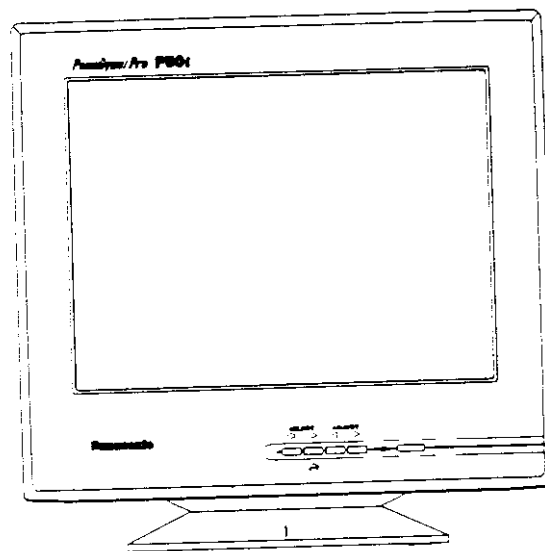


# Operating Instructions

Digital Multi-Scan Color Display

MODEL TX-T5N72



As an ENERGY STAR® partner,  
Matsushita Electric (Taiwan) Co., Ltd.  
has determined that this product  
meets the ENERGY STAR® guide-  
lines for energy efficiency.

## Panasonic

Read these instructions completely before operating this display monitor

## IMPORTANT NOTICE CONCERNING POWER CORD SELECTION

The power cord for this unit has been packed separately and has been selected according to the country of destination and must be used to prevent electric shock. Use the following guidelines if it is necessary to replace the original cord set.

The female receptacle of the cord set must meet CEE-22 requirements and will look like Figure 1:

## WICHTIGE INFORMATION BEZÜGLICH DES ZU BENUTZENDEN NETZKABELS

Das Netzkabel für diese Geräteeinheit wird separat verpackt geliefert und entspricht jeweils den landesspezifischen Anforderungen. Aus Gründen der Unfallverhütung ist die Benutzung dieses Netzkabels zwingend. Beachten Sie bitte folgende Hinweise, wenn ein Austausch des Originalkabels erforderlich ist. Der geräteseitige Stecker des Netzkabels muß den CEE-Anforderungen sowie dem in Abb. 1 gezeigten Beispiel entsprechen.

## AVISO IMPORTANTE RESPECTO A LA SELECCION DEL CABLE DE SUMINISTRO ELECTRICO

El cable de suministro eléctrico de esta unidad ha sido empacado en forma separada, ha sido seleccionado de acuerdo al país de destino y debe ser usado para prevenir sobrecargas eléctricas. Use las guías descritas a continuación, si es necesario reemplazar el cable original. El receptáculo hembra del cable debe cumplir los requerimientos CEE-22 y se vera como aparece en la Figura 1.

## NOTICE IMPORTANTE CONCERNANT LE CHOIX DU CORDON D'ALIMENTATION

Le cordon d'alimentation conçu pour cette unité a été emballé séparément et il a été choisi en fonction du pays de destination. Son utilisation vise à prévenir toute décharge électrique. Si vous devez remplacer le cordon initial, veuillez suivre les informations ci-dessous mentionnées. Le receptacle femelle du cordon doit satisfaire aux normes CEE-22 et comporter les caractéristiques présentées au schéma 1.

### For the United States and Canada

In the United States and Canada the male plug is a NEMA 5-15 style (Figure 2) and is UL Listed and CSA Labelled. For units which are mounted on a desk or table, type SVT or SJT cord sets may be used. For units which sit on the floor, only SJT type cord sets may be used. The cord set must be selected according to the current rating for your unit. Please consult Table A for the selection criteria for power cords used in the United States and Canada. (The cord set is marked with its Cord Type.)

### U.S.A. und Kanada:

In den U.S.A. und Kanada verfügt das Kabel netzseitig über einen Stecker des Typs NEMA 5-15 (Abb. 2), der den UL-Sicherheitsbestimmungen entspricht und die Markierung CSA trägt. Für Geräte, die auf einer Arbeitsfläche wie Tisch oder Schreibtisch installiert sind, können Netzkabel des Typs SVT oder SJT benutzt werden. Die Auswahl des Netzkabels muss gemäss dem für das Gerät zutreffenden Stromaufnahme-Nennwert erfolgen. Tabelle A enthält eine Aufstellung der Kriterien, die bei der Wahl des Netzkabels in den U.S.A. und Kanada zu berücksichtigen sind. (Der Kabelsatz ist mit dem Kabeltyp markiert.)

### Para Los Estados Unidos Y Canada

En los Estados Unidos y en Canadá el conector macho es estilo NEMA 5-15 (Figura 2), está listado UL y etiquetado CSA. Para las unidades que están montadas sobre un escritorio o sobre una mesa, debe usarse el cable tipo SVT o SJT. Para unidades que están sobre el piso, solo se debe usar el cable tipo SJT. El cable debe ser seleccionado de acuerdo al tipo de voltaje de su unidad. Consulte en la Tabla A los criterios de selección de los cables de suministro eléctrico usados en los Estados Unidos y en Canadá. (El juego de cables está marcado con su tipo de cables.)

### États-Unis et Canada

Aux États-Unis ainsi qu'au Canada, la prise mâle est de type NEMA 5-15 (schéma 2); elle est mentionnée dans la liste UL et est homologuée par l'ACNCR. En ce qui concerne les unités qui sont placées sur une table ou sur un bureau, il est possible d'utiliser des cordons de type SVT ou SJT. Quant aux unités qui sont placées à même le sol, seuls des cordons de type SJT peuvent être utilisés. Le choix du cordon doit s'effectuer en fonction de l'ampérage de votre unité. Veuillez consulter le tableau A pour les critères de sélection des cordons d'alimentation utilisés aux États-Unis et au Canada. (Le type de cordon est identifié sur le cordon lui-même.)

### For European Countries:

In Europe you must use a cord set which is appropriate for the receptacles in your country. The cord set is HAR-Certified, and the mark ◀HAR▶ will appear on the outer sheath, or on the insulation of one of the inner conductors.

If you have any questions concerning the proper power cord to use, please consult with the dealer from whom you purchased your unit.

### Europa:

In den europäischen Ländern ist das für den Anschluß an das jeweilige Netz erforderliche Kabel zu verwenden. Das Kabel muß den HAR-Anforderungen entsprechen und auf der Außenisolierung oder auf der Isolierung einer der Kabeladern die Markierung ◀HAR▶ aufweisen.

