

English

COLOR MONITOR

Model No : 710C

USER'S GUIDE



DAEWOO

IMPORTANT SAFEGUARDS

1. Read all of these instructions.

2. Save these instructions for later use.



3. Unplug this monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. Do not use attachments not recommended by the monitor manufacturer as they may cause hazards.

5. Do not use this monitor near water for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement or near a swimming pool, etc.



6. Do not place this monitor on an unstable cart, stand, or table. The monitor may fall, causing serious injury to a child or adult, and serious damage to the appliance.



7. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to ensure reliable operation of the monitor and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the monitor on a bed, sofa, rug, or other similar surface. This should never be placed near or over a radiator or heat register. This monitor should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.



8. This monitor should be operated only from the type of power source indicated on the marking label. If you are not sure of the power supplied to your home, consult your monitor dealer or local power company.



9. This monitor is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.



10. Do not allow anything to rest on the power cord. Do not locate this monitor where the cord will be abused by persons walking on it.

11. Follow all warnings and instructions marked on the monitor.

12. For added protection for this monitor during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the set due to lightning and powerline surges.

13. Do not overload wall outlets and extension cords as this can result in fire or electric shock.

14. Never push objects of any kind into this monitor through cabinet slots, as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the monitor.



15. Do not attempt to service this monitor yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

16. Unplug this monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power cord or plug is damaged or frayed.

b. If liquid has been spilled into the monitor.

c. If the monitor has been exposed to rain or water.

d. If the monitor does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore normal operation.

e. If the monitor has been dropped or the cabinet has been damaged.

f. When the monitor exhibits a distinct change in performance this indicates a need for service.



17. When replacement parts are required be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

18. Upon completion of any service or repairs to this monitor, ask the service technician to perform routine safety checks to determine that the monitor is in safe operating condition.

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

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 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 to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio, TV technician for help.

CAUTION : Any changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

CANADIAN DEPARTMENT OF COMMUNICATIONS COMPLIANCE STATEMENT

This digital apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Avis de conformité aux normes du Ministère des Communications du Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe A/de Classe B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par le ministère des communications du Canada.

WICHTIGE INFORMATIONEN

Bitte lesen Sie alle diese Informationen, bevor Sie das Gerät in Betrieb nehmen! Lesen Sie sich außerdem die Bedienungsanleitung komplett und sorgfältig durch, da nur in diesem Fall eine problemlose Inbetriebnahme erwartet werden kann.

- Achten Sie darauf, daß das Gerät nur in eine 230V Schuko-Steckdose eingesteckt wird.
- Die Steckdose sollte jederzeit frei zugänglich sein um bei einem evtl. auftretenden Notfall das Gerät schnell vom Netz zu trennen.
- Achten Sie desweiteren darauf, daß die Netzanschlußleitung nicht mechanisch beansprucht oder sonstige beschädigt wird.
- Öffnen Sie das Gerät niemals! Im Inneren befinden sich Teile mit gefährlicher Spannung.
- Bevor Sie das Gerät reinigen, ziehen Sie bitte den Netzstecker aus der Steckdose. Säubern Sie dann das Gerät mit einem feuchten (keinesfalls tropfnassen) Lappen.
- Die in diesem Gerät entstehende Röntgenstrahlung ist ausreichend abgeschirmt (Ortsdosisleistung in 0.1m Abstand weniger als 1.0µ Sv/h). Beschleunigungsspannung maximal 29Kv.
- Stellen Sie das Gerät an einem ergonomisch günstigen Ort auf und sorgen Sie dafür, daß der Monitor mit nach GS-VW-SG7 geprüfter Peripherie betrieben wird, da nur unter diesen Umständen ein optimaler ergonomischer Betrieb des Gerätes sichergestellt ist.

Falls Sie dennoch Fragen haben, auf die die Bedienungsanleitung keine hinreichende Antwort geben kann, so kontaktieren Sie bitte den nächsten Fachhändler.

Maschinenlärminformationsverordnung 3. GSGV, 18.01 1991:

Der arbeitsplatzbezogene Schalldruckpegel beträgt 70 dB (A) oder weniger gemäß ISO 7779.



