Before Use

English

- This user manual contains proprietary information that is protected by copyright. All rights are reserved. No part of this user manual may be reproduced, photocopied, transcribed, translated or transmitted in whatsoever from without the prior permission of the manufacturer.

- The size and appearance of this monitor may be changed for improvement without notice.

- Damage caused by using the unauthorized components or disregard of the information and cautions in this user manual is not covered by the warranty service.

- If you have problem with your monitor, please check TroubleShooting in this user manual before asking for help service center.

- The information in this user manual is subject to change without notice.

- If you let display the static images on the LCD monitor for prolonged time, the LCD monitor may show you the screen images retention. It is not a continuous condition and will fade away in a period time. The Image retention is a condition that may occur on all LCD monitors.

- The LCD consists of about 5 million pixels. One pixel includes 3 dots and some of dots could be seen bright and dark compared to other dots. Please, note that it may occur on all LCD monitors and it is not a product inferiority.

English

CE Conformity Notice

The Product herewith complies with requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the 'CE' mark accordingly.

Confirms to the following hamonized European standards have been applied:

EMC : EN 55022 Class B : 1998
EN 55024 : (EN 61000-4-2 : 1995, A1 : 1998, EN61000-4-3 : 1996, EN 61000-4-4: 1995, EN61000-4-5 : 1995, EN61000-4-4 : 1996, EN61000-4-8 : 1993 and EN61000-4-11 : 1994)
EN61000-3-3 : 1995, A1 : 98, A2 : 98
EN61000-3-3 : 1995

FCC Compliance Statement

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.

INFORMATION TO THE USER

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 resonable 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 communication. 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 an receiver.
- Connect the equipment into an outlet in a circuit different from that to which the receiver is connected.
- consult the dealer or an experienced radio / TV technician for help.

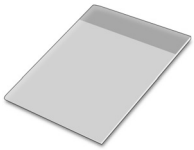
WARNING

Changes or modifications not expressly approved by the manufacturer could void the use's authority to operate the equipment.

Unpacking

After opening the box, make sure the following items are provided with the monitor. If you find that any of these items is missing or appears damaged, contact your dealer immediately.

Monitor



User Manual

Audio Cable

DC Adapter

Power Cord

Diskette
(Monitor Driver)

VGA Signal Cable

Note

The actual monitor and accessories may appear differently from those shown on the above figure

Instructions for Safety

English

▶ **Matters that demand special attention are divided into 'Warning' and 'Caution', and are detailed a follows.**

⚠ **Warning**	In case of the possibility that a serious injury or death may occur during a violation of the instructions.
⚠ **Caution**	In case of the possibility that a slight injury or product damage may occur during a violation of the instructions.

⚠ Warning

- **Don't plug the power adapter into a non-grounding power outlet.**

- **Never touch the power plug with wet hands.**
  An electric shock accident may occur.

- **Don't plug with other electrical cords into one power outlet.**
  An electric shock or fire accident may occur.

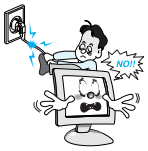
- **Only use the adapter provided with the monitor.**
  An electric shock or fire accident may occur.

- **Don't use a power cord or plug that is frayed or damaged.**
  An electric shock or ignition may be caused.

- **Insert the plug completely so that the power supply unit can be connected tightly.**
  Unsafe power connection may cause a fire.

Warning

- **Keep the power cord from proximity to a heating instrument.**
  The covering material of the cord may melt, causing a fire or electric shock.

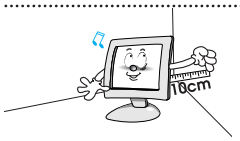


- **Grasp the power plug at the base to remove it from the wall, and pull firmly but gently.**
  If you yank at the cord, the wire may be broken, causing ignition or heat generation.

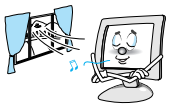
- **Pull the power cord out when the monitor is not used for a long time, or while you are away.**
  A dust covering may cause an electric shock, electric leakage, or fire by heat generation, ignition, and insulation degradation.

- **Select a cool, dry area and protect your monitor from extremes in temperature, humidity, dust and smoke.**
  Accidents of electric shock, fire or failure may occur.

- **Avoid direct sunlight or any other source of heat such as a fireplace.**
  A fire or electric shock accident may be caused.



- **Place the monitor at a proper distance (over 10 cm) away from the wall for sufficient ventilation.**
  A fire may be caused due to an increase in internal temperature.



- **Place the monitor in a well-ventilated room.**
  A fire may be caused due to an increase in internal temperature.