Sollten Sie hinsichtlich der Anwendung des richtigen Kabels irgendwelche Fragen haben, so konsultieren Sie bitte ihren Händler, von dem Sie ihr Gerät erworben haben.

### Para Los Países Europeos:

En Europa debe usar el cable apropiado al receptáculo usado en su país. El cable es HAR-Certificado y la marca ◀HAR▶ aparecerá en el forro externo o en la cubierta aislante de uno de los conductores internos.

Si tiene dudas acerca del cable apropiado que se debe usar, consulte la tienda donde adquirió su unidad.

### Pays européens:

En Europe, vous devez utiliser des cordons appropriés aux prises de votre pays. Les cordons doivent être de marque ◀HAR▶ et celle-ci doit apparaître sur la gaine plastique externe ou sur la partie isolante d'un des conducteurs internes.

Si vous avez des questions concernant le bon cordon à utiliser, vous êtes priés de consulter le concessionnaire chez qui vous avez acheté votre appareil.

Table A Tabelle A Tabla A Tacleau A

Cord Type	Size of Conductors In Cord	Maximum Current Rating of Unit
Kabeltyp	Größe der Kabeladern	Max. Stromaufnahme des Geräts
Tipo de cable	Tamaño de los conductores en el cable	Máximo voltaje de acuerdo a la unidad
Type de cordon	Taille des conducteurs dans le cordon	Amperage maximum de l'unité
SJT	18 AWG	10 Amps
SJT	16 AWG 14 AWG	12 Amps 12 Amps
SVT	18 AWG 17 AWG	10 Amps 12 Amps



Figure 1 Abb. 1

Figura 1 Schéma 1

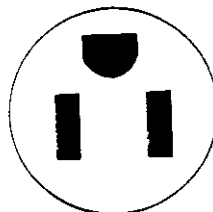


Figure 2 Abb. 2

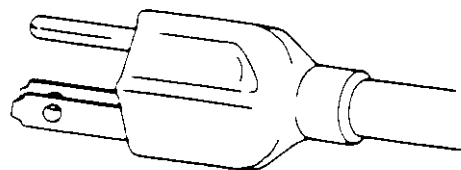


Figura 2 Schéma 2

**Precautions:**

● **AC PLUG CORD ( FOR U.K. )**

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

IF THE FITTED MOLDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET THEN THE PLUG SHOULD BE CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO AN APPROPRIATE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below. If in any doubt please consult a qualified electrician.

WARNING: -THIS APPLIANCE MUST BE EARTHED.

IMPORTANT: -The wires in this mains lead are coloured in accordance with the following code: -

Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol  $\perp$  or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or Coloured RED.

## Federal Communications Commission Requirements

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **FCC Warning:**

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

## CE Conformity



This device complies with the requirements of the EEC directive 89/336/EEC as amended by 92/31/EEC and 93/68/EEC Art. 5 with regard to "Electromagnetic compatibility", and 73/23/EEC as amended by 93/68/EEC Art. 13 with regard to "Safety".

Required item	Relative Standard Value	Relative to those Exceeding Standard Value	Remarks
EMI	#1		#4
ESD	#2	#3	X
RADIATED RF	#1	#3	
TRANSIENT F/B	#1	#3	
LINE HARMONICS	#1		

#1: Satisfies standards with no problems in performance and reliability.

#2: Effects may appear temporarily on the screen but there will be no problem in reliability.

#3: There is fear of the product breaking down.

#4: If a signal cable other than that specified is used, it will be the cause of electromagnetic wave interruption of peripheral devices.

To assure continued CE compliance the user must use the provided 1.5 m shielded video signal cable with bonded ferrite cores at both ends of the cable.

Handle correctly in accordance with the instruction manual.

EMI: Electromagnetic Interference      ESD: Electrostatic Discharge  
 RF: Radio Frequency                      F/B: Fast Burst

## Customer's Record

This serial number of this product may be found on this back cover.  
You should note this serial number of this unit in the space provided and retain this booklet as a permanent record of your purchase to aid in identification in the event of theft or loss.

Model number: \_\_\_\_\_  
Serial number: \_\_\_\_\_

ENGLISH

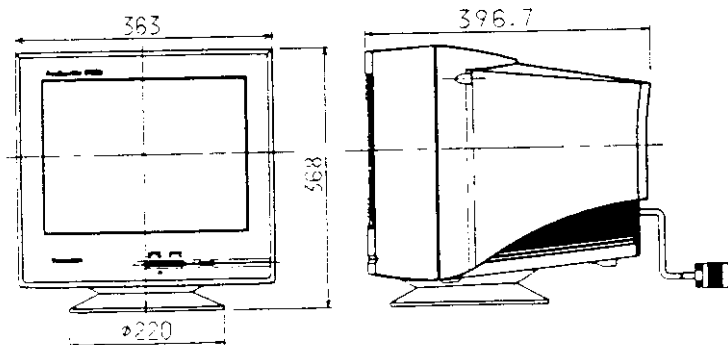
<b>Table of Contents</b>	<b><i>Product names listed here are company trademarks or registered trademarks.</i></b>
Features .....	I-2
Dimensions .....	I-2
Names .....	I-3
AC power cord .....	I-4
Connectors .....	I-4
Connections .....	I-4
Specifications .....	I-6
Preset Mode .....	I-6
On-Screen Display .....	I-7
Operation Procedure .....	I-7
Adjustments .....	I-8
Power Management System .....	I-13
Display Modes Memory .....	I-13
If Trouble Occurs .....	I-14
Precaution .....	I-15

## Features

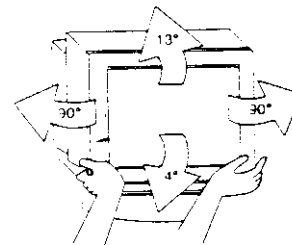
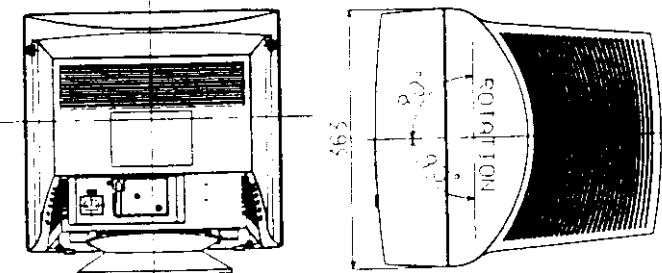
- 1) Digital adjustment using the on-screen display
  - The on-screen menu is available in 7 languages.
    - One of English, Russian, French, Italian, Spanish, German and Japanese can be selected.
  - Adjustments can be performed easily with the 4 control buttons and on-screen menu.
  
