

Page 1-2 stand for  
TCO'99 model only.  
Please See back label  
for model distinction.



### **Congratulations!**

You have just purchased a TCO'99 approved and labeled 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 labeled computers?**

In many countries, environmental labeling 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.

Labeled 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.

On the Back page of this folder, 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](mailto:development@tco.se)

Current information regarding TCO'99 approved and labeled 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

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

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 labeled 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.

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

# Operation Instructions

Thank you for purchasing this monitor, a high-resolution multi-scan color 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.

**Note:** 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 classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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# Getting Started

## First Step

Thank you for purchasing this high performance monitor!

This monitor package comes with:

- ❖ Video cable with 15 pin D-SUB connector.
- ❖ Power cable.
- ❖ User guidebook or CD-ROM (You're reading now)

## Quick Installation

### 1. Connect video cable

Make sure both the monitor and computer are powered OFF. Connect the video cable to the computer, then to the monitor.

### 2. Connect power cord

Connect the power cord to a properly grounded AC outlet, then to the monitor.

### 3. Power-ON computer and monitor

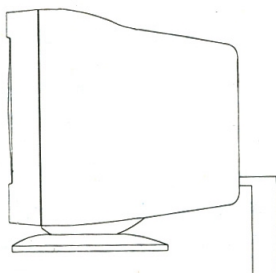
Power-ON the computer, then Power-ON the monitor.

### 4. Windows users:Setting the Timing Mode (Resolution and Refresh Rate)

*Example: 800 x 600 @ 75 Hz*

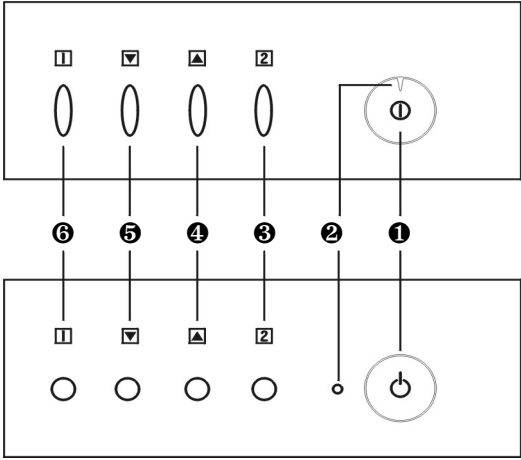
Resolution Right-click on the Windows desktop > Properties > Settings > "Desktop Area". Set the resolution.

Refresh Rate (vertical frequency) See your graphic card's user guide for instructions.



D-Sub Power

# Front Panel Control



- 1** Power Switch
- 2** Power Indicator
- 3** Function Key 2
- 4** Increase
- 5** Decrease
- 6** Function Key 1



# Operation

## Feature

- This monitor has a CPU to control contrast, brightness, and other Image features.

## Using OSD function

Press **1** to activate OSD menu and adjust with  $\Delta$  or  $\nabla$  to control direction.

Press **2** to select the desired item and use  $\Delta$  or  $\nabla$  to increase or decrease.

## OSD Function

Symbol	Item	Function Description
	Contrast	-Controls the Video gain.
	Brightness	-Controls the brightness of the image.
	Zoom	-To zoom in or out.
	Horizontal Position	-Controls the horizontal position of the image.
	Horizontal Width	-Adjusts the horizontal size of the image.
	Vertical Position	-Adjusts the vertical position of the image.
	Vertical Size	-Adjusts the vertical size of the image.
	Recall	-Press ▲ and ▼ together to retrieve preset memory.
	Pincushion	-Controls the pincushion of the image.
	Trapezoid	-Adjusts the vertical unevenness of the image.
	Parallelogram	-Makes the image parallel.
	Pin Balance	-Makes the curve on both side symmetrical.
	Tilt/Corner	-Adjusts the tilt of the image and the inward/outward position of four corners.
	View Color	-Adjusts the color temperature.
	Degauss	-Degauss the image.
	Language	-Select the language.
	Mode Display	-Shows preset horizontal/vertical frequency and mode
	Moire Reduction	-Reduces horizontal & vertical moire effect.
	OSD Position	-Adjusts horizontal/vertical position of OSD.