- **Note that air-flow holes must not be blocked such as a table cloth or curtain.**
  A fire may be caused due to an increase in internal temperature.

English

Warning

- **Don't block or obstruct the air-flow holes of the monitor.**
  A fire or damage of the monitor may be caused due to an increase in internal temperature.

- **Don't spill liquids such as chemicals, water on the monitor.**
  A fire or electric shock accident may be caused.

- **Never disassemble and repair the monitor but trained repair engineers.**
  A fire or electric shock accident may be caused. If you need the repair and adjustment, please contact the appropriate sales agency or customer counsel window for check-ups.

- **Don't insert metals (such as coins, hair pins or ironware) or flammable items (such as paper or matches) into the monitor.**
  A fire or electric shock accident may be caused.

- **Stop using in case of smoke or abnormal odors. Immediately turn off the power and pull out the power cord from the wall and then contact the service center.**
  Continuity of use in such a state may cause a fire or electric shock.

- **Don't spray any liquids directly onto the monitor.**
  An electric shock or fire accident may occur.

- **Clean the LCD panel with a soft material such as cotton cloth after removing the power cord from the monitor.**
  A fire or electric shock accident may be caused.

Caution

- **Place the monitor on a stable and secure surface.**
  Fall or displacement of the monitor may cause an injury.

- **Turn off the monitor and disconnect all cables from the monitor before moving the monitor.**

- **Be careful with the shock when moving the monitor.**

- **Don’t scratch or jolt the monitor surface.**
  Damage or failure of the panel may be caused.

- **Take hold of the monitor with both hands setting the panel forward.**
  If the monitor is dropped, contact the service center to check it for a susceptibility to fire or electric shock.

- **Often take a rest to protect your eyes when you work for a long time.**

- **Don’t press upon the panel or scratch the surface with your hands or sharp item such as a nail, pens.**
  Damage or failure of the panel may be caused.

- **The fluorescent light of the monitor contains a mercury which could be exploded. Don’t discard or bury the monitor without permission of the law concerned.**

CONTENTS

English

Installing the Monitor

1.1 **Features** 1

1.2 **Installing and Removing the Support** 2
Installing the Support 2
Removing the Support 2

1.3 **Monitor Overview** 3
Front Side 3
Rear Side 4

1.4 **Connecting the Peripheral Devices** 5

Installing the Monitor Driver

2.1 **Installing the Monitor Driver Under Windows** 7
Windows 98/Me 7
Windows 2000 8
Windows XP 9

2.2 **Installing the Monitor Driver Under Linux** 10

Adjusting the OSD(On Screen Display) Menu

3.1 **Selecting and Adjusting the OSD(On Screen Display) Menu** 11
Selecting and Adjusting the OSD Menu 12

3.2 **Exclusive ANALOG Monitor OSD Menus** 12
Main Menu 12

Troubleshooting/Specification

A.1 **Troubleshooting** 15

A.2 **Specification** 16

1.1 Features

Adopt the 15.0″ TFT LCD Narrow Bezel Panel

Adopt the 15.0″ LCD(Liquid Crystal Display) narrow bezel panel which allows you efficient use in a small space due to the slim design with wide screen.

AUDIO

It gives user an amplified stereo sound through internally installed speakers (2 W).

Power Consumption Economy Function

The VESA DPMS(Display Power Management Signaling) function is available to reduce power consumption by automatically switching the computer into the power saving mode if the system doesn't operate for a fixed period of time.

Tilting and Swiveling the Monitor

For optimum view, you can tilt the display vertically from -5° to 30° degree. When adjusting the display, grasp the left and right edges of the monitor.

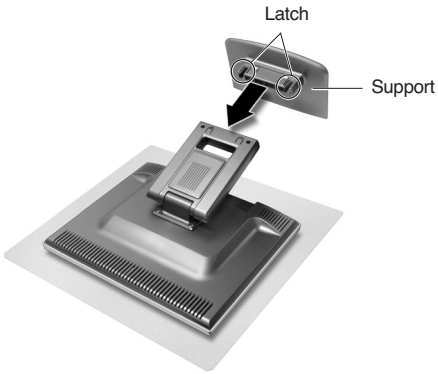
Tilting

1.2 Installing and Removing the Support

Installing the Support

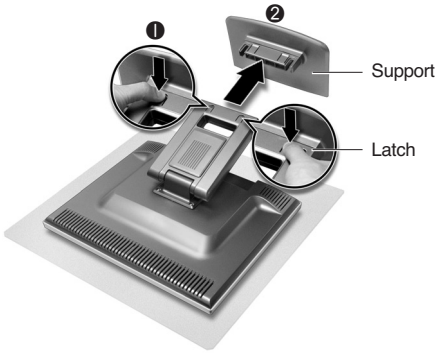
1 Lay a soft cloth and place the monitor on it with the screen facing downwards. (Take caution not to cause scratches to the LCD display.)