- 2) Environment-friendly
  - The display power consumption can be suppressed by using this unit in combination with a computer that conforms to the VESA DPMS (Video Electronics Standards Association Display Power Management Signaling) standards.
  - This product conforms to the ENERGY STAR program.
  
- 3) VESA DDC1/2B is used.
  - By using this unit in combination with a computer that conforms to the VESA (Video Electronic Standards Association) DDC (Display Data Channel) standard, the display monitor can be used in the optimum condition.
  
- 4) High quality CRT is used
  - The screen is 15-inch (14.0 inch/35.6 cm viewable, 0.27 dot pitch), Anti- Glare and Anti-Static Coat, and dark face, providing low reflection, static electricity prevention, high resolution and high contrast.
  
- 5) Digital multiscan
  - Automatic following is done with horizontal frequency of 30kHz to 70kHz and vertical frequency of 50Hz to 180Hz ; capable of matching VGA, SVGA, VESA and Macintosh 13", 16" modes and 1280(H)× 1024(V)/(fv=60 Hz) high resolution.

## Dimensions

*When adjusting the angle, hold the bottom corners of the display with both hands and turn it slowly. (See figure at down) Do not press on the upper part of the display.*



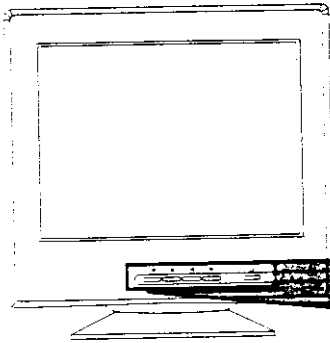
Width : 363mm, Height : 368mm. Depth : 369.7mm  
 Tilt angle : Up 13°, Down 4°  
 Swivel angle : 90°each Left and Right



*The color of the screen may become distorted due to magnetic influence when the display angle is adjusted while power supply is turned on. Perform the demagnetization operation if this condition occurs → See page 1 - 8*

## Names

### Front view



#### **1 2 3 4** Operation keys

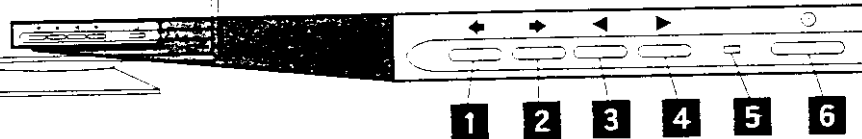
These keys are used for screen adjustment.

#### **5** Pilot LED

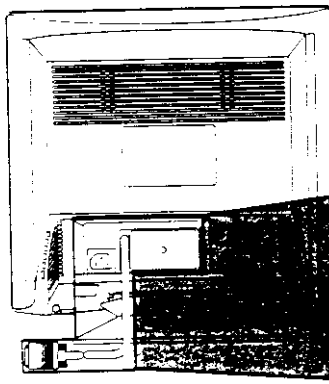
When power is turned ON, the lamp lights up green; when the unit goes into power management mode, the light turns amber.

#### **6** Power switch

This turns the power ON and OFF, press to turn the power ON; press again to turn the power OFF.



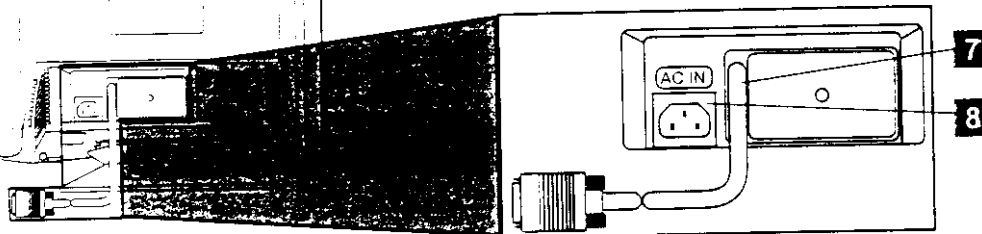
### Rear view



#### **7** Signal cable: (Mini D-sub 15 pin connector)

To the computer video output.

#### **8** AC inlet: Connect the power cord.





## AC power cord **Always use the power supply cord that was enclosed with the unit.**

If the enclosed power supply cord is not used, use a power cord with an AC adaptor that conforms to the following regional standards.

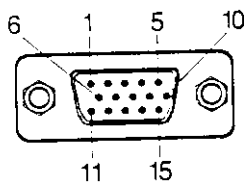
U.S.A ... UL                      Switzerland ... SEV  
 Canada ... CSA                  Britain ... BASEC/BS  
 Germany ... VDE                Japan ... According to the Electrical Appliance Control Act

In other regions, for safety please use an AC plug cord that complies with each country's safety regulations.

## Connectors **Do not modify the cable or attempt to manufacture a cable by yourself. A non-standard cable may damage the computer.**

### Mini D-sub connector

Pin assignments of 15-pin mini D-sub connector.



Pin number	Signal name	Pin number	Signal name
1	Red signal	9	Open
2	Green signal	10	Ground
3	Blue signal	11	Ground
4	Ground	12	SDA*
5	Ground*	13	Horizontal sync signal
6	Red signal ground	14	Vertical sync. signal
7	Green signal ground	15	SCL*
8	Blue signal ground		

\*: VESA DDC standard.

