



17-inch Flat Color Monitor

Ecran plat couleur 17"

17-Zoll-Flachbildmonitor

Monitor en color de pantalla plana de 17 pulgadas

Color Monitor a schermo piatto da 17 pollici

17" platt färgbildskärm

17-дюймовый цветной монитор с плоским экраном

17インチフラットカラーモニター

17 인치 평면 칼라 모니터

17-英寸纯平彩显

17-英寸平面彩色显示器

**Owner's
Instructions**

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Safety Instructions

Please read the following safety instructions as they are designed to prevent damage to property and harm to the user.

Warning / Caution



Failure to follow directions noted by this symbol could result in bodily harm or damage to equipment.

Notational Conventions



Prohibited



Important to read and understand at all times



Do not disassemble



Disconnect the plug from the outlet



Do not touch



Grounding to prevent an electric shock

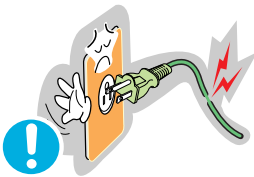
Safety Instructions

Power

When not used for extended periods of time, set your computer to DPMS. If using a screen saver, set it to the active screen mode.

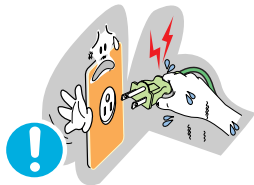


If the size of your monitor is small, or if the same image is present for long periods of time, you may see afterimages due to damage to the fluorescent substance on the inside of the CDT.



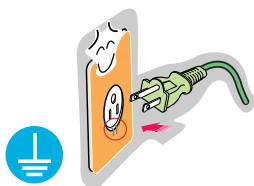
- Do not use a damaged or loose plug.

◆ This may cause an electric shock or fire.



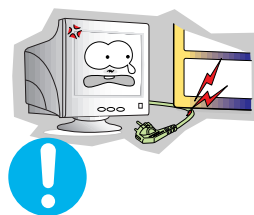
- Do not pull the plug out by the wire nor touch the plug with wet hands.

◆ This may cause an electric shock or fire.



- Use only a properly grounded plug and receptacle.

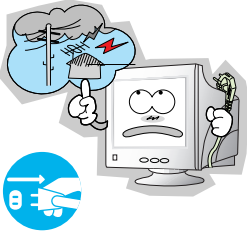
◆ An improper ground may cause electric shock or equipment damage.



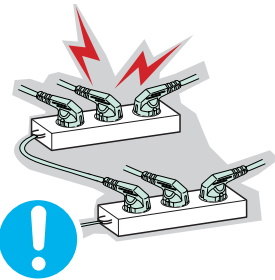
- Do not excessively bend the plug and wire nor place heavy objects upon them, which could cause damage.

◆ Failure to do so may cause an electric shock or fire.

Safety Instructions



- Disconnect the plug from the outlet during storms or lightening or if it is not used for a long period of time.
 - ◆ Failure to do so may cause an electric shock or fire.



- Do not connect too many extension cords or plugs to an outlet.
 - ◆ This may cause a fire.

Safety Instructions

Installation



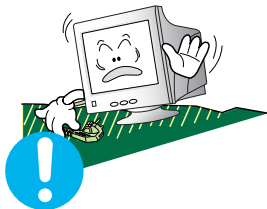
- Do not cover the vents on the monitor cabinet.
- ◆ Bad ventilation may cause a breakdown or fire.



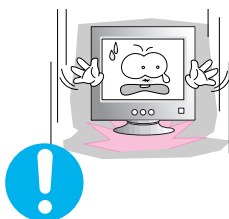
- Put your monitor in a location with low humidity and a minimum of dust.
- ◆ An electric short or fire could result inside the monitor.



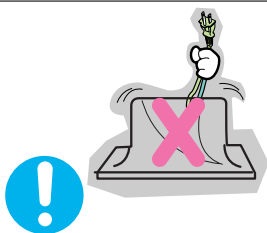
- Do not drop the monitor when moving it.
- ◆ This may cause damage to the product or human body.



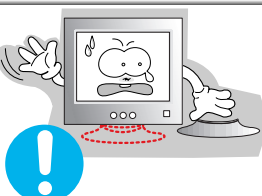
- Place the monitor on a flat and stable surface.
- ◆ The monitor can cause injury by falling.



- Set down the monitor carefully.
- ◆ It could be damaged or broken.



- Do not place the monitor face down on the screen.
- ◆ The CRT surface may be damaged.



- Do not use the monitor without the monitor stand.
- ◆ It could break down or cause a fire due to bad ventilation.
- ◆ If the monitor must be used without the supplied stand, take steps to insure proper ventilation.

Safety Instructions

Cleaning



When cleaning the monitor case or the surface of the CRT, wipe with a slightly moistened, soft fabric.

Do not clean Flat monitor with water. Use a water-diluted mild detergent.

(Some detergents contain significant amounts of alcohol-based solvents, which can damage (color change) or crack the monitor case. The antiglare/anti-static surface coating on the CDT may also be affected.)

Dilute the detergent (1:10 ratio) with water before using.



- Do not spray detergent directly on the monitor.



- Use the recommended detergent with a smooth cloth.
 - ◆ You can prevent the coated CRT from being damaged or the monitor cabinet from being dissolved, cracked or discolored.



Caution: Use a recommended detergent only, as other surfactants containing large amounts of alcohol, solvent or other strong substances, can discolor or crack the monitor or damage the coated CDT



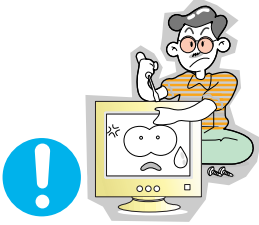
- If the connector between the plug and the pin is dusty or dirty, clean it properly with a dry cloth.
 - ◆ A dirty connector can cause an electric shock or fire.



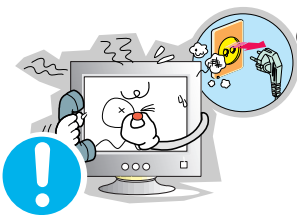
- Do not set a glass of water, chemicals or any small metal objects on the monitor.
 - ◆ This may cause damage, electric shock or a fire.
 - ◆ If a foreign substance gets into the monitor, disconnect the plug and then contact a service center.

Safety Instructions

Other



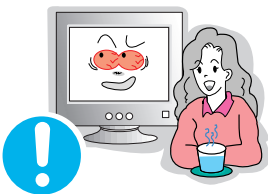
- Do not remove cover (or back). No user serviceable parts inside.
 - ◆ This may cause an electric shock or a fire.
 - ◆ Refer servicing to qualified service personnel.



- If your monitor does not operate normally - in particular, if there are any unusual sounds or smells coming from it - unplug it immediately and contact an authorized dealer or service.
 - ◆ This may cause an electric shock or a fire.