2 Push in the support in the direction of the arrow. (Make sure that the 'latches' are fixed to the LCD.)



Removing the Support

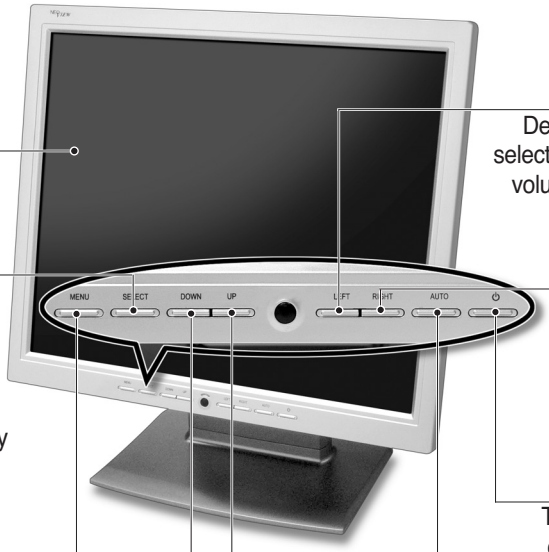
3 While pressing the 'latches' on both sides, push the support in the direction of the arrow and remove it.



1.3 Monitor Overview

This section identifies the name of each component of the monitor and briefly describes the function of each component.

Front Side



TFT LCD Display

Displays the current contents of the display.

SELECT Button

Selects the OSD menu item and the submenu item to be adjusted in the OSD menu window and save the modified value at any selected item. (If you press continuously every two times, the input source will be switched.)

MENU Button

Displays or Exits the OSD menu window.

DOWN Button

Moves to the down menu item in the OSD menu window.

UP Button

Moves to the up menu item in the OSD menu window.

LEFT Button

Decreases the value of the selected item. (Decreases the volume without pressing the **MENU** Button.)

RIGHT Button

Increases the value of the selected item. (Increases the volume without pressing the **MENU** Button.)

POWER Button/LED

Turns the monitor on and off. Indicates the monitor power status. **Green** : Monitor activated. **Orange** : Monitor standby/Monitor power saving mode/VGA signal cable unhooked.

AUTO Button

Press the AUTO button with no OSD menu shown on the screen, and the screen is automatically adjusted into the optimal state applicable to the current mode, showing the PROGRESSING AUTO CONFIGURATION message. If you are not satisfied with the auto adjustment, you can additionally adjust the H/V Position, Clock and Phase of the OSD menus. (For the OSD menu setup method, refer to the 'OSD Menu Functions')

Rear Side

AUDIO IN

Connects the audio cable to the LINE OUT jack on the computer or the stereo jack on the camcorder/VTR.

AUDIO OUT

Connects a set of headphones or external speakers.

ANALOG Connector

Connects the VGA signal cable to the ANALOG connector on the computer.

DC-IN

Connects the DC adapter to input the power.

Note

▶To enjoy the sound with your monitor, at first you must connect the audio cable to AUDIO IN on the monitor and LINE OUT on the computer, and then connect a set of headphones or external speakers.

Note

▶ **Self Diagnostics Screen (ANALOG)**

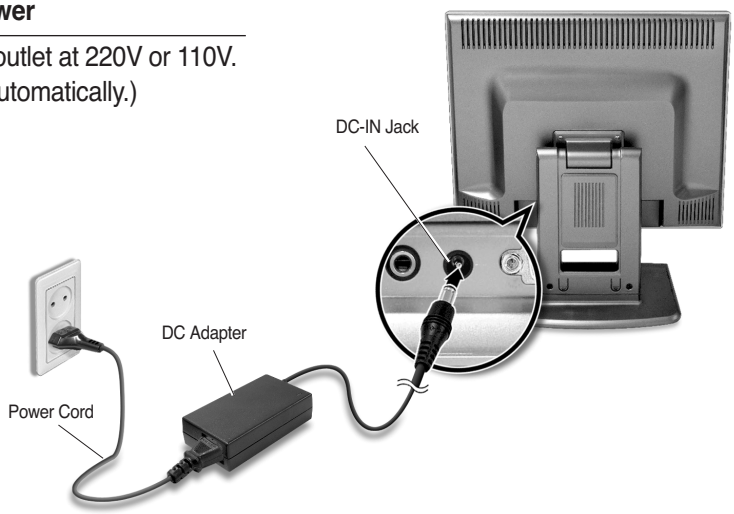
If the signal cable is improperly connected between the monitor and the computer, and if the computer is in the DPMS mode, 'ANALOG NO SIGNAL' message appears on the screen.

