# USER'S GUIDE

## TFT LCD-MONITOR
**Model No : L520B**

**DAEWOO**

http://www.dwe.co.kr

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

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

## CANADIAN NOTICE

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

## AVIS CANADIEN

Cet appareil numérique de la Class B respecte toutes les exigences du Règlement sur le matériel brouilleur 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 sonstwie beschädigt wird.

- Offnen 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.

- Stellen Sie das Gerät an einem ergonomisch günstigen Ort auf und sorgen Sie dafür, daß der Monitor mit nach ISO 9241 -3, -7, -8 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 wenigergemäß ISO 7779.

## DAEWOO

# 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,

TFT LCD monitor
L520B

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
A3:1995/A4:1997
EMC  : EN 55022/8.1994/A1:1995/A2:1997
EN 55024/1998
EN 61000 -3-2,3/1995

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

Handed over  by :    Jong K. Choi, Director.
Display Business Division.

Nov , 2001  Seoul        Signature :

**J.K.Choi Director.**
**Display Business Division.**
**DAEWOO ELECTRONICS CO., LTD.**

**Emission Characteristics Tested by  SEMKO**
A sample of this type has been tested and has shown compliance with
theguidelines in the swedish document TCO 99.

This product is also designed for IT power system with phase to phase
voltage of  230V.

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

As an **E**NERGY **S**TAR® Partner, Daewoo Electronics Co., Ltd. has
determined that this product meets the Energy Star® guidelines for
energy efficiency.

The appliance is not intended for use by young children or infirm
persons without supervision ;
Young children should be supervised to ensure that they do not play
with the appliance.

# CONTENTS

# INTRODUCTION

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

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

-  TFT LCD monitor
- Power cord
- 15 pin signal cable
- User's guide
- Warranty card (Optional)


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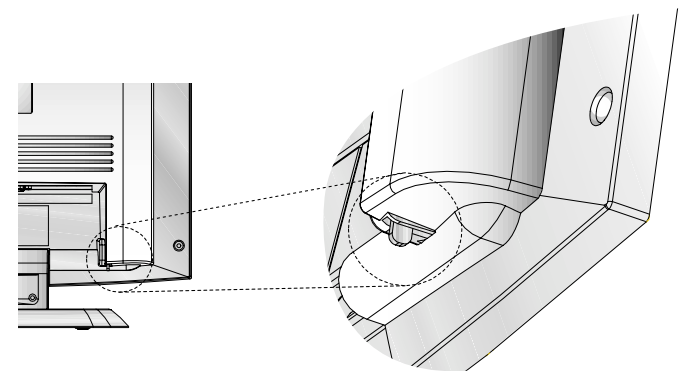
## PRODUCT FEATURES

- The monitor is designed for use in a small work area or for those who need more work space on the desk.

- The convenient and user-friendly on-screen display allows for easy and accurate adjustments of screen size, position and screen color.

- The monitor supports a safe working environment in strict compliance with the TCO 99 standard for low emissions .

- The monitor complies with the VESA Display Data Channel (DDC) specification for Plug and Play compatibility. Advanced microcircuitry makes setup 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 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.

- 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.

- The monitor supports the optimal display performance with 1024x768 at 75Hz.

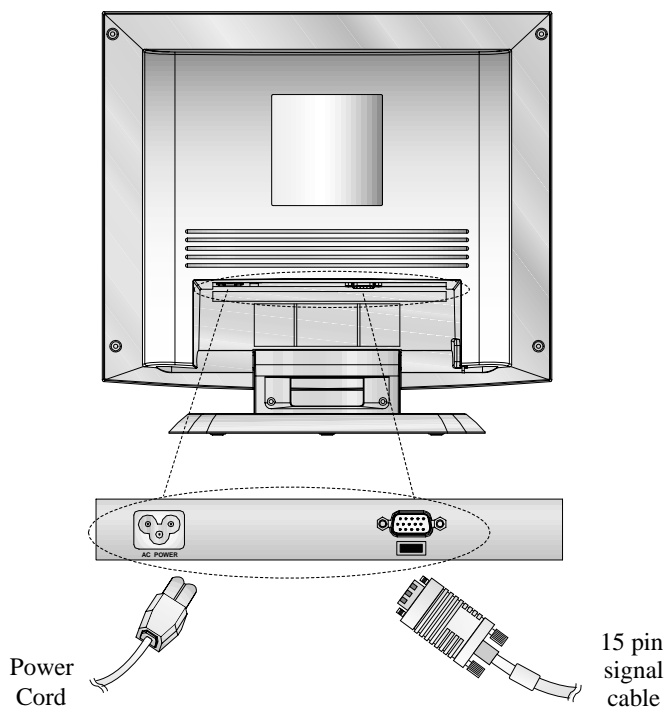## INSTALLING THE STAND

*Unfolding the stand*

*Folding the stand*

Fold the stand with pressing this lever.