\* This is the total OSD feature, your monitor may not have all the above functions.

## Timing Mode

### Timing modes of 85KHz

<b>VGA</b>	640 x 400 @ 70HZ
<b>VESA</b>	640 x 480 @ 85HZ
<b>VESA</b>	800 x 600 @ 75HZ
<b>VESA</b>	800 x 600 @ 85HZ
<b>VESA</b>	1024 x 768 @ 75HZ
<b>VESA</b>	1024 x 768 @ 85HZ
<b>VESA</b>	1280 x 1024 @ 60HZ
<b>VESA</b>	1280 x 1024 @ 75HZ
<b>VESA</b>	1600 x 1200 @ 65HZ
<b>Macintosh</b>	832 x 624 @75HZ
<b>Macintosh</b>	1024 x 768 @75HZ
<b>Macintosh</b>	1152 x 870 @75HZ

### Timing modes of 95KHz

<b>VESA</b>	640 x 350 @ 85HZ
<b>VESA</b>	720 x 400 @ 85HZ
<b>VESA</b>	640 x 480 @ 85HZ
<b>VESA</b>	800 x 600 @ 75HZ
<b>VESA</b>	800 x 600 @ 85HZ
<b>VESA</b>	1024 x 768 @ 75HZ
<b>VESA</b>	1024 x 768 @ 85HZ
<b>VESA</b>	1152 x 864 @ 75HZ
<b>VESA</b>	1280 x 960 @ 85HZ
<b>VESA</b>	1280 x 1024 @ 75HZ
<b>VESA</b>	1280 x 1024 @ 85HZ
<b>VESA</b>	1600 x 1200 @ 75HZ

## Other Information

### Technical Specification

<b>CRT</b>	Type	19"(Viewable size 18")	
	Dot Pitch	Specified on carton box.	
	Phosphor	RGB, medium persistence	
	Glass Surface	Anti-Static, Anti-reflection coating.	
<b>Input Signal</b>	Video	RGB analogue	
	Sync	H/V separate (TTL) H: 30-95KHz (95K model) H: 30-85KHz (85K model) V:50-160Hz	
<b>Compatibility</b>	IBM PC	IBM® XT, AT, 386, 486, Pentium®, PS/2 and compatibles.	
	Macintosh	Macintosh II, LC, Quadra series, Power Mac, Macintosh Clones.	
<b>Connectors</b>	Rear	Video-in	15-pin D-SUB
		Power	3-pin plug
<b>Power</b>	Voltage	AC	100-240 V
	Consumption	AC	130 watts (typical)
<b>Power saving modes</b>	On	<130W typical (green LED)	
	DPMS Stand By	<15W (orange LED)	
	DPMS Suspend	<15W (orange LED)	
	DPMS Off	<5W(orange LED)	

## 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 result in danger to the monitor as well as to the user. Carefully go over the following WARNINGS before installation and keep this guide handy.

### WARNINGS:

- ◆ This monitor should be operated only at the power voltages indicated on the label on the rear end of the monitor. If you're unsure of the power supply in your area, consult your local dealer or power company.
- ◆ Do not try to repair the monitor yourself as it contains no user serviceable parts. The monitor should only be repaired by a qualified technician.
- ◆ Do not remove the monitor cabinet. There are high-voltage parts inside that may cause an electric shock, even when the power cord is disconnected .
- ◆ 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. Unplug the monitor immediately if gets wet 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 cable or power cord.
- ◆ For pluggable equipment, the Socket-outlet shall be installed near the equipment and shall be easily accessible.

## Care and Maintenance

### Care

- Avoid exposing your monitor directly to sunlight or other heat source. Place your monitor away from the sun to reduce glare.
- Put your monitor in a well ventilated area. Do not place anything heavy on top of your monitor.
- Make certain your monitor is installed in a clean and moisture-free area.
- Keep your monitor away from magnets, motors, transformers, speakers, and TV sets.

### Safety Tips:

- If smoke, abnormal noise or odor comes out of your monitor, switch off the power immediately and call your service center.
- Never remove the rear cover of your monitor cabinet. The display unit inside contains high-voltage parts and may cause electric shock.
- Never try to repair your monitor yourself. Always call your service center or a qualified technician to fix it.