

Operation Instructions

Thank you for purchasing this LCD monitor!
Please read this guide thoroughly before installation.

FCC RADIO FREQUENCY INTERFERENCE STATEMENT WARNING:(FOR FCC CERTIFIED MODELS)

This monitor has been tested and found compliant with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide proper protection against harmful interference to a residential installation. This monitor generates, uses, and can radiate radio frequency energy. Harmful interference to radio communication may be led as a result if it's not properly installed and used. However, there is no guarantee that interference will not occur in a particular installation. If this monitor does cause serious interference to radio or television reception, resetting the monitor may determine it. Moreover, users are encouraged to correct interference by doing one or more of the following:

- Reorient or relocate the receiving antenna.
- Move the monitor and the receiver further away from each other.
- Connect the monitor into an outlet on a circuit different from that to which the receiver is connected.
- Consult your local dealer or an qualified technician.

FCC Warning:

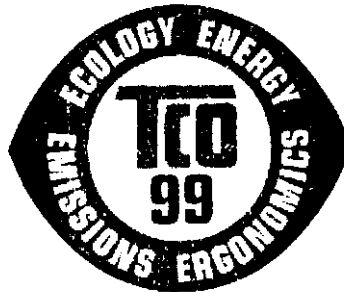
To assure a continued FCC compliance, a user must use a grounded power supply cord and the provided shielded video interface cable with bonded ferrite cores. Also, any unauthorized changes or modifications to this monitor would void the user's authority to operate this device.

if necessary, shielded interface cables and A.C. power cord must be used to meet the emission level limits.

EMI Certification

The Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.
Cet appareil numérique de class B respecte toutes les exigences du Reglement sur le materiel brouilleur du Canada.

*Page 1-2 stands for TCO'99 models only. Please see back label for model distinction.



ENGLISH

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.

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.

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GENERAL

This monitor package comes with a LCD monitor, a signal cable, a guidebook, and a power cable.

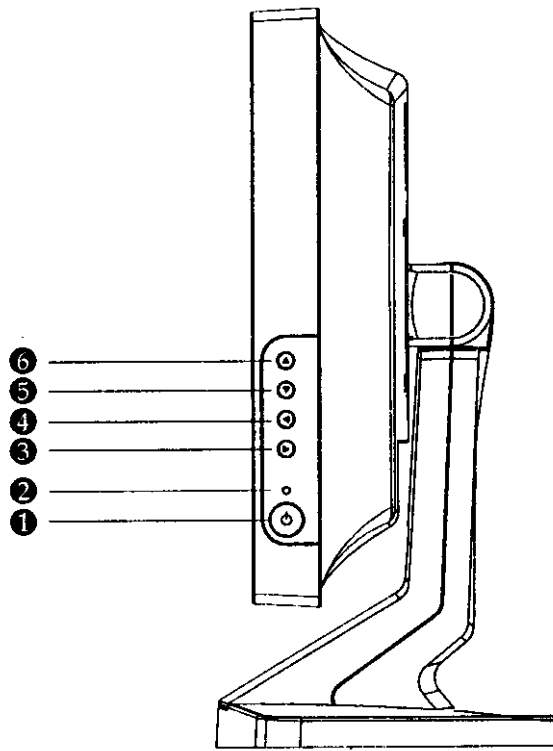
This LCD monitor is a microprocessor controlled multi-frequency system device. It is compatible with many standard graphic formats, including VGA, SVGA, and XGA.

The key features include :

- Support for graphic cards with VESA compatible DDC1/2B (Display Date Channel 1/2b) interface for monitor-to-PC communication.
- Easy to use On Screen Display (OSD) adjustment interface.
- Support EPA, NUTEK A/B, VESA compatible 4-staged power management systems.

