panel" → "Display" → "Setting" menu.
- Vertical slim lines appear on the background screen?
 - Press the AUTO/SET button to adjust the screen automatically with the optimal state that fits into the currently selected mode.
If you're not satisfied with the adjusted screen, use the "Clock" OSD menu to manually remove the vertical lines.
- Horizontal noise appears or letters are blurred?
 - Press the AUTO/SET button to adjust the screen automatically with the optimal state that fits into the currently selected mode.
If you're not satisfied with the adjusted screen, use the "Phase" OSD menu to manually adjust it.

Screen color is displayed abnormally


- Screen is de-colored (16 colors)?
 - Change the number of colors to 24 bits (true color) or better.
: Windows Control Panel → Display → Setting → Color Table.
- Screen color is unstable or mono-color?
 - Check signaling cable connection. If not properly connected, connect it again. Or, plug in the PC video card firmly.
- Dots appear on the screen?
 - You may see several pixel dots (red, green, white or black) while using the monitor due to the characteristics of the LCD panel. It is not related with monitor performance and is not a malfunction.

When the monitor is connected, the "Unknown Monitor" message appears

- Monitor driver is installed?
 - Install the provided monitor driver again or download the driver from the LG Electronics web site (<http://www.lge.co.kr>).
See if the plug & play function is supported by the video card by referring to the video card user's manual.

Troubleshooting

Tablet pen is not working normally


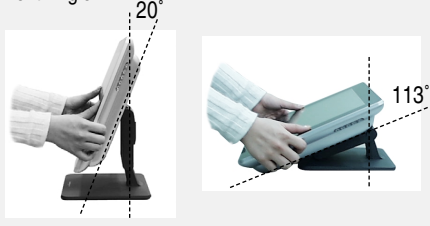
- **Tablet pen is not working?**
 - See if the tablet driver (USB Tablet Manager) is properly installed. (See the page K12)
 - See if the USB cable is connected properly.
If you have connected the USB cable again, wait until the USB tablet icon  appears on the Windows Task Bar before using the pen. The icon appears after 3 – 4 seconds after connecting the USB cable.
 - See if the battery is inserted into the pen, or the battery is not flat. If it is flat, replace with new one.
 - See if the battery polarity is correct (+/-).
- **I cannot draw a picture or write a letter when I move the tablet pen.**
 - You should apply a certain amount of pressure to the pen to draw a picture or write a letter. If it is inconvenient for you to apply excessive force, adjust pressure (sensitivity) by setting “Pen Offset Value” or “Click Pressure” by referring to the page K13.
- **I cannot click the icon on the background screen with a tablet pen.**
 - Clicking will be disabled in the drawing menu of “Office Ink” or “Power Presenter RE” – tablet application software.
 - 1) When running Office Ink: Click the Cancel button in the toolbar, or exit from the program.
 - 2) When running Power Presenter RE: Select the mouse icon in the toolbar window to activate the pen mouse function.
- **I cannot double click the icon properly on the background screen with a tablet pen**
 - You should double click on the precise position quickly. If it is not working, use the upper pen side button. Or, set the side button function manually by referring to the page K13.

Pen touch position does not match with the cursor position

- **Tablet pen touch position deviates from the cursor position by more than 5cm?**
 - The tablet driver is not recognized properly.
Plug out the USB cable and plug it in again. If you meet up with the same symptom, remove the driver and install it again.
- **Pen touch position does not match with the cursor position?**
 - Adjust the position again using the About – Calibration menu in the USB Tablet Manager. (See the page K12)

Product Specification

Product specification is subject to change without a prior notice to improve the product.