DECLARATION OF CONFORMITY

We, Manufacturer / Importer

DAEWOO ELECTRONICS CO., Ltd
541, 5-Ga, Namdaemoon-Ro, Jung-Gu
Seoul, Korea

declare under our sole responsibility that the product,

Color Display monitor
710C

to which this declaration relates is in conformity with the following standard(s) or other normative document(s)

Safety : EN60950/1992/A1:1993/A2:1993
EMC : EN 55022/8.1994, EN 50082-1/1992
EN 61000 Part 3/1995

following the provisions of 89/336 EEC-EMC Directive and the provisions of 73/23 EEC-Low Voltage Directive.

Handed over by : S.R. Yu, Managing Director.
Display Business Division

A handwritten signature in dark ink, appearing to read "S.R. Yu".

May 30, 1998 Seoul Signature:

S.R. YU Managing Director.
Display Business Division.
DAEWOO ELECTRONICS Co., Ltd

Energy Star Characteristics Tested by SEMKO (Optional)

A sample of this type has been tested and has shown compliance with the Energy Star guidelines in the Swedish document TCO'95.

This product is also designed for IT power system with phase to phase voltage 400V.

The power cord is used as a main disconnect device. Disconnect the power cord before servicing.
The power outlet must be installed near the monitor and must be easily accessible.

ENERGY STAR Partner, Daewoo Electronics Co., Ltd. has determined that this product meets the Energy Star guidelines for energy efficiency.

CONTENTS

Introduction	1
Product Features	2
Setup	3
Installing the Tilt/Swivel Stand	3
Connecting the Signal Cable and Power Cord	4
Connecting the External Speakers	5
Power Management System	6
DDC for Plug & Play	6
Operation & Adjustment	7
Specifications	14
Signal Timing Guide	16
Troubleshooting	17

Appendix

Description for D-sub Connector

INTRODUCTION

This manual explains how to correctly install, operate and get the best performance from your monitor. Please read this user's manual carefully before installing your monitor, then keep it near your monitor for quick reference.

First, please check that the contents of the carton box corresponds with the following checklist :

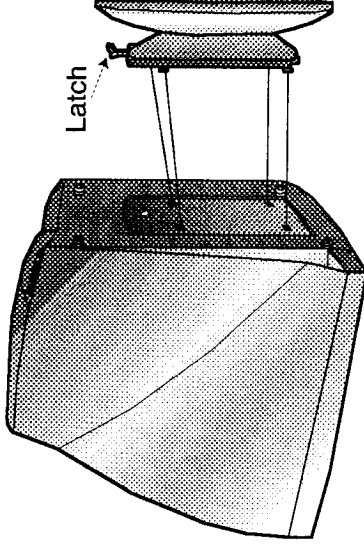
- ◆ Color monitor
- ◆ Power cord
- ◆ Tilt/swivel stand
- ◆ User's manual
- ◆ Warranty Card (Optional)

If there is any item missing or damaged, please contact your dealer. Please keep the carton box and packing materials so that you may properly store or transport your monitor.

SETUP

INSTALLING THE TILT/SWIVEL STAND

1. Ensure that the power to the monitor is off.
2. Set the monitor face down with the underside facing you. Please be careful so as not to scratch the monitor screen.
3. Align the four hooks on the stand with the guide holes of bottom chassis of the monitor.
4. Insert the hooks into the guide holes.
5. Slide the tilt/swivel stand toward the front of the monitor until the latch locks in position.
6. Turn the monitor and the stand upright.



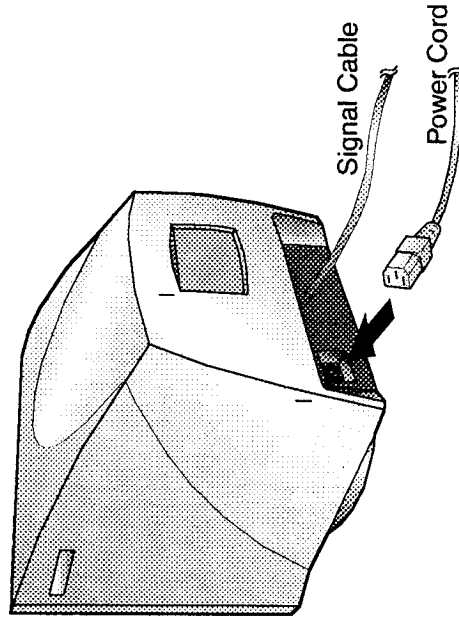
- ◆ If you want to remove the tilt/swivel stand on the monitor, press the latch and pull the tilt/swivel stand toward the back of the monitor. Lift the stand to separate.