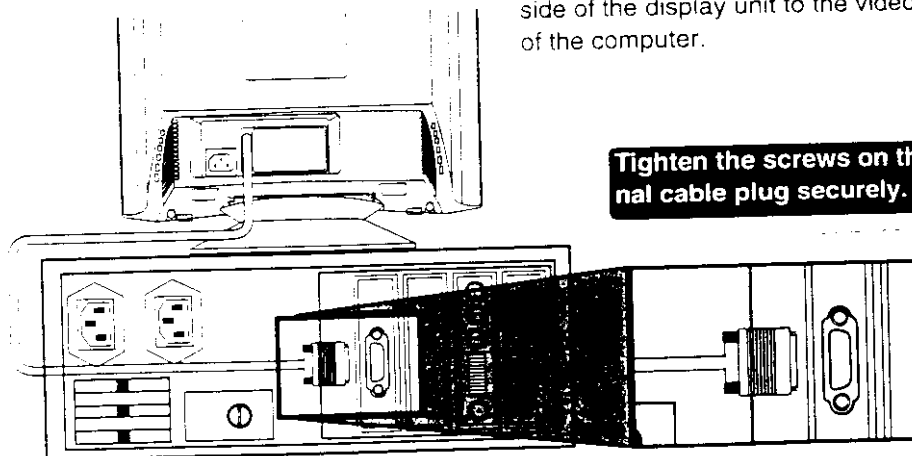
## Connections **Always turn off the power supply of the computer and the monitor before performing the connection procedures.**

The connection method differs depending on the type of computer the monitor is connected to. Refer to the following item "1. Signal Cable Connection" when connecting the monitor to IBM PC, compatible or Apple computers. When other types of computers are used, refer to their operation manual for the correct connection procedures.

### 1. Signal Cable Connection

#### ■ Case of connection to an IBM PC or Compatible

Connect the signal cable plug from the rear side of the display unit to the video connector of the computer.

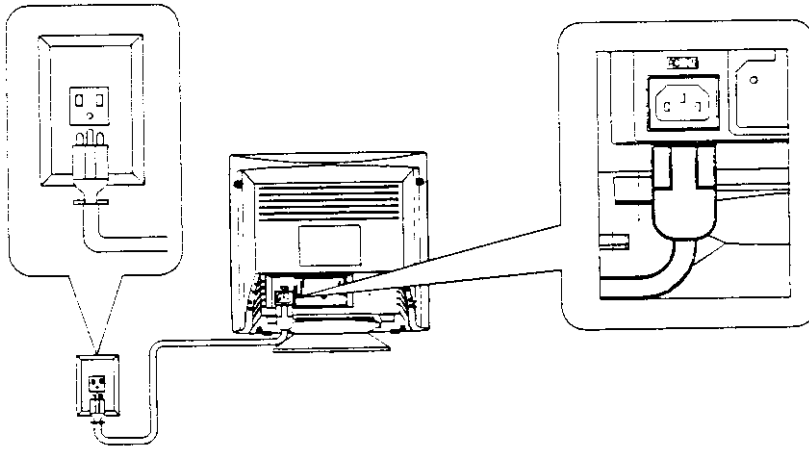


**Tighten the screws on the signal cable plug securely.**

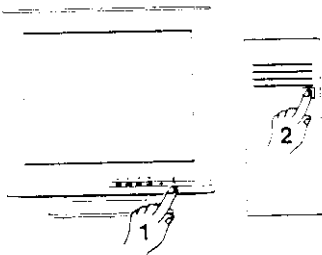
## 2. Attached power cord

Find the power supply cord enclosed in the shipping carton. Connect the power supply cord to the connector marked "AC IN" on the rear side of the monitor. Connect the other side of the cable to an electrical outlet.

**Always use the power supply cord with the ground line attached. Connect the ground line properly to use the monitor safely. Use the power supply cord enclosed the shipping carton to use this unit safely.**







## 3. Power on



The monitor can use an AC power voltage of either 50 or 60 Hz. Turn the power switch of this unit (1 in the figure on the left) on, then turn the switch of the computer (2 in the figure on the left) on. Refer to the item "Operation" on page I-7 to perform the desired settings.

## Specifications

Specifications are subject to change without notice for the purpose of improvement.

CRT	Type	15 inch (14.0 inch/35.6 cm viewable) flat screen
	Dot pitch	0.27 mm
	Fluorescent body/glass	RGB medium-short persistence
	Surface treatment	Anti-glare and Anti-static or Silica Coating
Input signal	Video	RGB analog
	Signal level	0.7 Vp-p (without sync. signal), 1.0 Vp-p (with sync. signal)
	Synchronization	H/V separate (TTL level), H/V composite (TTL level), Sync on Green
	Horizontal frequency	Operation range: 30.0 to 70.0 kHz
	Vertical frequency	Operation range: 50.0 to 180.0 Hz
Connectors	Signal	15-pin mini D-sub connector (female pins)
	Power supply	CEE 22 type 3-pin connector
Controls	Front panel	Power ON/OFF,  /  (Manual Degauss),  , 
	On-Screen Display	Contrast, Brightness, Zoom, Horizontal position, Horizontal size, Vertical position, Vertical size, Memory recall, Vertical pincushion, Side pincushion balance, Trapezoid, Parallelogram, OSD position selection, Rotation, Color Select, User color adjustment, Signal level selection (0.7 V/1.0 V), Display language selection, V.Moire, Exit
Maximum pixel clock		86 MHz typ.
Maximum Resolution		1280 dots (H) × 1024 lines (V) / 60 Hz
Display area		272 × 204 mm (10.71" × 8.03") (1024 × 768)
Operating conditions		Temperature: 0 to 35°C (32~95°F) Humidity: 5 to 90% (No condensation)
Input power		AC 100 - 240 V (50/60 Hz)
Power consumption		65 W typ/<5 W (during power saving operation)
Dimensions width × height × depth		363 × 368 × 369.7 mm
Weight (main unit only)		12.5 kg (27.5 lbs)
Screen angle adjustment		13° (Up), 4° (Down), 90° (Left and Right)

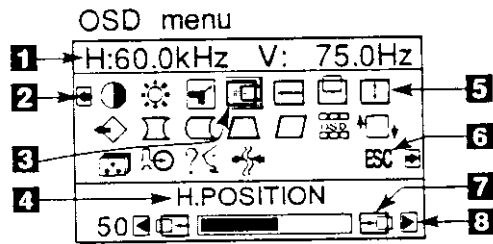
## Preset Mode

The timing in the following table has been preset.

	Mode	Resolution	Horizontal frequency	Vertical frequency	Horiz. sync polarity	Vert. sync polarity
1	XGA (1)	1024 × 768	60.02kHz	75.03Hz	+	+
2	VGA	640 × 480	31.47kHz	59.94Hz	-	-
3	MAC (1)	832 × 624	49.73kHz	74.55Hz	-	-
4	VESA	640 × 480	37.50kHz	75.00Hz	-	-
5	S.VGA	800 × 600	46.88kHz	75.00Hz	+	+
6	MAC (2)	1024 × 768	60.24kHz	74.93Hz	-	-
7	XGA (2)	1024 × 768	56.48kHz	70.07Hz	-	-
8	VESA	1280 × 1024	63.98kHz	60.02Hz	+	+

# On-Screen Display

The adjustments needed to adjust the display unit are shown on the screen.