1.4 Connecting the Peripheral Devices

Turn off the monitor, computer and other peripheral devices before connecting the monitor and peripheral devices.

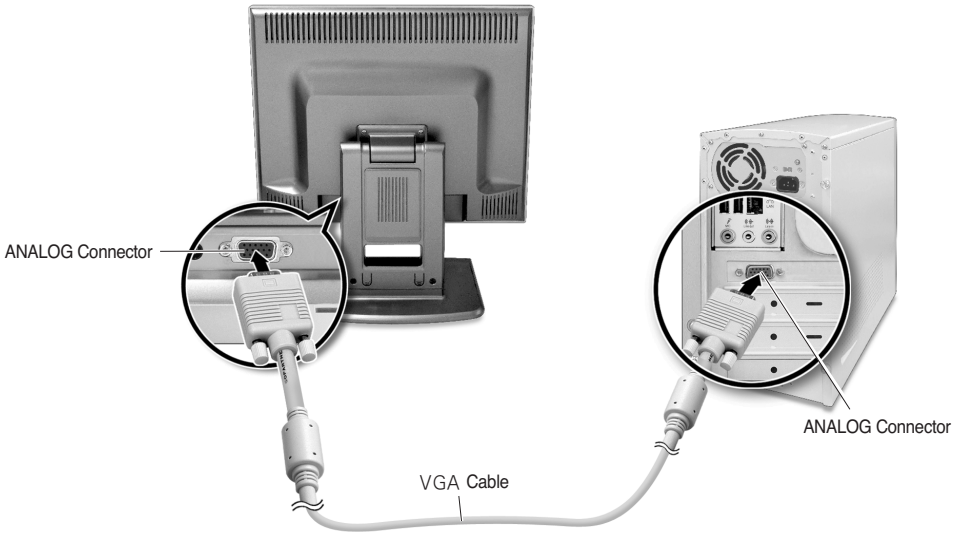
1 Connecting the power

Plug into the power outlet at 220V or 110V.
(The voltage is set automatically.)



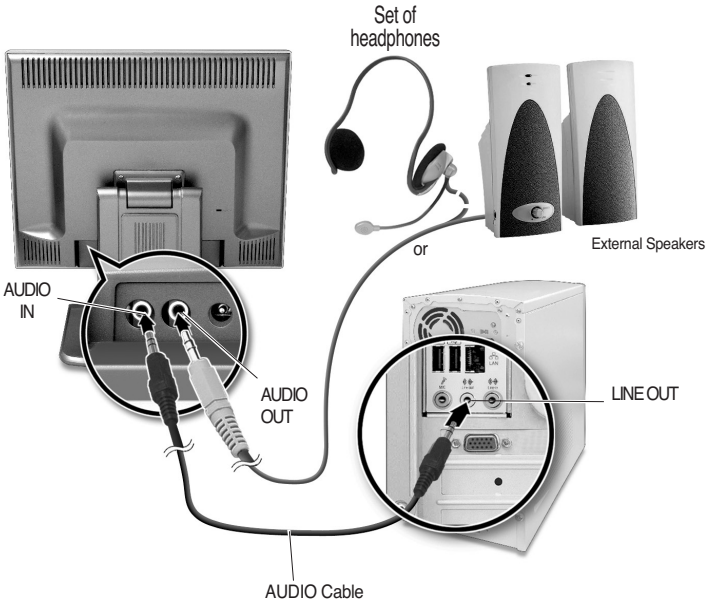
2 Connecting the computer

Connect the ANALOG connector on the computer.



3 Connecting Audio Devices

Connect the audio cable to the AUDIO IN on the monitor and the LINE OUT on the computer or connect the audio cable (RCA) cable to the AUDIO IN on the monitor and the stereo on the camcorder/TV and connect a set of headphones or external speakers to the AUDIO OUT.



2.1 Installing the Monitor Driver Under Windows

This section shows how to install the monitor driver under Windows or Linux by using the monitor driver diskette provided. To install the monitor driver, please refer to your OS in this section.