FEATURES

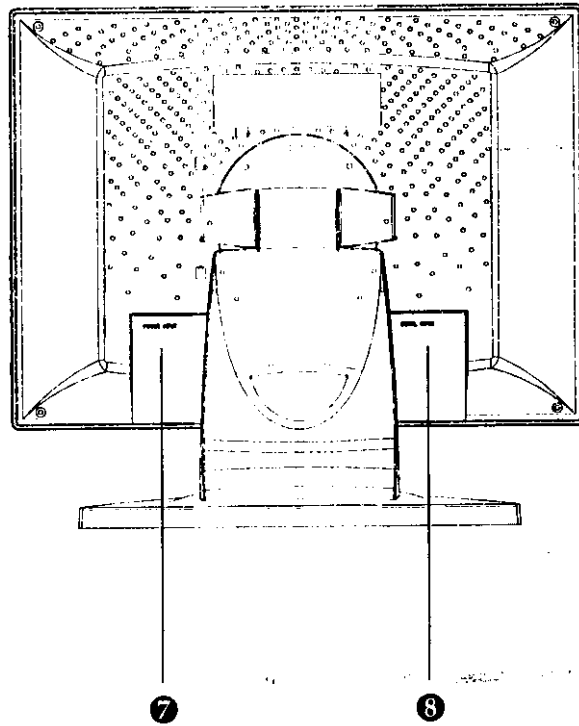
A. RIGHT



- ① POWER ON/OFF
- ② POWER INDICATOR
- ③ INCREASE


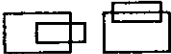
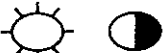




- ④ DECREASE
- ⑤ SCROLL DOWN
- ⑥ SCROLL UP

B. Installation





- ⑦ POWER INPUT (POWER CABLE)
CAPTIVE POWER CORD (TCO'99 ONLY)
- ⑧ SIGNAL INPUT (COMPUTER CABLE)



● MAIN MENU (example)

| | | |
|---|-------------------------|----------|
| 56 KHZ / 70.2 HZ | | 1024x768 |
|  | AUTO ADJUST | |
|  | H-POSITION / V-POSITION | |
|  | BRIGHTNESS / CONTRAST | |
|  | DELAY / H-TOTAL | |
|  | FOCUS / OSD-POSITION | |
|  | GAMMA CORRECTION | |
| DOS-TEXT / GRAPHIC | | TXT |
|  | REVERT | |
| ◀: EXIT ▲▼: SELECT ▶: ENTER | | |

- AUTO-ADJUST : Automatic Adjust Geomentry and delay.
- H-POSITION : Adjust the Horizontal position of the video.
- V-POSITION : Adjust the Vertical position of the video.
- BRIGHTNESS : Adjust the Back-Light current.
- CONTRAST : Adjust the contrast of the video.
- DELAY : Adjust the Delay-time between Horizontal pixels.
- H-TOTAL : Adjust video display Horizontal pixels.
- FOCUS : Select interpolation mode exclude 1024x768 timing.(sharp or smooth)
- OSD-POSITION : Select OSD position.
- GAMMA CORRECTION : Adjust R/G/B Gamma correction.
- DOS-TEXT/GRAPHIC : Select 720x400 or 640x400.
- REVERT : Revert user Adjust of screen function before save.

● SUB-MENU (example)

| | | | | | |
|---|-----|-----|------------|-----|--|
| H-POSITION | | | | ▽ : |  |
|  | MIN | MAX | 150 | | |
| △ :MAIN-MENU | | | ◀▶ :ADJUST | | |

| | | | | | | |
|---|---|---|------------|---|-----|--|
| FOCUS | | | | | ▽ : |  |
|  | F | 1 | 2 | 3 | 4 | |
| △ :MAIN-MENU | | | ◀▶ :ADJUST | | | |

SIGNAL TIMING

This monitor has 10 factory preset timing modes.

| Horizontal Resolution | Vertical Resolution | Horizontal Refresh rate | Vertical Refresh rate | Pixel |
|-----------------------|---------------------|-------------------------|-----------------------|-----------|
| 640 | 480 | 31.5Khz | 60Hz | 25.175Mhz |
| 640 | 480 | 37.9Khz | 72Hz | 31.500Mhz |
| 640 | 480 | 37.5Khz | 75Hz | 31.500Mhz |
| 800 | 600 | 35.1Khz | 56Hz | 36.000Mhz |
| 800 | 600 | 37.9Khz | 60Hz | 40.000Mhz |
| 800 | 600 | 48.1Khz | 72Hz | 50.000Mhz |
| 800 | 600 | 46.9Khz | 75Hz | 49.500Mhz |
| 1024 | 768 | 48.4Khz | 60Hz | 65.000Mhz |
| 1024 | 768 | 56.5Khz | 70Hz | 75.000Mhz |
| 1024 | 768 | 60.0Khz | 75Hz | 78.750Mhz |