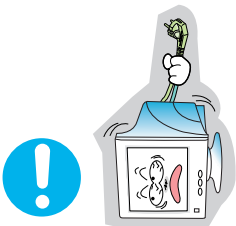
- Do not place any heavy objects on the monitor.
 - ◆ This may cause an electric shock or a fire.



- For each hour of looking at the monitor, you should let your eyes rest for 5 minutes.
 - ◆ This will reduce eye fatigue.

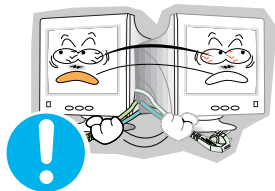


- Do not use or store flammable substances near the monitor.
 - ◆ This may cause an explosion or fire.



- Do not try to move the monitor by pulling on the wire or the signal cable.
 - ◆ This may cause a breakdown, electric shock or a fire due to damage to the cable.

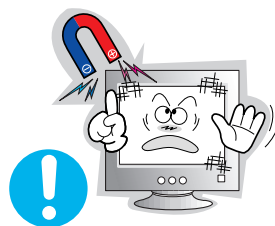
Safety Instructions



- Do not move the monitor right or left by pulling only the wire or the signal cable.
- ◆ This may cause a breakdown, electric shock or a fire due to damage to the cable.



- Never insert anything metallic into the monitor openings.
- ◆ This may cause an electric shock, fire or injury.



- Keep the monitor away from any magnetic substances..
- ◆ This may cause discoloring or distortion of the image.

Introduction

Unpacking

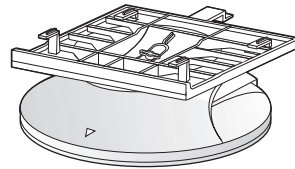
■ Monitor and Stand



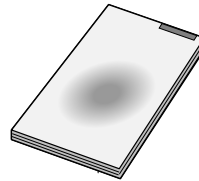
(Your monitor is shipped with the base detached.)

Please make sure the following items are included with your monitor. If any items are missing, contact your service representative.

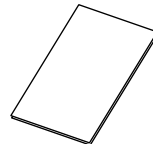
■ Stand



■ Quick Setup Guide



■ Warranty card

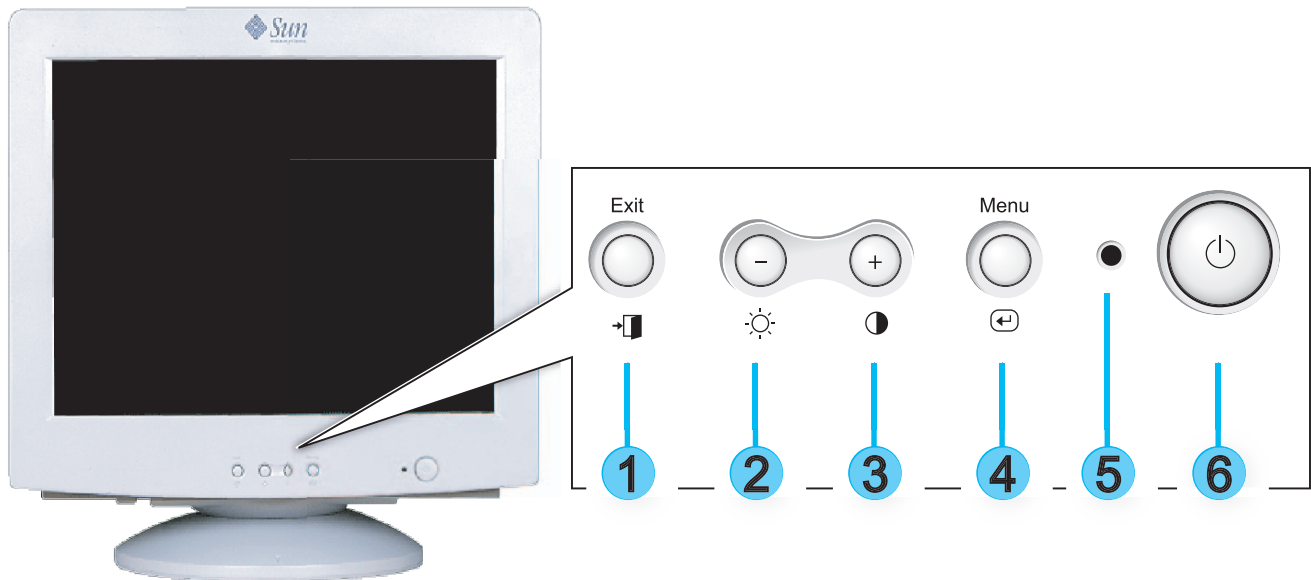


■ User's Guide CD



Introduction

Front



1. Exit button : Use this button to Exit the active menu or the OSD.
- 2,3. Adjust buttons : These buttons allow you to highlight and adjust items in the menu.
4. Menu button : Use this button to open the OSD and activate a highlighted menu item.
5. Power indicator : Indicates normal or Power Saving Mode.
6. Power button : Use this button to turn the monitor on and off.

Note: See PowerSaver described in the manual for further information regarding power saving functions. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods.

Introduction

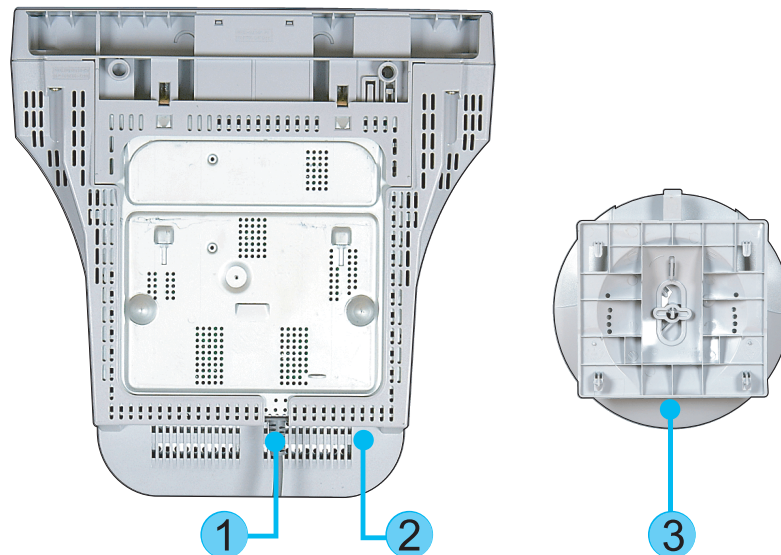
Rear



1. Power port : Connect the power cord for your monitor to the power port on the back of the monitor.
2. Signal cable : Connect the end of the signal cable to your computer's video port (video board, video card or graphics card).

Note: See Connecting Your Monitor for further information regarding cable connections.