PRODUCT FEATURES

- ◆ The convenient and user-friendly on-screen display allows for easy and accurate adjustments of horizontal and vertical screen size and position, geometry and screen color.
- ◆ The monitor supports a safe working environment in strict compliance with the MPR II standard for low emissions(TCO 95 is optional).
- ◆ The monitor complies with the VESA Display Data Channel (DDC) specification for "Plug & Play" compatibility. Advanced microcircuitry makes set-up and configuration fast and effortless.
- ◆ The monitor features Advanced Color Controls for fine-tuning to meet your own personal tastes or application requirements. Use the on-screen controls to adjust the color temperature, RGB gain value or RGB bias parameter for the best possible screen color and intensity.
- ◆ Press the menu button and activate the Self-Diagnosis menu to determine whether your monitor is functioning normally, not receiving a signal or is receiving a signal that is out of scanning range.
- ◆ Just activate the higher refresh rates of the monitor to stabilize the screen and eliminate the annoying flicker that contributes to eye-strain and headaches.
- ◆ The "borderless" full-screen display capability works under all graphic modes and provides a larger viewing area than conventional monitors, giving you a better picture with more workspace.

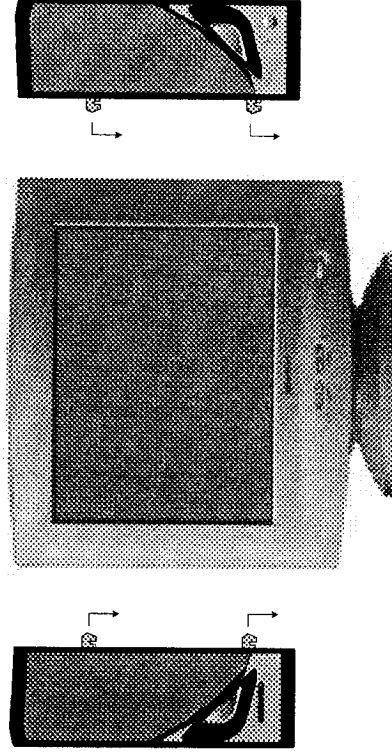
CONNECTING THE SIGNAL CABLE AND POWER CORD

1. Turn off the computer and monitor.
2. Connect the 15 pin D-sub connector to the output port of the video card in your computer.
3. Tighten the screws of connector.
4. Plug the power cord into the AC receptacle located at the back of the monitor.
5. Plug the other end of the power cord into the AC outlet.



CONNECTING THE EXTERNAL SPEAKERS (OPTIONAL)

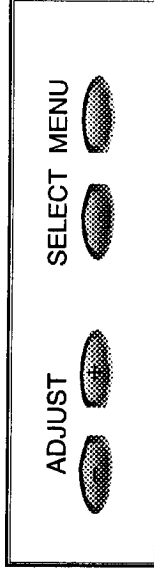
1. Set the monitor front facing you
2. Align the two hooks on each speaker with the holes on the right and left side of the monitor.
3. Insert the hooks into the holes.
4. Slide the speakers toward the bottom of the monitor.
5. Plug the connector of the left speaker into the *Left out* socket of the right speaker
6. Plug the *Stereo in* cable of the right speaker into the audio port on your PC.
7. Plug the adapter into the *DC in* socket of the right speaker.



- ♦ If you want to remove the speakers on the monitor, pull the speakers toward the top of the monitor.

OPERATION & ADJUSTMENT

ADJUSTMENT KEY



POWER MANAGEMENT SYSTEM

If you use the monitor with a computer which complies with the power saving program, you can set the monitor to go blank when the system has remained unused for a period of time. To specify the period or to disable this feature, set the system timeout field of the computer's system setup program or use special software for power saving. See the computer user's manual for the details of using the system setup. While the monitor is in power saving mode (blank screen), it consumes less power than normal state; the color of the power LED will indicate the state. To restore the screen image, press any key of your keyboard or move your mouse. If the signal cable is connected loosely or disconnected, the power saving feature will operate.