## CONNECTING THE 15 PIN SIGNAL CABLE AND POWER CORD

1. Turn off the computer and monitor.

2. Connect the 15 pin signal cable to the output port of the video card in your computer and monitor.

3. Tighten the screws of the 15 pin signal cable.

4. Plug the power cord into the AC receptacle located on the back of the monitor.

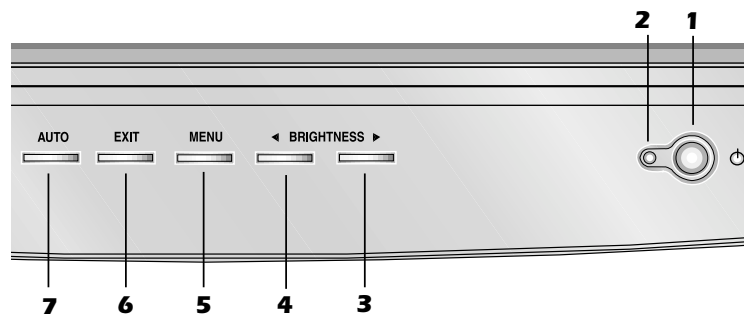5. Plug the other end of the power cord into the AC outlet.



Power Cord

15 pin signal cable

# OPERATION & ADJUSTMENT

## CONTROL PANEL

**1 POWER**

swithes the monitor on and off.

**2 POWER Indicator**

shows both normal operation and power management status with power indicator light.



**3** ▶ (∗)

moves cursor to the right or low window in the OSD window and increases the value of any selected function.

**4** ◀ (∗)

moves cursor to the left or high window in the OSD window and decreases value of any selected function.

**5 MENU**

turns the OSD window on and moves from top menu to sub menu in the OSD window.
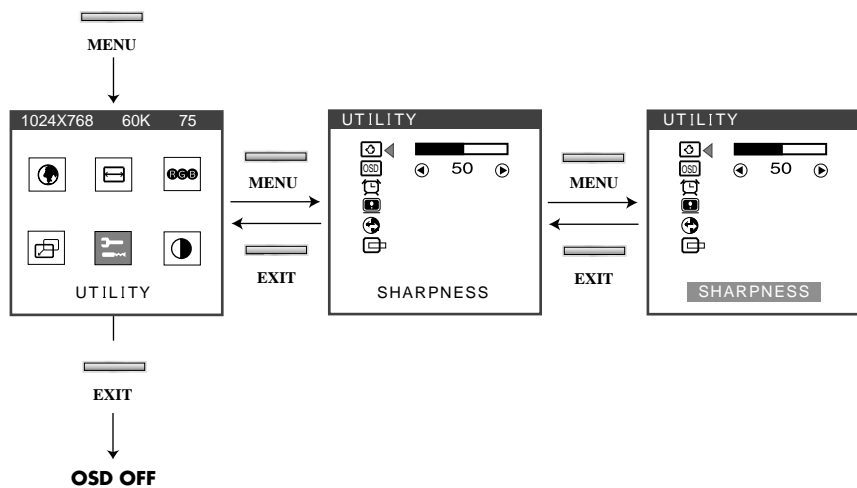
**6 EXIT**

turns the OSD (On-Screen Display) window off and moves from sub menu to top menu in the OSD window.

**7 AUTO** (∗)

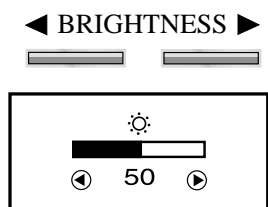launches the AUTO TRACKING function directly.