(example: horizontal position adjustment)

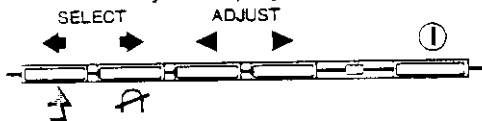
- 1 Input frequency display**  
This display the input synchronization signal frequency
- 2 Select key**  
When the or key is pressed, icon can be selected.
- 3 Selection mark**
- 4 Name of adjustment screen**
- 5 Adjustment menu icons.**
- 7 Menu icon**
- 6 Exit**  
Press the or keys to exit, and the OSD is disappears.
- 8** The adjustment level is shown by both a number and a bar. It can be varied with the front or keys.

# Operation Procedure

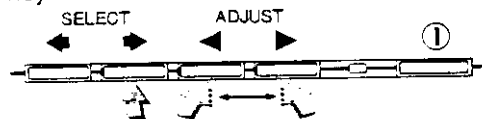
Referring to the figures below, adjustment using the on-screen display.

## Horizontal position adjustment

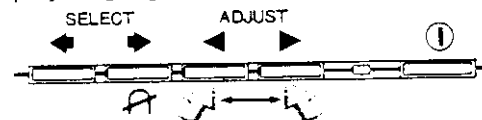
1. Press the key to display the menu.



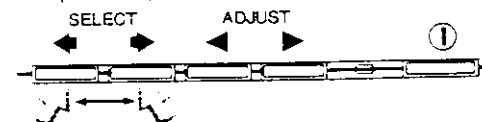
2. Press the key, to move the selection mark to the (language) icon; then press the or key to select .



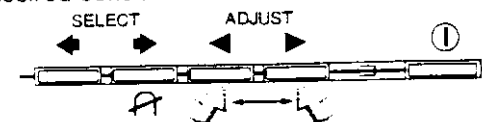
3. Select one of English, Russian, French, Italian, Spanish, German and Japanese as the display language. When the or key is pressed, the display language changes.



4. Select the item to be adjusted (example horizontal position) from the menu screen.

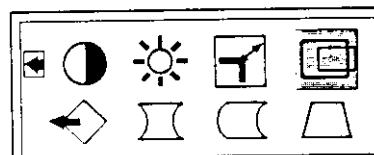
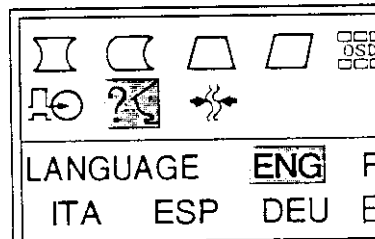
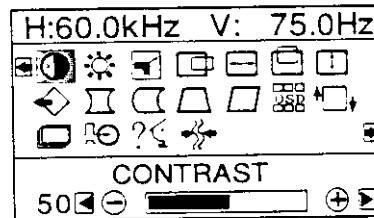


5. Press the front or keys to reach the desired condition.



6. Press the ESC to memories the settings and complete the adjustments.

If there are no operations performed for about 10 seconds, the OSD screen disappears.



# Adjustments

## SELF-TEST MENU (NO SIGNAL screen)



This display indicates that the monitor is operating normally. When one of the following conditions occurs, press one of the 4 operation keys to call the appropriate display.

**Note:**

When the key is pressed, the OSD pattern will disappear.

- 1) The unit has entered power saving mode (only displayed when in OFF STATE).
- 2) There is no signal (not connected to the computer, computer power is OFF, etc.).

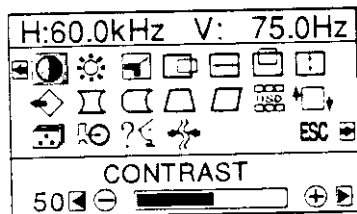
## MANUAL DEGAUSS

When the OSD is not displayed, use this function to degauss the monitor. When irregular colors occur in the image after moving the monitor or changing the screen angle.

## SELECT MENU

The adjusted items are represented by icons. When the select key is pressed, the menu screen appears.

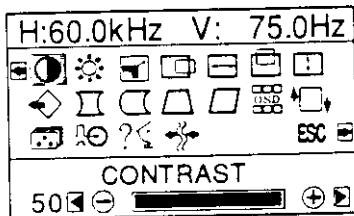
Use the or select keys to move the cursor to the item to be adjusted, then press the or adjust keys to call the Adjustment menu. If there are no operations performed for about 10 seconds, the OSD screen disappears.



- CONTRAST Adjustment
- BRIGHTNESS Adjustment
- ZOOM Adjustment
- H.POSITION
- H.SIZE
- V.POSITION
- V.SIZE
- RECALL
- V.PINCUSHION
- SIDE PINCUSHION BALANCE
- TRAPEZOID
- PARALLELOGRAM
- OSD Screen position
- ROTATION
- COLOR TEMP
- VIDEO Input level
- LANGUAGE Selection
- V.MOIRE Reduction
- ESC EXIT

## Adjustment menu

### CONTRAST



(CONTRAST adjusts the white level)  
Adjust the screen contrast to match the brightness level in the room.

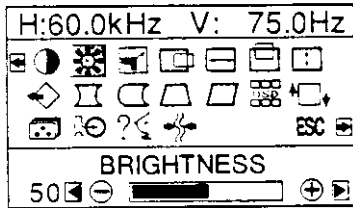


Adjust key decreases the contrast of the image.

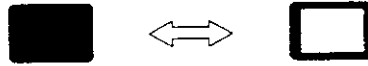
Adjust key increases the contrast of the image.

※ If the and adjust keys are pressed at the same time, the standard level will be set.

## ☀ BRIGHTNESS



(BRIGHTNESS adjusts the black level)  
Adjust the brightness to match the brightness level in the room so that the level will be easy to see.

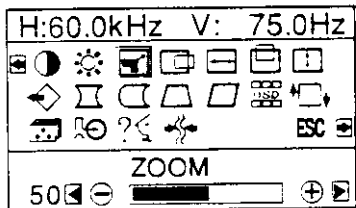


◀ Adjust key decreases the brightness of the image.

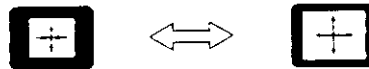
▶ Adjust key increases the brightness of the image.