DISPLAY DATA CHANNEL (DDC) FOR PLUG & PLAY

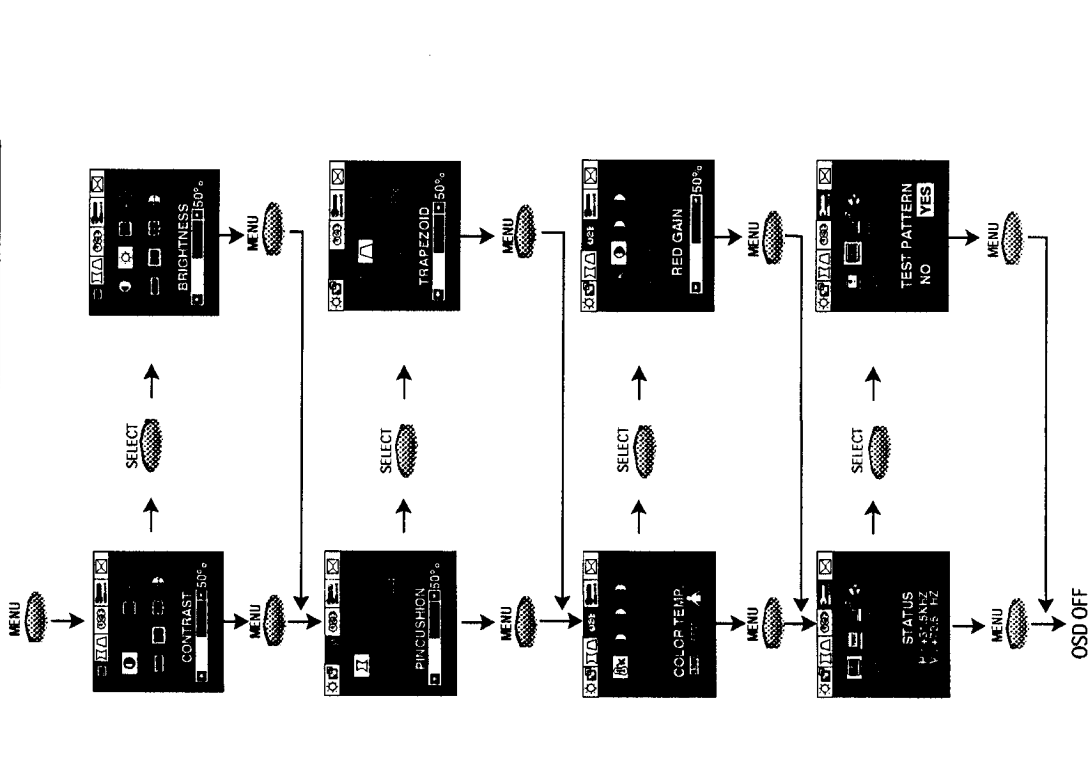
If you use the monitor with a computer which complies with DDC1/2B/2Bi/2B + of VESA, the Host-Video Card automatically configures itself without your intervention in a way that best fits the attached monitor. The Display Data Channel, DDC, allows the monitor to inform the host system about configuration information for optimum use of the monitor. Use of the Video Card utility is not required to match the resolutions and refresh rates of the monitor and video card.

MENU	Launch OSD(On-Screen Display) menus
SELECT	Select the next function
ADJUST	Increase the value of any selected function
ADJUST	Decrease the value of any selected function

OSD(On-Screen Display) Menu 1

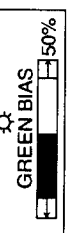
	Adjust the contrast of image, the difference between light and dark areas on the screen. Range : 0 -100 %
	Adjust the brightness of the entire display.
	Adjust the position of the display horizontally (left or right).
	Adjust the display width (horizontal size).
	Adjust the position of the display vertically (up or down).
	Adjust the display height (vertical size).
	Adjust the display width & height at the same time.
	Reset the screen to the Factory Preset Display Settings.