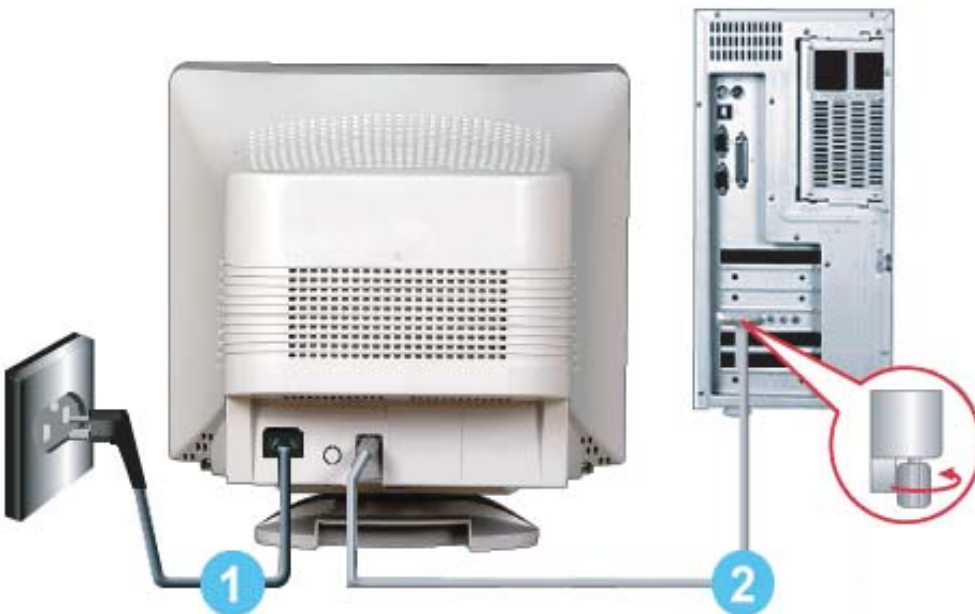
Bottom



1. Signal cable : Connect the end of the signal cable to your computer's video port (video board, video card or graphics card).
2. Power port : Connect the power cord for your monitor to the power port on the back of the monitor.
3. Tilt/Swivel Base : You can separate the base from the monitor.

Setup

Connecting Your Monitor



1. Connect the power cord for your monitor to the power port on the back of the monitor.
Plug the power cord for the monitor into a nearby outlet.
2. Connect the end of the signal cable to your computer's video port (video board, video card or graphics card).
3. Turn on your computer and monitor. If your monitor displays an image, installation is complete.

Setup

Tilt/Swivel Base Installation

1. Tilt/Swivel Base

With the built-in pedestal, you can tilt and/or swivel the monitor for the most comfortable viewing angle.

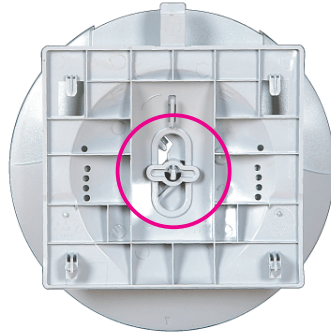


Note: The base is detachable. Your monitor is shipped with the base detached.

Setup

2. Attaching the Base

Your monitor is supplied with the base detached, attach the base as follows.



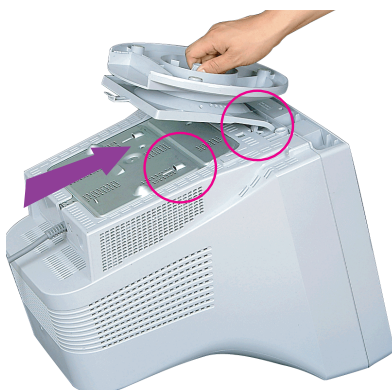
Note: Remove the twist-tie before attaching the base to the monitor.



1. Place the monitor upside-down on a flat work surface.



2. Align the tabs on the base with the corresponding slots on the bottom of the monitor.



3. Press the base onto the monitor until the tabs are fully engaged in the slots.



Do not bend the snap.

4. Push the base toward the front of the monitor until the release latch clicks into the locked position.

Note: The Base will align with the monitor slots in only one position.

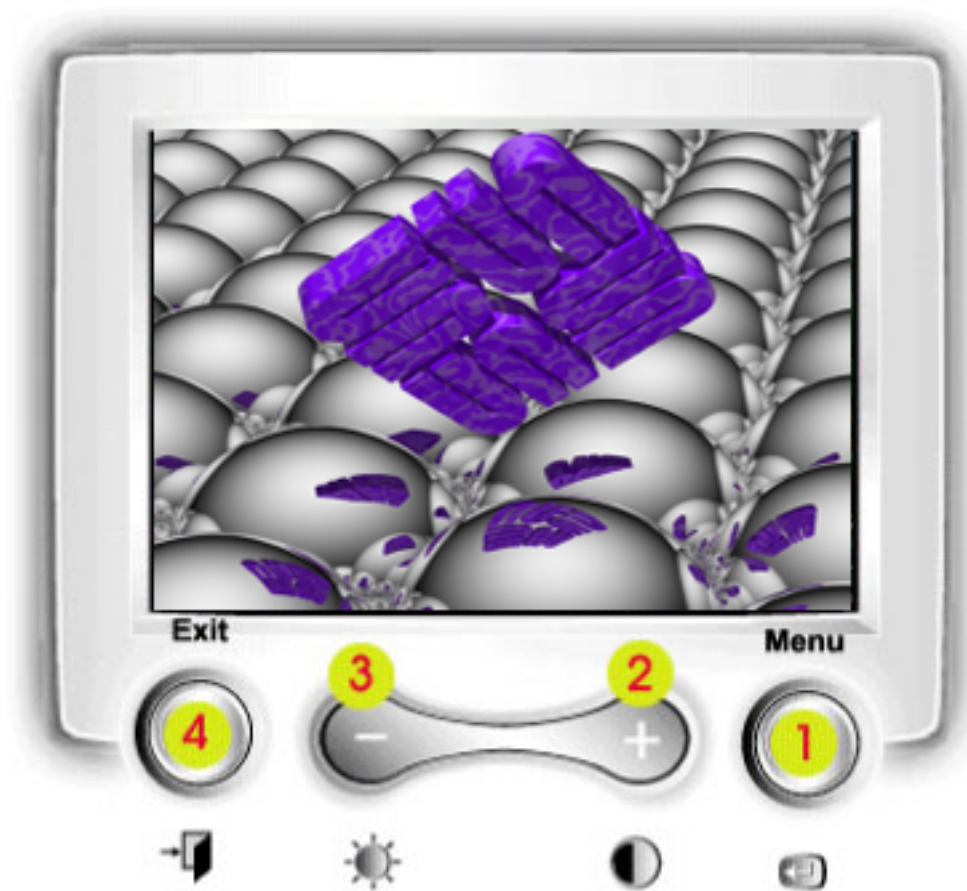
Setup

3. Removing the Base



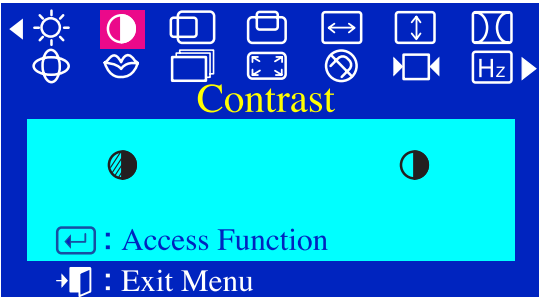

1. Turn off the monitor and unplug it from the electrical outlet.
2. Place the monitor upside down on a stable, flat work surface.
3. Squeeze and pull up on the release latch on the base.
4. Push the base toward the back of the monitor and lift up to remove the base.