(∗) : Hot Key

## KEY PROCESS



**MENU**

1024X768  60K  75

UTILITY

MENU ⟶ ⟵ EXIT

UTILITY

SHARPNESS  50

MENU ⟶ ⟵ EXIT

UTILITY

SHARPNESS  50

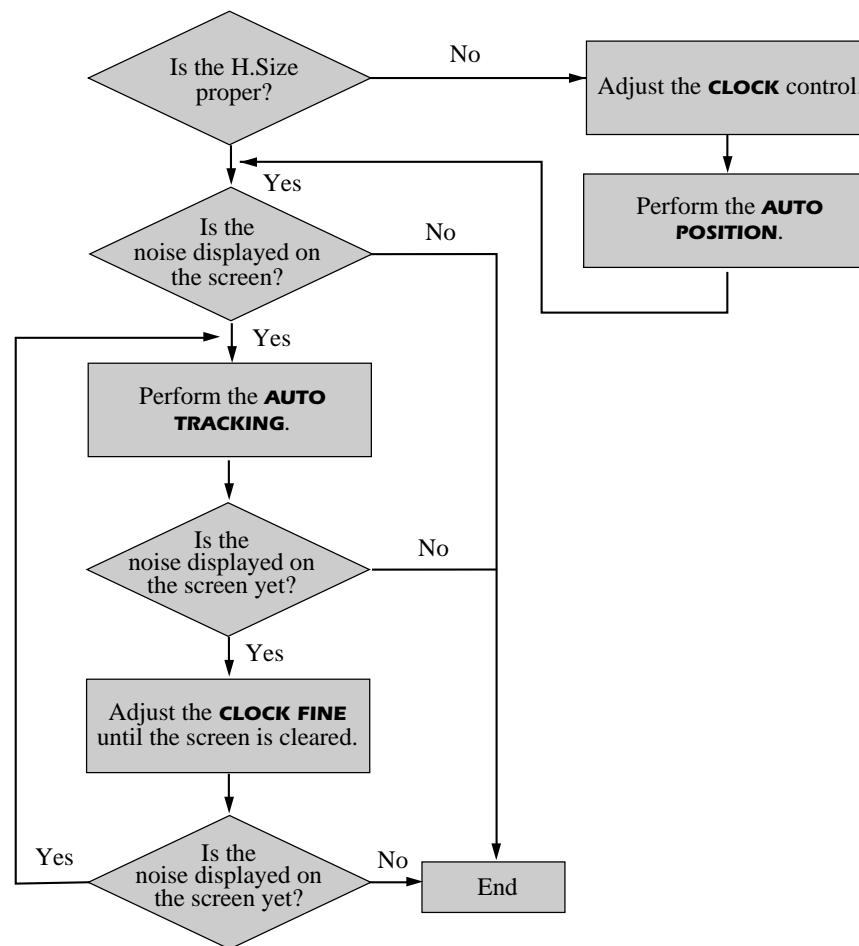**EXIT**

**OSD OFF**

## HOT KEY

AUTO

**AUTO TRACKING**

☐ When there is no OSD, if you press this AUTO button, you can use the best display performance fit for a current mode.

◀ BRIGHTNESS ▶

☼

◀ 50 ▶

☐ When there is no OSD, if you press this BRIGHTNESS button, you can adjust the brightness directly.

◀ : decreases brightness

▶ : increases brightness

## ADJUSTMENT PROCEDURE



Is the H.Size proper? — No → Adjust the **CLOCK** control.

Yes ↓

Is the noise displayed on the screen? — No →

Perform the **AUTO POSITION**.

Yes ↓

Perform the **AUTO TRACKING**.

Is the noise displayed on the screen yet? — No →

Yes ↓

Adjust the **CLOCK FINE** until the screen is cleared.

Is the noise displayed on the screen yet? — Yes / No → End

| ICON | CONTROL | FUNCTION |
|---|---|---|
| | LANGUAGE | Select language for OSD (6 languages). |
| | CLOCK | Adjust the width (horizontal size) of the screen image. |
| | CLOCK FINE | Sharpen the focus by aligning the illuminated pixels and adjust until the screen image looks focused, crisp and sharp. Adjusting the **CLOCK FINE** after the **CLOCK** adjustment will produce a clear screen. |
| | AUTO TRACKING | Adjust the horizontal & vertical picture image quality and size. |
| | COLOR TEMPERATURE | Choose different preset color temperatures or set your own customized color parameters. |
| | RED CONTROL | Adjust the red color. |
| | GREEN CONTROL | Adjust the green color. |
| | BLUE CONTROL | Adjust the blue color. |
| | H. CENTER & V. CENTER | Adjust the position of the display horizontally (left or right) and vertically (up or down). |
| | SHARPNESS | Adjust the display image quality (if the screen proceed to scaling up). |
| | OSD POSITION | Adjust the OSD position horizontally (left or right) and vertically (up or down). |