ADJUSTMENT PROCESS



◆ When you choose the icon on the OSD window, you can exit the OSD screen.

OSD(On-Screen Display) Menu 3

	Choose different preset color temperatures or set your own customized color parameters.
	Adjust the red gain.
	Adjust the green gain.
	Adjust the blue gain.
	Adjust the red bias.
	Adjust the green bias.
	Adjust the blue bias.

OSD(On-Screen Display) Menu 2

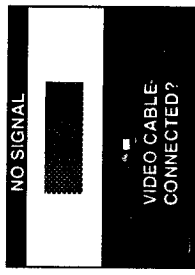
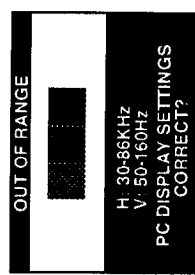
	Adjust the left and right margins for more convex or more concave margins. • Image turns to  by  . • Image turns to  by  .
	Adjust the trapezoid of the screen by moving the lines inward or outward. • Image turns to  by  . • Image turns to  by  .
	Adjust parallelogram when the screen is leaning left or right. • Image turns to  by  . • Image turns to  by  .
	Adjust the side balance when the sides of the screen are bowed towards left or right. • Image turns to  by  . • Image turns to  by  .
	Adjust the rotation when the screen is tilted left or right. • Image turns to  by  . • Image turns to  by  .
	Adjust the horizontal picture moire cancellation.
	Adjust the vertical picture moire cancellation.
	Adjust the apparent spot size.

OSD(On-Screen Display) Menu 4

 STATUS H : 31.5KHz V : 70.5 Hz	Display horizontal & vertical frequency and polarity.
 TEST PATTERN NO	Determine whether the monitor is functioning normally or not.
 POWER SAVER NO	YES : VESA DPMS operation. NO : NO DPMS operation.
 LANGUAGE ENGLISH DEUTSCH ESPAÑOL FRANÇAIS ITALIANO	Select language for OSD.
 DEGAUSS NO	Degauss the display and restore image quality.
 H.LINEARITY 50%	Adjust the horizontal linearity.
 V.LINEARITY 50%	Adjust the vertical linearity.

Self Diagnosis

When the monitor doesn't display, if you press any key, Self Diagnosis screen is displayed. Self Diagnosis function checks if the status of the monitor is No Signal or Out of range.

	No Signal screen is displayed when the D-Sub signal connector is not connected or the status of the monitor is on DPMS mode.
	Out of Range screen is displayed when the applied frequency is under or over normal range. ■ Normal range H : 30 - 86 KHz V : 50 - 160 Hz

SPECIFICATIONS

Picture Tube	Type : 17-inch, Flat Square Tube type (16.2-inch, viewing area) Dot Pitch : 0.27mm(0.26mm Optional) Face Treatment : Non-glare / Anti-static
Video	Input Signal : R.G.B. Analog Amp. Bandwidth : 135 MHz Input Sync : TTL, separate negative / positive
Scan Frequency	Horizontal : 30 - 86 KHz (automatic) Vertical : 50 - 160 Hz (automatic)
Max. Resolution	1600 dots × 1200 lines (at 65 Hz)
Power Source	Free Voltage (100-240 Vac, 50/60 Hz)
Display Area	Standard Display Area : 310(H) × 232(V) mm 12.2(H) × 9.1(V) in Full Screen Size : 330(H) × 250(V) mm 13(H) × 9.8(V) in

Power Consumption Max. 120W

State	Recovery Time	Power LED
On	None	Green
Stand-by Suspend	3 seconds	Green : 1 second Amber: 0.5 second
Off	7 seconds	Amber

Regulatory Approvals

VLF/ELF	: MPR II, TCO 95(Optional)
Safety	: UL, CSA, GS(GS-VW-SG7), EMKO (S.N.D.FI), DHHS
EMI	: FCC-B, CISPR 22, CE
Ergonomics	: ISO 9241.3