On Screen Display (OSD) Menu System



- 1 Use this button to open the OSD and activate a highlighted menu item.
- 2.3 Use these buttons to highlight and adjust items using the On-Screen Display. These buttons are also direct access buttons for the contrast and brightness feature.
- 4 Use this button to Exit the active menu or the OSD.

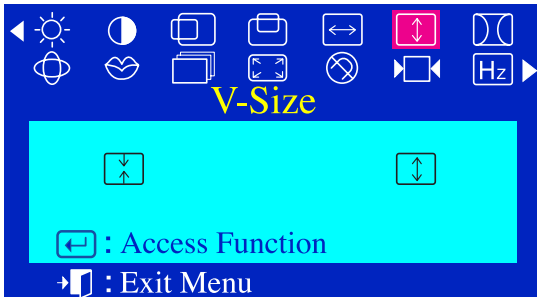
On Screen Display (OSD) Menu System

Menu	How to adjust
 <p>Brightness</p> <p>← : Access Function → : Exit Menu</p>	<p>Brightness</p> <p>: Background brightness of screen.</p> <p>– Decreases brightness + Increases brightness</p>
 <p>Contrast</p> <p>← : Access Function → : Exit Menu</p>	<p>Contrast</p> <p>: Contrast of screen image.</p> <p>– Decreases contrast + Increases contrast</p>
 <p>H-Position</p> <p>← : Access Function → : Exit Menu</p>	<p>Horizontal Position</p> <p>: Horizontal screen position.</p> <p>– Moves screen left + Moves screen right</p>
 <p>V-Position</p> <p>← : Access Function → : Exit Menu</p>	<p>Vertical Position</p> <p>: Vertical screen position.</p> <p>– Moves screen down + Moves screen up</p>
 <p>H-Size</p> <p>← : Access Function → : Exit Menu</p>	<p>Horizontal Size</p> <p>: Horizontal screen size.</p> <p>– Decreases size + Increases size</p>

On Screen Display (OSD) Menu System

Menu

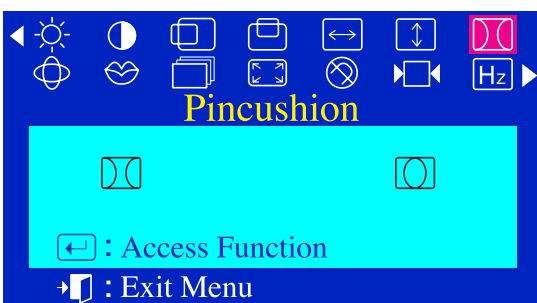
How to adjust



Vertical Size

: Vertical screen size.

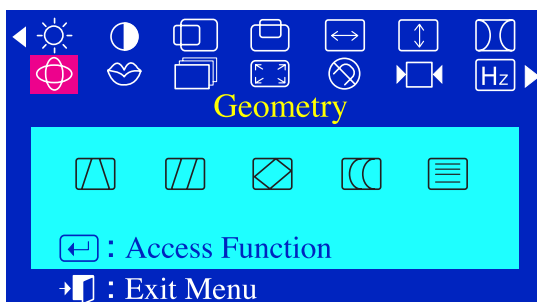
- Decreases size
- + Increases size



Pincushion

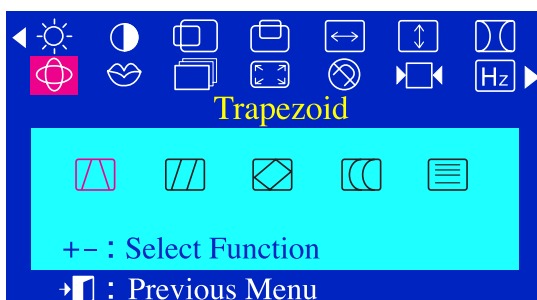
: Straightens screen vertical edges.

- Curves image inward
- + Curves image outward



Geometry

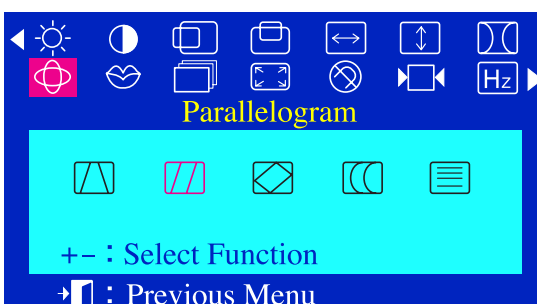
: Adjust the Trapezoid, Parallelogram, Rotation, Pinbalance, V-Linearity of the screen image.



Trapezoid

: Width of top and bottom of screen.