LCD Panel	Type	15 inch (38.0 cm) TFT (Thin Film Transistor) LCD (Liquid Crystal Display) Panel Size of Visible Diagonal Line: 38.0cm
	Pixel Pitch	0.297mm
Video Signal	Max. Resolution	Digital/Analog: 1024x768 @ 75 Hz
	Recommended Resolution	1024x768 @ 60 Hz
	Horizontal Frequency	Digital/Analog: 30 ~ 63 kHz
	Vertical Frequency	56 ~ 75 Hz
	Synchronization Type	Separate/Composite/SOG (Sync On Green)/ Digital
Input Connector	15 pin D-Sub Type/DVI-D (Digital)	
Power	Rated Voltage	DC 12V  3A
	Power Consumption	Normal Operation : 35W
		Power-saving Preparation Mode ≤ 3W Power-saving Mode ≤ 3W
Dimension/Weight	Monitor Dimension (W x L x H)	385.5x211.1x354.5mm
	Weight (excl. packaging materials)	5.85kg
	Stand Adjustment Angle	
Environmental Conditions	Operational Storage	Temperature 10 °C ~ 35 °C Humidity 10% ~ 80%
		Temperature -20 °C ~ 60 °C Humidity 5% ~ 95%

Product Specification

■ ■ ■ PC Mode – Preset Mode

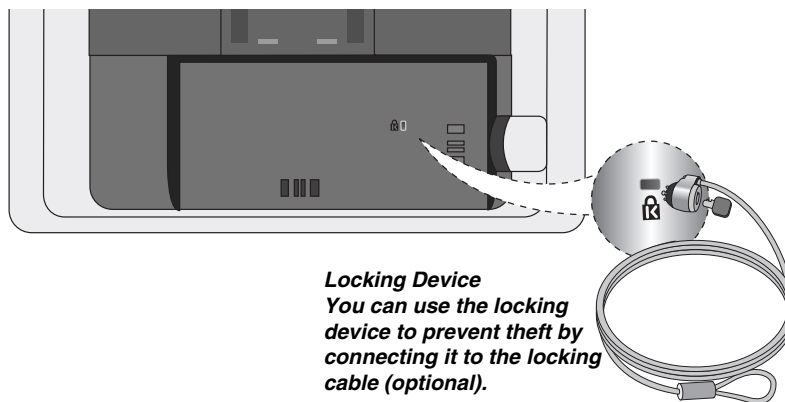
	Preset mode		Horizontal Frequency (kHz)	Vertical Frequency (Hz)
1	VGA	640 x 350	31.468	70
2	VGA	720 x 400	31.468	70
3	VGA	640 x 480	31.469	60
4	VESA	640 x 480	35.000	66.67
5	VESA	640 x 480	37.861	72.8
6	VESA	640 x 480	37.500	75
7	VESA	800 x 600	35.156	56.25
8	VESA	800 x 600	37.879	60
9	VESA	800 x 600	48.077	72
10	VESA	800 x 600	46.875	75
11	MAC	832 x 624	49.725	75
*12	VESA	1024 x 768	48.363	60
13	VESA	1024 x 768	56.476	70
14	VESA	1024 x 768	60.023	75

*Recommended Resolution

■ ■ ■ Power LED

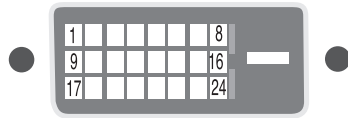
Mode	LED
Normal Operation	Green
Power-saving Preparation Mode	Orange
Power-saving Mode	Orange

- ■ ■ **Locking Device** - Check the locking device by opening the back door at the rear of the monitor.



Locking Device
You can use the locking device to prevent theft by connecting it to the locking cable (optional).

● DVI-D



Number	Signal
1	T.M.D.S. Data 2-
2	T.M.D.S. Data 2+
3	T.M.D.S. Data 2/4 Shield
4	T.M.D.S. Data 4-
5	T.M.D.S. Data 4+
6	DDC Clock
7	DDC Data
8	Analog Vertical Synchronization
9	T.M.D.S. Data 1-
10	T.M.D.S. Data 1+
11	T.M.D.S. Data 1/3 Shield
12	T.M.D.S. Data 3-
13	T.M.D.S. Data 3+
14	+5V Power
15	Groundings (return for +5V, horizontal and vertical synchronization)
16	Hot Plug Detect
17	T.M.D.S. Data 0-
18	T.M.D.S. Data 0+
19	T.M.D.S. Data 0/5 Shield
20	T.M.D.S. Data 5-
21	T.M.D.S. Data 5+
22	T.M.D.S. Clock Shield
23	T.M.D.S. Clock+
24	T.M.D.S. Clock-

T.M.D.S.(Transition Minimized Differential Signaling)

MEMO