SAFETY PRECAUTIONS

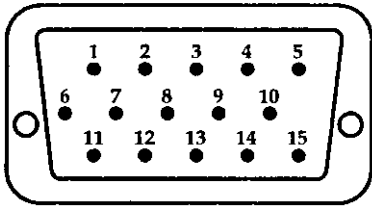
This monitor is manufactured and tested on a ground principle that a user's safety comes first. However, improper use or installation may cause damage to the monitor as well as to the user. Carefully go over the following WARNINGS before installing and keep this guide handy.

WARNINGS:

- ◆ This monitor should be operated only at the correct power sources indicated on the label on the rear end of the monitor. If you're unsure of the power supply in your residence, consult your local dealer or power company.
- ◆ Use only the special power adapter that comes with this monitor for power input.
- ◆ Do not try to repair the monitor yourself as it contains no user-serviceable parts. This monitor should only be repaired by a qualified technician.
- ◆ Do not remove the monitor cabinet. There is high-voltage parts inside that may cause electric shock to human bodies, even when the power cord is unplugged.
- ◆ Stop using the monitor if the cabinet is damaged. Have it checked by a service technician.
- ◆ Put your monitor only in a clean, dry environment. If it gets wet, unplug the power cable immediately and consult your service technician.
- ◆ Always unplug the monitor before cleaning it. Clean the cabinet with a clean, dry cloth. Apply non-ammonia based cleaner onto the cloth, not directly onto the glass screen.
- ◆ Keep the monitor away from magnetic objects, motors, TV sets, and transformer.
- ◆ Do not place heavy objects on the monitor or power cord.

D-SUB CONNECTOR

15-PIN D-SUB CONNECTOR



| | | |
|-------|--------|-----------|
| 1.R | 6.GND | 11.GND |
| 2.G | 7.GND | 12.SDA |
| 3.B | 8.GND | 13.H.SYNC |
| 4.GND | 9.NC | 14.V.SYNC |
| 5.NC | 10.GND | 15.SCL |

SIGNAL LEVEL

| CONNECTOR | SIGNAL | DESCRIPTION |
|-----------|---------|--------------------------|
| R | RED | 0.7 VP-P(VIDEO) |
| G | GREEN | 0.7 VP-P(VIDEO) |
| B | BLUE | 0.7 VP-P(VIDEO) |
| H | H/SYNC | TTL positive or negative |
| V | V/SYNC | TTL positive or negative |
| SDA | DDC1/2B | TTL |
| SCL | DDC1/2B | TTL |

SPECIFICATIONS

| | |
|-------------------------------|--|
| LCD Panel | 15" TFT |
| Power Management | Energy Star compliant VESA DPMS compatible <5W |
| Displayable Resolution | XGA 1024 x 768 max. Vertical Frequency 75 HZ max. |
| Pixel Dimension | 0.297 x 0.297 mm |
| LCD Display Color | 262, 144 Color Max. (18 bit) 16.7M (8 bits/color) |
| viewing Angle | 15" CR ≥ 10 Horizontal -60° ~ 60° (typical) Vertical -55° ~ 45° (typical) |
| Tilt | +20°, -5° |
| Contrast Ratio | 350:1 (typical) |
| Brightness | 200 cd/m ² (typical) |
| Response Time | Tr=13 ms (typical) Tf=27 ms (typical) |
| Active Display Area | 304.1mm x 287.1mm |
| Temperature | Operating: 0°C ~ +40°C Storage: -20°C ~ +60°C |
| Compliance | UL, CDA, DHIIS, TÜV, CE, FCC-B, VDE-B, Energy Star. |
| Power | Voltage 100-240V Consumption 30 Watts |

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