- Widens bottom of screen
- + Widens top of screen



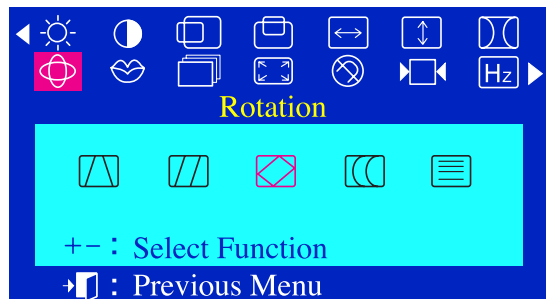
Parallelogram

- Skews screen image left
- + Skews screen image right

On Screen Display (OSD) Menu System

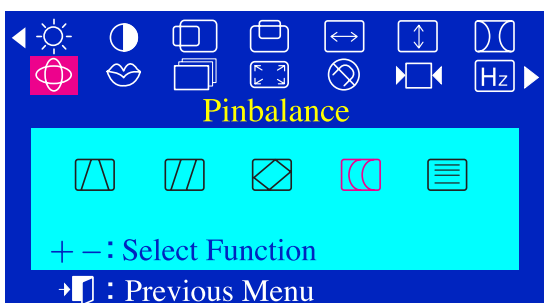
Menu

How to adjust



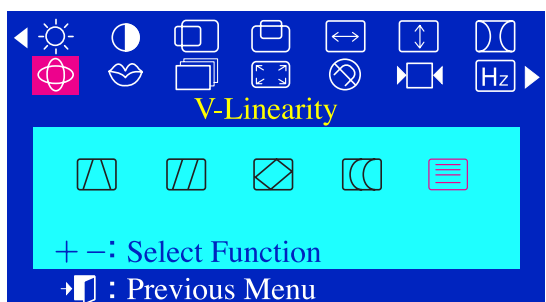
Rotation

- Rotates entire screen left
- + Rotates entire screen right



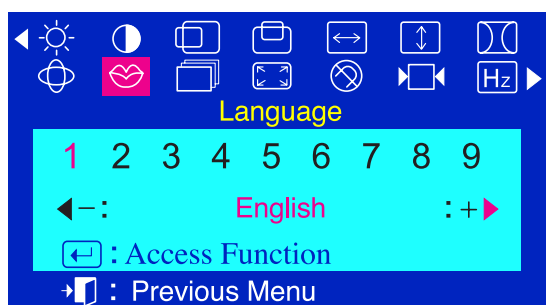
Pinbalance

- Curves vertical lines to left
- + Curves vertical lines to right



V-Linearity

- Compresses image at top of screen
- + Compresses image at bottom of screen



Language

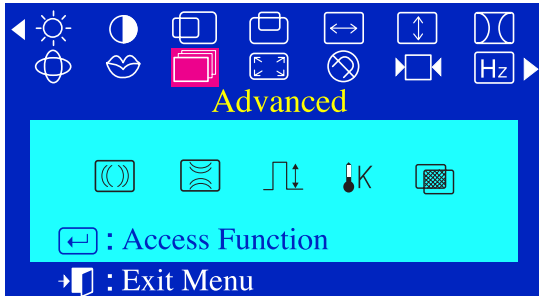
- : - and + scroll through on-screen language options.
(English/ Deutsch/ Francais/ Italiano/Português/
Español/ Svenska/ Russian/Korean)

Note: The language chosen affects only the language of the OSD. It has no effect on any application software.

On Screen Display (OSD) Menu System

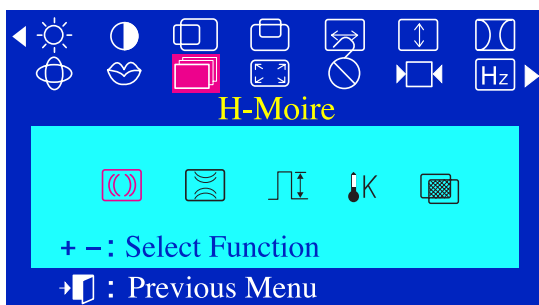
Menu

How to adjust



Advanced

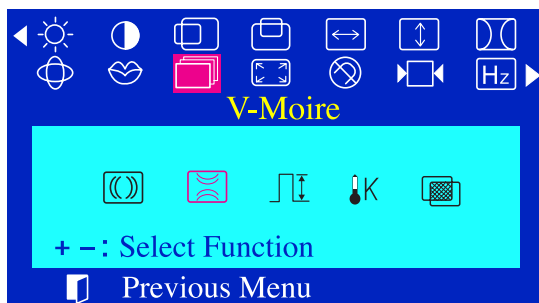
H-Moire
V-Moire
Video Input Level
Color Temperature
Halftone



H-Moire

: Corrects for on-screen moiré pattern.

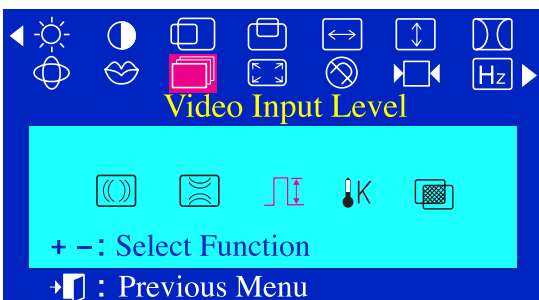
– and + clear Horizontal Moiré



V-Moire

: Corrects for on-screen moiré pattern.

– and + clear Vertical Moiré



Video Input Level

: Selects the video signal level.

– Select 0.7 V
+ Select 1.0 V



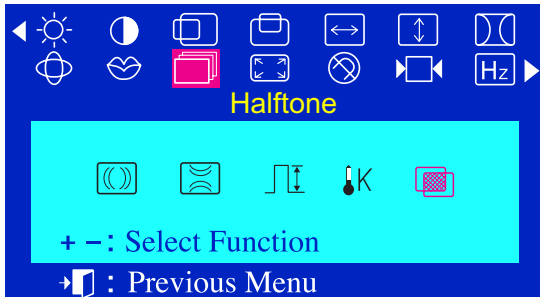
Color Temperature

– 9300k more blue
+ 6500k more red

On Screen Display (OSD) Menu System

Menu

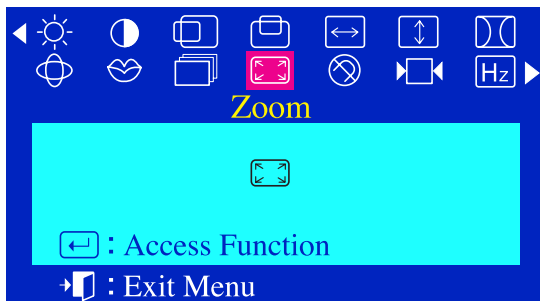
How to adjust



Halftone

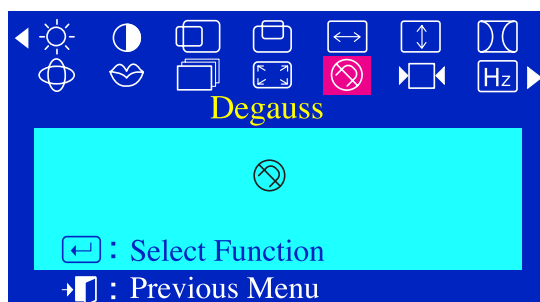
: Used to adjust transparency of OSD.

- Decrease
+ Increase



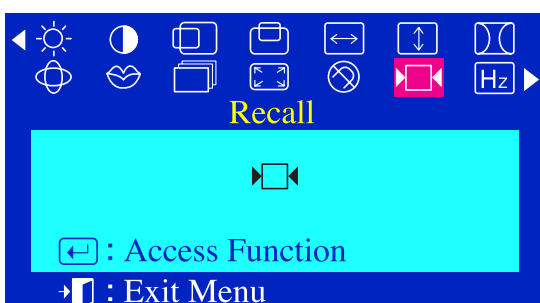
Zoom

- Reduces view of display area
+ Enlarges view of display area



Degauss

: Removes color distortion caused by magnetic fields.
Do not use more than once in 30 minutes.