※ If the ◀ and ▶ adjust keys are pressed at the same time on the BRIGHTNESS adjustment screen, the standard level will be set.

## ↖ ZOOM



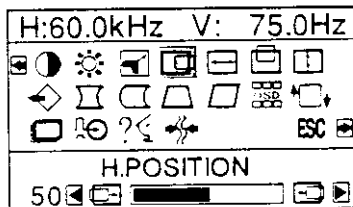
The horizontal and vertical size can be adjusted simultaneously.



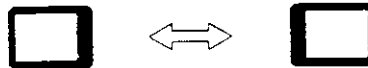
◀ Image size can be reduced.

▶ Image size can be enlarged.

## □ H.POSITION



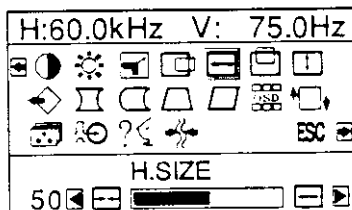
The horizontal position of the image can be adjusted.



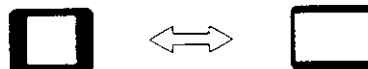
◀ Adjust key moves the screen image left.

▶ Adjust key moves the screen image right.

## ⇄ H.SIZE



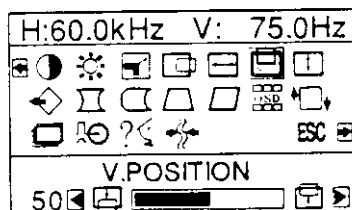
The horizontal size of the image can be adjusted.



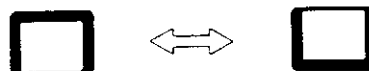
◀ Adjust key decreases the size of the screen image.

▶ Adjust key increases the size of the screen image.

## □ V.POSITION



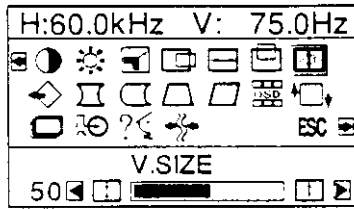
The vertical position of the image can be adjusted.



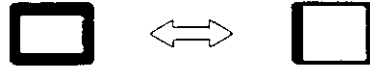
◀ Adjust key moves the screen image down.

▶ Adjust key moves the screen image up.

## V.SIZE

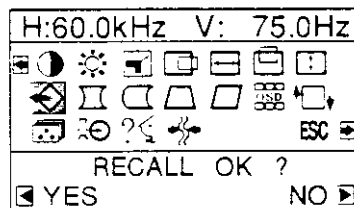


The vertical size of the image can be adjusted.



Adjust key decreases the size of the screen image.       Adjust key increases the size of the screen image.

## RECALL

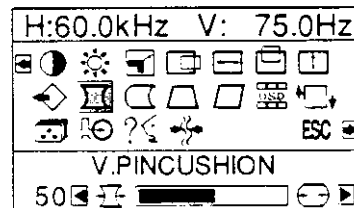


It is possible to return to the initial settings (the settings at the time of factory shipment).

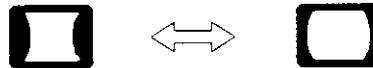
- 1) When the  adjust key (YES) is pressed, the settings are recalled and the menu screen returns. (Recall=return to initial settings)
- 2) When the  adjust key (NO) is pressed, the menu screen returns without the settings being recalled.

※ If there are no operations performed for about 10 seconds, the screen goes off without a recall.

## V.PINCUSHION

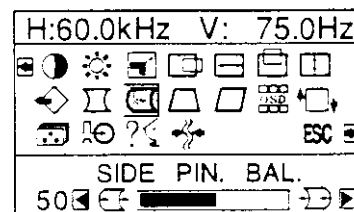


The image can be corrected for barrel distortion.

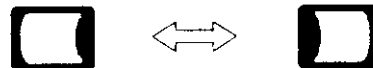


Adjust key curves the image's edges inwards.       Adjust key curves the image's edges outwards.

## SIDE PINCUSHION BALANCE

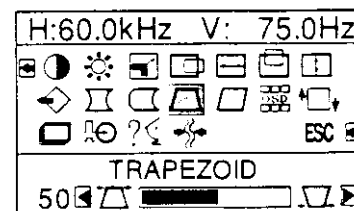


It is possible to adjust the side pincushion balance to the left and right.

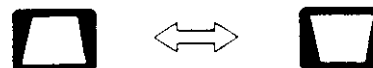


Adjust key expand to the left.       Adjust key expand to the right.

## TRAPEZOID

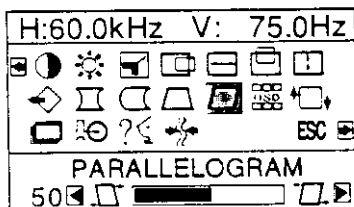


The image can be corrected for trapezoidal distortion.

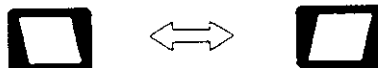


Adjust key makes the screen image wider at the top.       Adjust key makes the screen image narrower at the top.

## ▢ PARALLELOGRAM

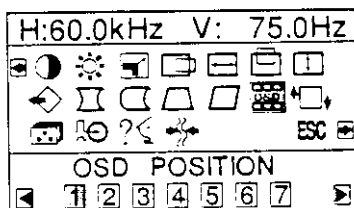


The image can be corrected for parallelogram distortion.

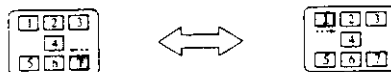


◀ Adjust key tilts the screen image leftward. ▶ Adjust key tilts the screen image rightward.

## OSD SCREEN POSITION

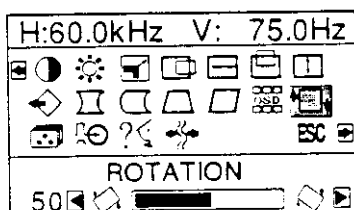


On-Screen Display position can be selected and move as per 7 preset positions.

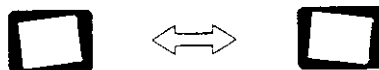


◀ Adjust key move OSD position back 6 →5→... 1. ▶ Adjust key move OSD position forward 2→3→... 7.