Tilt/Swivel Range	Tilt : 5° forward, 10° backward Swivel : ± 45° leftward, rightward
Dimension (set with stand)	424(W) × 447.2 (D) × 440(H) mm 16.7(W) × 17.6(D) × 17.3(H) in
Weight(net/gross)	18.7 / 21.7 Kg 41.2 / 47.8 lbs
Operating Environment	Temperature : 10 ~ 40° C / 50 ~ 104° F Relative Humidity : 8 ~ 80%
Storage Environment	Temperature : - 20 ~ 45° C / - 4 ~ 113° F Relative Humidity : 5 ~ 90%

SIGNAL TIMING GUIDE

Mode	Resolution (dots × lines)	HFreq (KHz)	VFreq (Hz)	Remark
VGA	725 × 400	31.3	70	Non-interlaced
VESA 80/75	800 × 600	46.9	75	Non-interlaced
Super VGA	800 × 600	35.2	56	Non-interlaced
VESA 640/72	640 × 480	37.9	72	Non-interlaced
VESA 800/60	800 × 600	37.9	60	Non-interlaced
VESA 800/72	800 × 600	48.1	72	Non-interlaced
VESA 1024/60	1024 × 768	48.4	60	Non-interlaced
VESA 800/85	800 × 600	53.7	85	Non-interlaced
VESA 1024/70	1024 × 768	56.5	70	Non-interlaced
VESA 1024/75	1024 × 768	60.0	75	Non-interlaced
VESA 1280/60	1280 × 1024	63.9	60	Non-interlaced
VESA 1600/65	1600 × 1200	81.3	65	Non-interlaced
VESA 1024/85	1024 × 768	68.7	85	Non-interlaced
VESA 1152/75	1152 × 864	67.5	75	Non-interlaced
VESA 75K/75	1280 × 960	75.0	75	Non-interlaced
VESA 1280/75	1280 × 1024	80.0	75	Non-interlaced
VESA 1280/960	1280 × 960	85.9	85	Non-interlaced
VESA 1600/65	1600 × 1200	81.3	65	Non-interlaced
MAC 35K	640 × 480	35.0	67	Non-interlaced
MAC 49.7K	832 × 624	49.7	77	Non-interlaced
MAC 60.24K	1024 × 768	60.2	75	Non-interlaced
MAC 68.68K	1152 × 870	68.7	75	Non-interlaced

◆ This monitor has stored ten timings identified by mark * of the above timings in factory. If any timings which have not been recommended by the factory don't display a fine screen, adjust it by key control. You can save up to 24 modes in the user memory automatically. Please note that if you save to user memory over twenty four times, the first mode saved will be replaced with your twenty fifth mode.

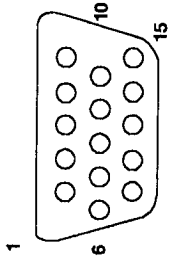
TROUBLESHOOTING

Symptom	Check
No picture.	Check if POWER SWITCH and COMPUTER POWER SWITCH are in the on position. ↓ Check if the signal cable is correctly connected to the video card. ↓ Check if the pins of D-sub connector are not bent. ↓ Check if the computer is in the power saving mode.
POWER LED is not lit.	Check if POWER SWITCH is in the on position. ↓ Check if the power cord is correctly connected.
Image is unstable.	Check if the signal cable is suitable to the video card.
Image is not centered, too small or too large.	Adjust H & V SIZE or H & V POSITION to get the proper image.
Picture bounces or a wave pattern is present in the picture.	Keep the devices that may cause electrical interference away from the monitor. ↓ See the FCC information at the front cover of the manual.
Color looks blotchy.	Operate DEGAUSS once.
Picture is blurred.	Adjust CONTRAST and BRIGHTNESS. ↓ Operate DEGAUSS once.
Edges of available area on the screen are not straight.	Adjust PINCUSHION/TRAPEZOID.

APPENDIX

DESCRIPTION FOR D-SUB CONNECTOR

Pin	Signal
1	Red
2	Green
3	Blue
4	GND
5	GND(Self-Test)
6	GND-Red
7	GND-Green
8	GND-Blue
9	Reserved
10	GND-H.Sync
11	GND-V.Sync
12	Bi-directional Data(SDA)
13	Horizontal Sync
14	Vertical Sync(VCLK)
15	Data Clock(SCL)



* GND=Ground