Recall

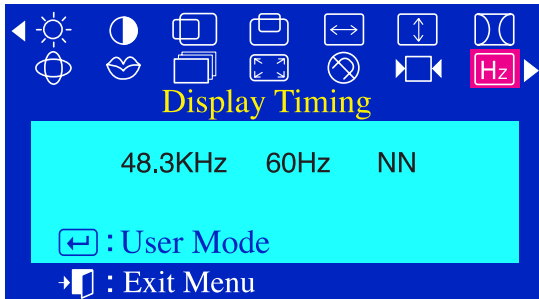
: Returns monitor to original settings.

- No
+ Yes

On Screen Display (OSD) Menu System

Menu

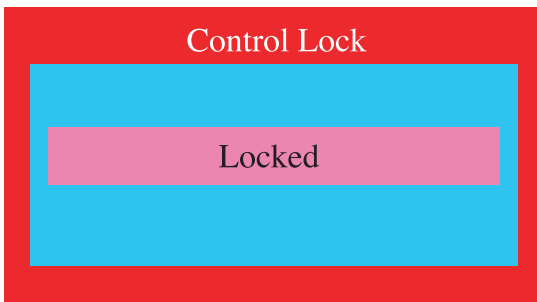
How to adjust



Display Timing

: Monitor display settings.

– Factory timing
+ User timing



OSD Lock/Unlock



: Allows you to secure the current control settings so that they cannot be inadvertently changed. You can unlock the OSD controls at any time by using the same procedure.

- Push and hold in the Menu button for 10 seconds or more to Lock or to Unlock.





Troubleshooting

Check List



Note : Before calling for service, check the information in this section to see if you can solve the problem yourself. If you do need assistance, please call the phone number on the warranty card, the phone number on the Information section or contact your service representative.

Symptom	Check List	Solution
<p>No Images on the screen. I cannot turn on the monitor.</p> 	Is the power cord connected properly?	Check the power cord connection and supply.
	Can you see "No Connection, Check Signal Cable" on the screen?	Check the signal cable connection.
	If the power is on, reboot the computer to see the initial screen(the login screen), which can be seen.	<ul style="list-style-type: none"> If the boot up screen appears and the login screen does not, check that the correct timing/resolution is set by the video card for this monitor. (Refer to Preset Timing Modes) Note: If the boot up screen does not appear, contact a service center or your service representative
	Can you see "Sync. Out of Range" on the screen?	<ul style="list-style-type: none"> You can see this message when the signal from the video card exceeds the maximum resolution and frequency that the monitor can properly handle. Adjust the maximum resolution and frequency applicable to the monitor.
<p>I cannot see the On Screen Display(OSD).</p> 	There is no image on the screen.Is the power indicator on the monitor blinking at 1 second intervals?	<ul style="list-style-type: none"> The monitor is in PowerSave mode. Press a key on the keyboard or move the mouse to activate the monitor and restore the image on the screen.
	Have you locked the On Screen Display (OSD) Menu to prevent changes?	<ul style="list-style-type: none"> Unlock the OSD by pressing the MENU button for at least 10 seconds.

Troubleshooting

Symptom	Check List	Solution
<p>The image on the screen is shaking.</p> 	<p>Check the monitor configuration to see if it is in Interlace Mode. (Interlace Mode: Vertical frequency 43Hz, 87Hz(i), etc)</p>	<ul style="list-style-type: none"> The signal from the video card exceeds the maximum resolution and frequency of the monitor.
	<p>Are there any magnetic products such as a high voltage wire near by?</p>	<ul style="list-style-type: none"> Move the monitor away from anything that can create a strong magnetic field.
	<p>Is the voltage stable?</p>	<ul style="list-style-type: none"> The screen image can appear to shake or vibrate at a particular time of day due to low supply voltage.
	<p>The screen image can also appear to shake or vibrate if there is a problem with the video card or the computer's main board.</p>	
<p>The screen shows strange colors or just black and white.</p> 	<p>Is the screen displaying only one color as if looking at the screen through a cellophane paper?</p>	<ul style="list-style-type: none"> Check the signal cable connection. Make sure the video card is fully inserted in its slot.
	<p>Have the screen colors become strange after running a program or due to a crash between applications?</p>	<ul style="list-style-type: none"> Reboot the computer.
	<p>Has the video card been set properly?</p>	<ul style="list-style-type: none"> Set the video card by referring to the video card manual.
<p>The screen suddenly has become unbalanced.</p> 	<p>Have you changed the video card or the driver?</p>	<ul style="list-style-type: none"> Adjust screen image position and size using the OSD.
	<p>Have you adjusted the resolution or frequency to the monitor?</p>	<ul style="list-style-type: none"> Adjust the resolution and frequency at the video card. (Refer to the Preset Timing Modes)
	<p>The screen can be unbalanced due to the cycle of the video card signals. Readjust Position by referring to the OSD.</p>	
<p>The screen is out of focus or OSD cannot be adjusted.</p> 	<p>Have you adjusted the resolution or frequency on the monitor?</p>	<ul style="list-style-type: none"> Adjust the resolution and frequency of the video card. (Refer to the Preset Timing Modes)

Troubleshooting

Symptom	Check List	Solution
<p>The screen is partially distorted.</p> 	<p>Are there any magnetic products such as an adapter, speaker or a high voltage wire near the monitor?</p>	<ul style="list-style-type: none"> • Enter the OSD and perform a 'Degauss'. • Keep the monitor away from any magnetic products.
<p>LED is blinking but no images on the screen.</p> 	<p>Is the frequency properly adjusted when checking the Display Timing on the menu?</p>	<ul style="list-style-type: none"> • Adjust the frequency properly by referring to the video card manual and the Preset Timing Modes. <p>(The maximum frequency per resolution may differ from product to product.)</p>
<p>There are only 16 colors shown on the screen. The screen colors have changed after changing the video card.</p>	<p>Has the video card been set properly?</p>	<ul style="list-style-type: none"> • Set the video card by referring to the video card manual.
<p>There is a message that reads "Unrecognized monitor, Plug & Play (VESA DDC) monitor found".</p>	<p>See the video card manual to see if the Plug & Play (VESA DDC) function can be supported.</p>	
<p>Note: If problems repeatedly occur, contact an authorized service center.</p>		

Troubleshooting

Q & A

Question	Answer
How can I change the frequency?	Frequency can be changed by reconfiguring the video card. Note that video card support can vary, depending on the version of the driver used. (Refer to the computer or the video card manual for details.)
How can I set the Power Saving function?	Refer to your computer user's manual.
The monitor makes a sound when it is turned on.	This is normal as some sound may be generated when the metal case and the electromagnet, which are installed to block any electromagnetic waves, interact with each other.
How can I clean the outer case/Picture tube?	Disconnect the power cord and then clean the monitor with a soft cloth, and/or a very mild detergent. Do not leave any remains of the detergent nor scratch the case. Do not allow any liquids to go inside the monitor.