## ↕ ROTATION



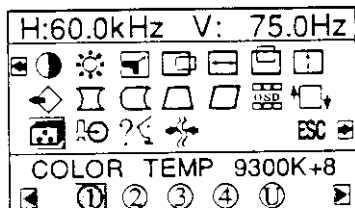
This control adjusts the evenness of the screen image relative to a horizontal line.



◀ Adjust key tilts the screen image left. ▶ Adjust key tilts the screen image right.

※ If the ◀ or ▶ adjust keys are pressed at the same time, the standard level will be set.

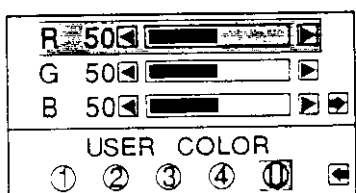
## COLOR TEMP



The white in the image can be adjusted.

Use the ◀ or ▶ adjust keys to select  
1: 9300 K+8, 2: 7500 K, 3: 6500 K, 4: 5000 K,  
U: User colors is selected.

## USER COLOR



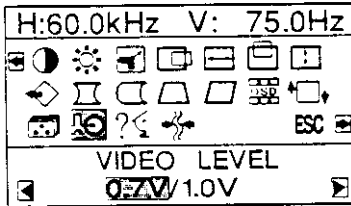
The white in the video image can be adjusted to the user's preferred color.

- 1) Use the ▶ select key to select R (red), G (Green) or B (blue).
- 2) Use the ◀ or ▶ adjust keys to adjust the color as desired.
- 3) Press the ◀ select key to memorize the settings and complete the adjustments.

※ Memory recall of the user's color is not possible, so make a note of the initial setting before adjusting. R: 97 G: 64 B: 27

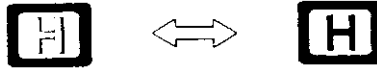


## VIDEO INPUT LEVEL



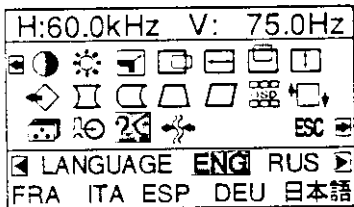
The video input signal level can be matched to the computer being used.

Either 0.7V or 1.0V can be selected with the ◀0.7V or ▶1.0V adjust key.



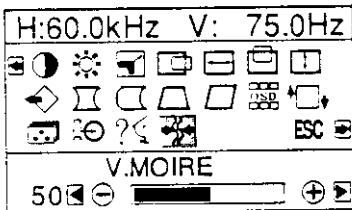
Use 0.7V under normal condition.

## LANGUAGE selection

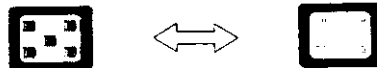


The language of the On-Screen Display can be selected from among English, Russian, French, Italian, Spanish, German and Japanese. Select with the ◀ or ▶ adjust keys.

## V.MOIRE REDUCTION

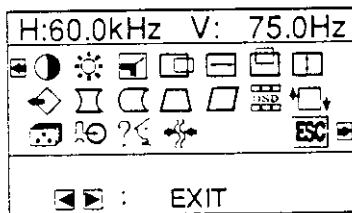


- The moire correction circuit can be switched On and Off with the ◀ key.
- Adjust with the ◀ and ▶ keys so that the striped moire pattern is in its optimum condition.



- ◀ Adjust key decrease the amount of adjustment.
- ▶ Adjust key increase the amount of adjustment.

## ESC EXIT



Press the ◀ or ▶ adjust keys to exit, and the OSD menu is turned OFF.

### Caution:

1. If once two of following four keys are pressed at the same time, the priority of keys will be functioned in order by the following: 1. ◀ 2. ▶ 3. ⏪ 4. ⏩ key.
2. If your monitor is no signal (LED is green or amber) or no power (LED is dark) when you are running a monitor, this will probably be a shut down of automatical circuit-protection design. It will be O.K. after you turning off and then turn ON the power switch.

## Power Management System

This monitor conforms to the VESA DPMS standard.

This function can suppress power consumption by the display unit.

The computer and video board being used must also conform to the VESA DPMS standard.





Note: Regarding operation, please consult the Operation Manuals for the hardware being used. Modes change in response to input signals as indicated in the table below.

APM state	Screen status	LED color	Power consumption	Return time	Input signals		
					Video	Horizontal	Vertical
ON	Active	Green	Normal	—	ON	ON	ON
STAND-BY	Black out	Amber	< 15 Watts	< 3sec.	OFF	OFF	ON
SUSPEND	Black out	Amber	< 15 Watts	< 3sec.	OFF	ON	OFF
OFF	Black out	Amber	≤ 5Watts	< 20sec.	OFF	OFF	OFF

APM: Advanced Power Management

### Caution

How to replace the system from the power management function.

- 1) Read the operation Manuals for the hardware you are using.
- 2) Press one of the ( , , ,  ) keys on the front panel.

The NO SIGNAL screen appears, and the monitor side power management function is released (only in OFF STATE).

## Display Modes Memory

- This unit contains a microprocessor, and the user's adjustments can be saved.
- Up to 13 modes can be saved as the user's preset modes.
- If the new adjustment data differs in any of the following four (4) ways, they can be saved as new data.

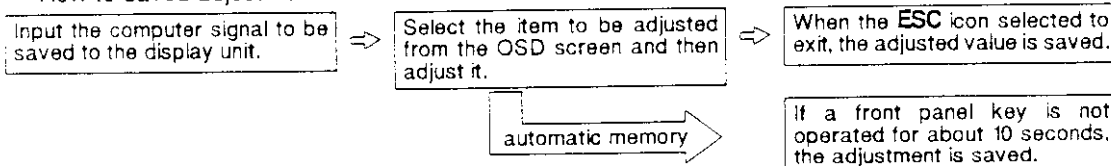
Horizontal frequency	Horizontal synchronization polarity	Vertical frequency	Vertical synchronization polarity
----------------------	-------------------------------------	--------------------	-----------------------------------

Note: In order for the new data to be saved, they must differ by more than the following error ranges of the standard frequency ranges: 30kHz ± 0.2kHz to 70kHz ± 0.3kHz for the horizontal frequency and 50Hz ± 0.3Hz to 180Hz ± 1.2Hz for the vertical frequency.

- The data that can be saved are those in the following table.