| ICON | CONTROL | FUNCTION |
|---|---|---|
| | OSD TIME OUT | Adjust the display OSD Menu. |
| | STATUS | Display horizontal & vertical frequency and polarity. |
| | RECALL | Reset the screen to the Factory Preset Display Settings. |
| | AUTO POSITION | Choose automatically the proper horizontal position and vertical position & size of the screen image. |
| | CONTRAST | Adjust the contrast of image, the difference between light and dark areas on the screen. |

If there is no image, the Self Diagnosis screen will be displayed. Self Diagnosis function checks if the status of the monitor screen is "No Signal", "Out of range" or "Check Cable".
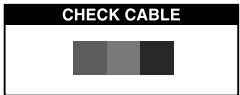
**NO SIGNAL**

"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**

"Out of Range" screen is displayed when the applied frequency is under or over normal range.
- Normal range
  (Non-interlaced mode only)
  H : 30 - 62 KHz
  V : 50 - 75 Hz

**CHECK CABLE**

"Check Cable" screen is displayed when the D-Sub signal connector is not connected.

# SPECIFICATIONS

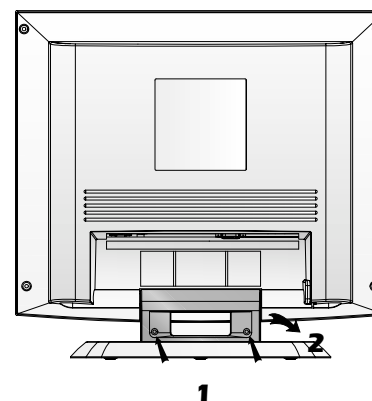| Panel | Size | 15-inch (38 cm) diagonal |
|---|---|---|
| | Pixel Pitch | 0.297 x 0.297 mm |
| | Viewing Angle | 60°(Right/Left) |
| | | 40°(up), 60°(down) |
| | Contrast Ratio | 350:1 contrast ratio (typ) |
| | Brightness | 250cd/m$^2$ brightness (typ) |
| | Color Filter | RGB vertical stripe |
| Synchronization | Horizontal | 30 - 62 KHz |
| | Vertical | 50 - 75 Hz |
| Video Bandwidth | | 80 MHz |
| Max Resolution(Optimal) | | 1024 x 768 @75Hz |
| Colors | | 6 bit (16.7M Colors) |
| Display Area | | 304.1mm x 228.1mm |
| PC Input Signal | Sync | H/V separate (TTL) |
| | Video | 15 pin mini D-sub (Analog RGB) |
| | | DVI-D(Option) |
| AV Input Signal (Option) | Video | CVBS(RCA), S-Video(Mini-DIN) |
| | Audio | RCA Left+Right Input |
| | | Stereo Mini Jack Input & Output |
| TV Receiving Signal (Option) | TV Tuner | NTSC, PAL |
| External Speaker (Option) | Max. Output | 6W (Left 3W+Right 3W) |
| Plug and Play | | VESA DDC Compatible |
| Power Source | | 100-240 Vac, 50/60 Hz (Free Voltage) |
| Power Consumption | | 26 W |
| Dimension-W x H x D | | 370 x 352 x 205 mm (with stand) |
| | | 370 x 312 x 60 mm (without stand) |
| Weight-net/gross | | 4.2/5.5 Kg (9.2/12.1 lbs) |
| Power Saving | | EPA, VESA DPMS, Nutek Compliant |
| Tilt Range | | 5° forward, 30° backward |
| Operating Temperature | | 10 ~ 40°C /50 ~ 104°F |