Troubleshooting

Self-Test Feature Check

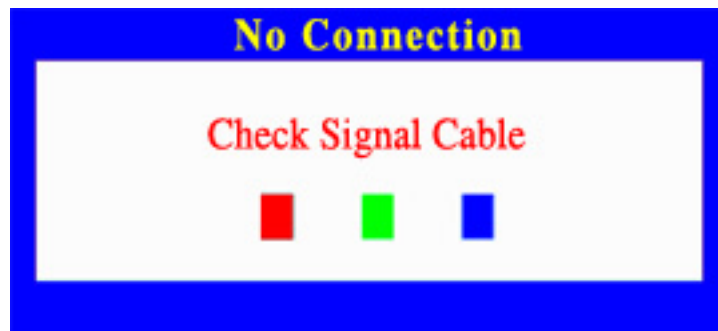
A self-test feature is provided that allows you to check for proper monitor function. If your monitor and computer are properly connected but the monitor screen remains dark and the power indicator is blinking, run the monitor self-test by performing the following steps:

Self-Test Feature Check

1. Turn off both your computer and the monitor.
2. Unplug the video cable from the back of the computer.
3. Turn on the monitor.

If your monitor is functioning properly, you will see a box with a blue border and red text inside as shown in the following illustration:

The three boxes inside the border are red, green and blue.



Failure of any of the boxes to appear indicates a problem with your monitor. This box also appears during normal operation if the video cable becomes disconnected or damaged.

4. Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

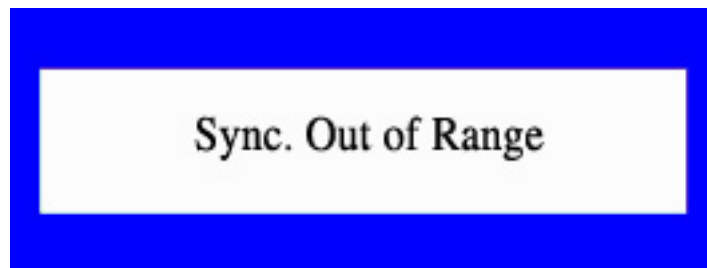
If your monitor screen remains blank after using the previous procedure, check your video card and computer system; your monitor is functioning properly.

Troubleshooting

Self-Test Feature Check

Warning Messages

If there is something wrong with the input signal, a message appears on the screen or the screen goes blank although the power indicator LED is still on. The message may indicate that the monitor is out of scan range or that you need to check the signal cable.



Environment

The location and the position of the monitor may influence the quality and other features of the monitor.


1. If there are any woofer speakers near the monitor, unplug and relocate the woofer to another room.
2. Remove all electronic devices such as radios, fans, clocks and telephones that are within 3 feet (one meter) of the monitor.
3. Degauss the monitor if any devices were removed from the area.

Useful Tip

- A monitor recreates visual signals received from the computer. Therefore, if there is trouble with the computer or the video card, this can cause the monitor to become blank, have poor coloring, noise, Sync. Out of Range, etc. In this case, first check the source of the problem, and then contact a service center or your dealer.
- Judging the monitor's working condition
 - ◆ If there is no image on the screen or a "Sync. Out of Range" message comes up, disconnect the cable from the computer while the monitor is still powered on.
 - ◆ If there is a message coming up on the screen or if the screen goes white, this means the monitor is in working condition.
 - ◆ In this case, check the computer for trouble.

Specifications

General Specifications

General	
Model Name	PN17JO
Picture Tube	
Type	17" (43cm) DynaFlat, 16" (40.6cm viewable)
Deflection angle	90°
Dot Pitch	0.24 mm (Horizontal: .20 mm ~ Vertical: 25 mm)
Screen type	Silica coated with anti-electronic properties (TCO : Multilayer coating) Medium-short persistence phosphor.
Maximum Resolution	~ Recommended Resolution
1600 Dots, 1200 Lines	~ 1280 Dots; 1024 lines
Active Display	4:3 5:4
Horizontal	12.3 ± 0.16 inch (312 ± 4 mm) 11.1 ± 0.12 mm (295 ± 3 mm)
Vertical	9.2 ± 0.16 inch (234 ± 4 mm) 9.29 ± 0.12 mm (236 ± 3 mm)
Synchronization	
Horizontal	30 ~ 85 kHz
Vertical	50 ~ 160 Hz
Input Signal, Terminated	
Analog	0.7 Vpp positive at 75 ohms
Combined/Sep. Sync	TTL level, positive or negative
Display Color	
Unlimited	
Maximum Pixel Clock	
135 MHz	
Power Supply	
AC 100 ~ 240V ± 10%, 60Hz/50 Hz ± 3Hz	
Power Consumption	
100 W (Maximum), 80W (Nominal)	
Dimensions (WxDxH)	
398 x 412 x 400 mm (with base)	
Weight	
16.3 kg	
Plug and Play Capability	
This monitor can be installed on any Plug & Play compatible system. Interaction of the monitor and computer systems will provide the best operating conditions and monitor settings. In most cases, monitor installation will proceed automatically, unless the user wishes to select alternate settings.	

Specifications

Preset Timing Modes

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjust the screen as follows.

Model Name : PN17JO

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
SUN, 1280 x 1024	81.13	76.11	135.00	-/-
SUN, 1152 x 900	71.81	76.15	108.00	-/-
VESA, 1024 x 768	60.023	75.029	78.75	+/+
SUN, 1152 x 900	61.846	66.003	94.50	-/-
VESA, 800 X 600	46.875	75.00	49.50	+/+
VESA, 1280 X 1024	68.70	75.00	94.50	+/+



Specifications

PowerSaver

This monitor has a built-in power management system called PowerSaver. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain amount of time. The monitor automatically returns to normal operation when you move the computer's mouse or press a key on the keyboard. For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods. The PowerSaver system operates with a VESA DPMS compliant video card installed in your computer. Use a software utility installed on your computer to set up this feature.

Model Name : PN17JO

State	Normal Operation	Power-off Mode EPA/ENERGY 2000
Power Indicator	Green	Green, Blinking (1 sec. interval)
Power Consumption	80W (Nominal) 100W (Maximum)	Less than 3W



This monitor is EPA ENERGY STAR[®] compliant and ENERGY2000 compliant when used with a computer equipped with VESA DPMS functionality. As an ENERGY STAR[®] Partner, Sun Microsystems, Inc. has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

Information

Terms

● Dot Pitch

The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit: mm

● Vertical Frequency

The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called Vertical Frequency or Refresh Rate. Unit: Hz

Example: If the same light repeats itself 60 times per second, this is regarded as 60 Hz. In this case, flickering of the screen can be detected. To avoid this problem, there is a Flicker-free Mode using a vertical frequency over 70 Hz.

● Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: KHz

● Interlace and Non-Interlace Methods

Showing the horizontal lines of the screen from the top to the bottom in order is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.

● Plug & Play

This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.

● Resolution

The number of horizontal and vertical dots used to compose the screen image is called 'resolution'. This number shows the accuracy of the display. High resolution is good for performing multiple tasks as more image information can be shown on the screen.

Example: If the resolution is 1024 X 768, this means the screen is composed of 1024 horizontal dots (horizontal resolution) and 768 vertical lines (vertical resolution).

Information

Regulatory

**FCC Information | IC Compliance Notice | MPR II Compliance |
European Notice (Europe only) | PCT Notice |
TCO'99 - Ecological requirements for personal computers (TCO applied model only)**

● FCC Information

User Instructions

The Federal Communications Commission Radio Frequency Interference Statement includes the following warning:

Note: 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 receptions, 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.

User Information

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may find the booklet called How to Identify and Resolve Radio/TV Interference Problems helpful. This booklet was prepared by the Federal Communications Commission. It is available from the U.S. Government Printing Office, Washington, DC 20402, Stock Number 004-000-00345-4.

Warning

User must use shielded signal interface cables to maintain FCC compliance for the product.

Declaration of conformity for products Marked with FCC Logo

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The party responsible for product compliance:

SAMSUNG ELECTRONICS CO., LTD

America QA Lab of Samsung

85 West Tasman Drive

San Jose, CA 95134 USA

Tel) 408-544-5124

Fax) 408-544-5191

Information

A detachable power supply cord with IEC320 style terminations is required for, but not supplied with, this monitor. It should be suitable for connection to any UL Listed personal computer with similar configuration. Before making the connection, make sure the voltage rating of the computer convenience outlet is the same as the monitor and that the ampere rating of the computer convenience outlet is equal to or exceeds the monitor voltage rating. For 120 Volt applications, use only UL Listed detachable power cord with NEMA configuration 5-15P type (parallel blades) plug cap. For 240 Volt applications use only UL Listed Detachable power supply cord with NEMA configuration 6-15P type (tandem blades) plug cap.

● IC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations of ICES-003.

Cet appareil Numérique de classe B respecte toutes les exigences du Règlement ICES-003 sur les équipements produisant des interférences au Canada.

● MPR II Compliance

This monitor complies with SWEDAC(MPR II) recommendations for reduced electric and magnetic fields.

● European Notice (Europe only)

Products with the CE Marking comply with both the EMC Directive (89/336/EEC), (92/31/EEC), (93/68/EEC) and the 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:

- EN55022:1998 - Radio Frequency Interference
- EN55024:1998 - Electromagnetic Immunity
- EN61000-3-2:1995+A1+A2 - Power Line Harmonics
- EN61000-3-3:1995 - Voltage Fluctuations
- EN60950 - Product Safety.

● PCT Notice



● TCO'99-Ecological requirements for personal computers (TCO applied model only)



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.

This product meets the requirements for the TCO'99 scheme which provides for an international environmental and quality 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), Statens Energimyndighet(The Swedish National Energy Administration) and SEMKO AB.

Information

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

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?

The environmental demands have been developed by Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation). These 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.

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. There is however one exception. Mercury is, for the time being, permitted in the back light system of flat panel monitors as today there is no commercially available alternative. TCO aims on removing this exception when a Mercury free alternative is available.

Information

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.

Information

FCC Information

Declaration of conformity for products Marked with FCC Logo

We hereby declare that this device complies with Part 15 FCC Rules.

Operation is subject to the following two conditions :

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received, including interference that may cause undesired operation.

User Instructions

The Federal Communications Commission Radio Frequency Interference Statement includes the following warning:

Note: 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 receptions, 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.

User Information

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may find the booklet called *How to Identify and Resolve Radio/TV Interference Problems* helpful. This booklet was prepared by the Federal Communications Commission. It is available from the U.S. Government Printing Office, Washington, DC 20402, Stock Number 004-000-00345-4.

Warning

User must use shielded signal interface cables to maintain FCC compliance for the product.

Provided with this monitor is a detachable power supply cord with IEC320 style terminations. It may be suitable for connection to any UL Listed personal computer with similar configuration. Before making the connection, make sure the voltage rating of the computer convenience outlet is the same as the monitor and that the ampere rating of the computer convenience outlet is equal to or exceeds the monitor voltage rating.

For 120 Volt applications, use only UL Listed detachable power cord with NEMA configuration 5-15P type (parallel blades) plug cap. For 240 Volt applications use only UL Listed Detachable power supply cord with NEMA configuration 6-15P type (tandem blades) plug cap.

IC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations of ICES-003.

VCCI Information

This equipment is in the Class B category (information equipment to be used in a residential area or an adjacent area there-to) and conforms to the standards set by the Voluntary Control Council For Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in such residential area. When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

MPR II Compliance

This monitor complies with SWEDAC (MPR II) recommendations for reduced electric and magnetic fields.

European Notice

Manufacturer: Samsung Electronics Co., Ltd.

Products with the CE Marking comply with both the EMC Directive (89/336/EEC), (92/31/EEC), (93/68/EEC) and the 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:

- EN55022 (CISPR 22) – Radio Frequency Interference
- EN50082-1 : 1992 – Electromagnetic Immunity
- EN60555-2 (IEC555-2) – Power Line Harmonics
- EN60555-3 (IEC555-3) – Voltage Fluctuations
- EN60950 (IEC950) – Product Safety

Information

FCC Declaration of Conformity

According to 47 CFR, Parts 15 of the FCC Rules

*** For the following named product :**

COLOR MONITOR

(Category Name)

PN17JO / SAMSUNG

(Model No / Brand Name)

DP17M*

(Basic Model)

*** Manufactured at :**

SAMSUNG ELECTRONICS CO., LTD

We hereby declare that this device complies with Part 15 FCC Rules.
Operation is subject to the following two conditions ;

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received,
including interference that may cause undesired operation.

*** FCC Rules :**

Tested to comply with FCC part 15, class B

*** Test site at :**

Compliance Engineering Services, Sunnyvale, CA, USA

*** Responsible Party for Product Compliance**

America QA Lab of Samsung

85 West Tasman Drive, San Jose, CA 95134

Tel)408-544-5124

Fax)408-544-5191

*** Manufacturer Information**

SAMSUNG ELECTRONICS CO.,LTD.

416, Maetan-3Dong, Paldal-Gu

Suwon City, Kyungki-Do, Korea,

442-742 2000-02-15

(place and date of issue)

Display Division

EMC/SAFETY GROUP

Senior Manager/

Chai Gwang Lim

(name and signature of authorized person)