Horizontal frequency	Horizontal synchronization polarity	Horizontal size	Horizontal position
Vertical frequency	Vertical synchronization polarity	Vertical size	Vertical position
Pincushion distortion	Video signal level	Trapezoidal distortion	Parallelogram distortion

- How to saved adjustment data



- There are 13 modes that can be preset by the user; if all 13 modes have already been saved, when the one that has been saved last is deleted a new mode can be saved.
- If the timing of the newly set data differs little in frequency from the previously saved timing and in addition the signal polarity is the same, they will be judged to be the same and the new timing cannot be saved.

## If Trouble Occurs

For safety, please observe the following points.

- **When trouble occurs, turn the power OFF immediately and contact your dealer.**

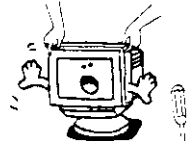
If smoke comes out of this unit or a bad odor or strange noise comes out, continuing to use the unit can cause a fire or electrical shock. Turn the power OFF immediately, unplug the power cord from the outlet and contact your dealer.

- **Absolutely do not remove the rear cover.**





There are parts at high voltage inside, so touching them can cause an electrical shock. Leave inspection, adjustment and cleaning of the interior to your dealer.

- **Do not put anything inside.**

If liquid or a foreign object should get inside accidentally, immediately turn the power OFF, unplug the power cord from the outlet and contact your dealer. Continuing to use the unit can cause a fire, electrical shock or breakdown of the unit.



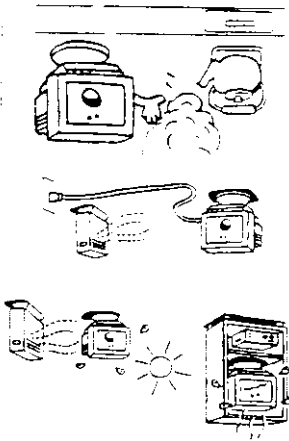
If trouble occurs in the display unit, perform the following checks and take the indicated action; if the trouble persists, please consult with your dealer.

Symptom	Check	Remedy
 There is no display	Power cord/plug Power switch Signal cable The power saving function might have acted (if so the pilot LED will be lit up yellow).	Plug the power cord into the outlet correctly. Press the power switch. Connect the signal cable correctly. Release the power saving function. Operate the mouse or keyboard. For additional details please read the Operation Manual of the hardware you are using.
 The image is too large or too small, or it is displaced from the correct position.	The mode is not registered.	Perform the desired settings and then register them.
 The display color is abnormal. Example) The color is uneven or off-color. The image distortion and or tilt is large.	Is there something that produces a magnetic field nearby? Examples) Television monitor, another computer display unit, speaker, etc.; was the orientation of the monitor perhaps changed while it was in use?	Remove the source of the magnetic field. Perform manual degaussing. Use a correct cable with in arrangement. Connect the signal connector correctly.
 Characters cannot be seen clearly; the image is too dark.	Is the image signal level correctly adjusted? Is the brightness or contrast adjustment turned all the way down?	Check the video signal level from the computer and adjust it in the correct direction. Adjust the brightness and contrast.
The screen size and position do not change. The front panel keys fail to operate.	Is the input synchronization signal within the operating range? Are 2 or more buttons being operated at the same time?	Check the video output mode from the computer, and select a mode within the display unit operating range. For details, please read the Operation Manual of the hardware you are using. Operate only one button at a time.

**Precaution** Always observe the following precautions and use this unit safely.

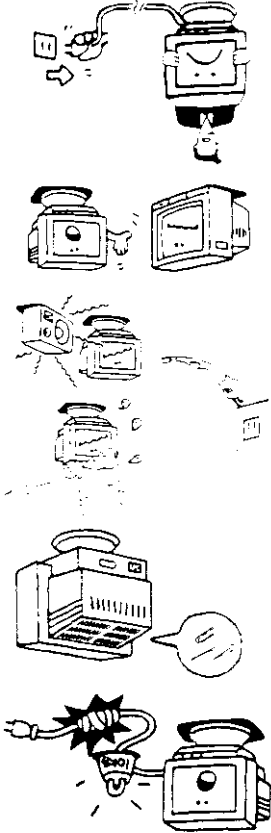
1) Installation location

- Avoid direct sunlight and heat sources such as heaters. Heat adversely affects the cabinet and the parts. Keep the power cord away from heat sources; falling to do so could cause fire or electrical shock.
- Install in a well ventilated location.
- To prevent the temperature from rising inside the set, there are ventilation holes in the cabinet. Make sure that they are not obstructed. Install the unit at least 10cm from walls, and do not install it in a book cabinet or lying on its side, which could block the ventilation holes. Failure to observe this precaution could cause fire or equipment breakdown.
- Do not install in a location with a great deal of moisture or dust. Avoid wet locations such as a kitchen drainboard, bathroom or washing machine; also avoid locations with a great deal of steam, water vapor or dust. Failure to observe this precaution could cause fire, electrical shock or equipment breakdown.



2) Precautions in use

- Handle the power cord carefully. Do not place any heavy objects on top of the power cord, add legs to it, tie knots in it or pull on the cord when unplugging it; if the power cord is damaged (for example if the wires are exposed or broken); there is danger of causing fire or electrical shock.
- Do not place anything on top of the main unit.
- Do not place any foreign object such as a container containing water or another liquid, or a solvent or cloth soaked in a solvent, or a metal object such as a paper clip, on the unit. If the object is knocked over the liquid can spill and enter the interior of the unit, causing fire, electrical shock or equipment breakdown.
- Handle the cabinet carefully. If a volatile solvent or adhesive comes into contact with the cabinet, the surface can be damaged or the paint might come off. If a rubber or vinyl object is in contact with the cabinet for a long time, the surface can be stained.
- Avoid magnetism. Use the unit removed from any object such as a speaker that uses a magnet or an object such as a motor or transformer that generates a strong magnetic field. The magnetism can distort the color or cause tearing of the image in the screen.
- Avoid disrupting reception. Use of this unit near a television or other display unit can result in both interfering with the other's reception, tearing of the images and noise. Keep them as far apart as possible.
- When moving this unit, be careful not to apply shock to it. Always unplug the power cord from the outlet and disconnect all other external cables and cords. Be especially careful with the CRT.



3) Care of this unit

- Clean this unit with a soft, dry cloth. If it becomes very dirty, wipe it with a cloth that has been soaked in neutral detergent diluted with water and then wrung out thoroughly, then use of a chemically treated cloth or gloss-producing cleaner can damage the surface or cause the paint to come off. Do not rub the surface of the CRT with a hard object or strike it with anything. Doing so can scratch it.