# FACTORY PRESET TIMINGS

| VESA MODES | | | | |
|---|---|---|---|---|
| Mode | Resolution (dots × lines) | H.Freq (KHz) | V.Freq (Hz) | Remark |
| VGA | 640 × 480 @ 60Hz | 31.5 | 60 | Non-interlaced |
| VGA | 640 × 480 @ 72Hz | 37.9 | 72 | Non-interlaced |
| VGA | 640 × 480 @ 75Hz | 37.5 | 75 | Non-interlaced |
| SVGA | 800 × 600 @ 56Hz | 35.2 | 56 | Non-interlaced |
| SVGA | 800 × 600 @ 60Hz | 37.9 | 60 | Non-interlaced |
| SVGA | 800 × 600 @ 72Hz | 48.1 | 72 | Non-interlaced |
| SVGA | 800 × 600 @ 75Hz | 46.9 | 75 | Non-interlaced |
| XGA | 1024 × 768 @ 60Hz | 48.4 | 60 | Non-interlaced |
| XGA | 1024 × 768 @ 70Hz | 56.5 | 70 | Non-interlaced |
| XGA | 1024 × 768 @ 75Hz | 60.0 | 75 | Non-interlaced |

| IBM MODES | | | | |
|---|---|---|---|---|
| Mode | Resolution (dots × lines) | H.Freq (KHz) | V.Freq (Hz) | Remark |
| EGA | 640 × 350 @ 70Hz | 31.5 | 70 | Non-interlaced |
| DOS | 720 × 400 @ 70Hz | 31.3 | 70 | Non-interlaced |

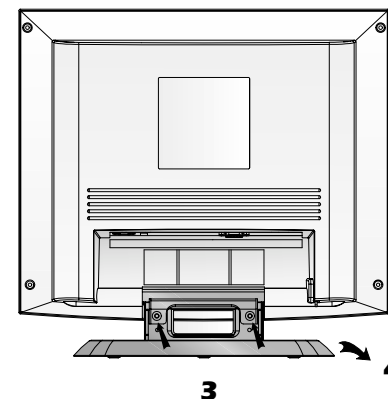| MAC MODES | | | | |
|---|---|---|---|---|
| Mode | Resolution (dots × lines) | H.Freq (KHz) | V.Freq (Hz) | Remark |
| VGA | 640 × 480 @ 67Hz | 35.0 | 67 | Non-interlaced |
| SVGA | 832 × 624 @ 75Hz | 49.7 | 75 | Non-interlaced |

▣ The LCD Monitor has only Non-interlanced modes without flicker.

▣ The specification can be changed without any prior notice to improve the quality of the product.

▣ The LCD panel may have some defective pixels (e.g. slightly light or dark) due to a characteristic of the LCD panel.  But there is no defect in your LCD product itself.

# CHANGING THE STAND

## REMOVING THE STAND



**1**. Remove 2 screws.
**2**. Remove the Stand Rear.
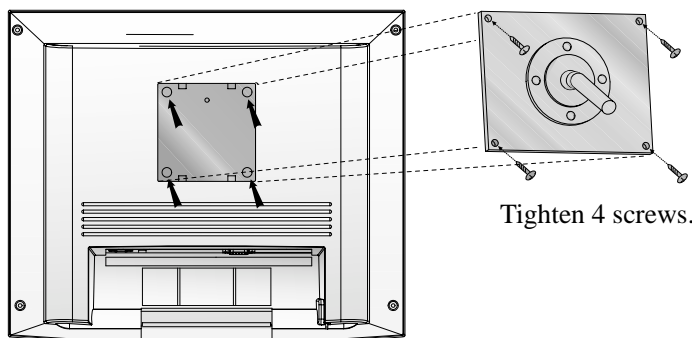


**3**. Remove 2 screws.
**4**. Remove the Stand Base.

## REMOVING THE COVER

Remove the Cover.

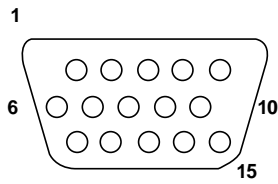## ATTACHING THE MONITOR WITH THE ARM-STAND(OPTION)

Tighten 4 screws.

■ Use the VESA approved arm-stand.
(75x75 mm hole spacing)

| Symptom | Check |
|---|---|
| **Picture is jitterd.** | Adjust Clock to set the screen position and adjust Clock fine until a noise isn't displayed. |
| **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 subconnector 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 Clock or H&V Center 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. |
| **Picture is blurred.** | Adjust Contrast and Brightness. |

## DESCRIPTION FOR D-SUB CONNECTOR

| Pin | Signal |
|-----|--------|
| 1 | Red |
| 2 | Green |
| 3 | Blue |
| 4 | GND |
| 5 | GND |
| 6 | GND-Red |
| 7 | GND-Green |
| 8 | GND-Blue |
| 9 | +5Vdc |
| 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

S/N:9978632100