Windows 98/Me

1. Turn on the computer and the monitor.
2. Insert the monitor driver diskette into the FDD on the computer.
3. Click the **Start** button on the Windows display and select **Control Panel**.
4. Double click the **Display** icon in the **Control Panel** window.
5. In the **Display Properties** window, click the **Setting** tab and then select **Advanced**.
6. Select the **Monitor** tab and click **Properties**.
7. **This wizard searches updated drivers for next device.**
   Click **Next**.
8. **What do you want Windows to do?**
   Select **Display a list of all the drivers in a specific location, so you can select the driver you want** option and click **Next**.
9. **Select the manufacturer and model of your hardware device.**
   Click **Have Disk**.

Note

If it doesn't show up the relevant model in device selection window, click List all Device, select one of them and then click OK.

10. **Install From Disk**
    Click **Browse,** select <A:\> and click **OK**.
11. **Select the manufacturer and model of your hardware device.**
    Select **15.0 ANALOG MONITOR** option and click **Next**.
12. **Windows has finished installing the driver you selected for your hardware device.**
    Click **Finish**.
13. Now, the model name of the monitor is changed. Close all windows opened and restart the computer.

Windows 2000

1 Turn on the computer and the monitor.

2 Insert the monitor driver diskette into the FDD on the computer.

3 Click the **Start** button on the Windows display and select **Control Panel**.

4 Double click the **Display** icon in the **Control Panel** window.

5 In the **Display Properties** window, click the **Setting** tab and then select **Advanced**.

6 Select the **Monitor** tab and click **Properties**.

7 Click the **Driver** tab, select the **Driver Update** button, and then click the **Next** button.

8 **Start the Device Driver Upgrade Wizard**
Click the **Next** button.

9 **Installing the Hardware Device Drivers**
Select **a list suitable to this device to select the specific driver** item, and click the **Next** button.

10 **Selecting the Device Drivers**
Click the **Have Disk** button.

11 **Installing From Disk**
Click the **Browse button**, and select <A:\>

12 **Selecting the Device Drivers**
Select **15.0 ANALOG MONITOR**, and click the **Next** button.

13 **Starting Installing the Device Drivers**
Click the **Next** button, and the driver is installed.

14 **Completing the Hardware Update Wizard**
If the driver installation is completed, click the **Finish** button.

15 If the model name of the monitor is changed, close all windows opened and restart the computer.

Windows XP

1 Turn on the computer and the monitor.

2 Insert the monitor driver diskette into the FDD on the computer.

3 Click the **Start** button on the Windows display and select **Control Panel**.

4 Double click the **Display** icon in the **Control Panel** window.

5 In the **Display Properties** window, click the **Setting** tab and then select **Advanced**.

6 Select the **Monitor** tab and click **Properties**.

7 Select the **Driver** tab, click **Update Driver** and then click **Next**.

8 **Welcome to the Hardware Update Wizard**
Select **Install a list or specific location(Advanced)** option and click **Next**.

9 **Please choose your search and installation option**
Select **Don't search. I will choose the driver to install** option and click **Next**.

10 **Select the device drivers you want to install for this hardware.**
Click **Have Disk**.

11 **Install From Disk**
Click **Browse**, select <A:\> and then click **OK**.

12 **Select the device drivers you want to install for this hardware.**
Select **15.0 ANALOG MONITOR** and click **Next**.

13 **Please wait while the wizard installs the software.**
Now, start installing the monitor driver.

14 **Completing the Hardware Update Wizard**
Click **Finish**.

15 Now, the model name of the monitor is changed. Close all windows opened and restart the computer.

2.2 Installing the Monitor Driver Under Linux

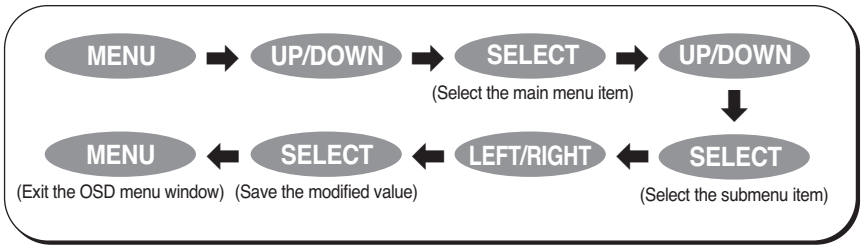
Linux

1. You'd make xf86config file to run X-Window. Your monitor is surely and easily configured with this file. This file will be made as running xf86config.
2. Press Enter in the first and second window after running xf86config file.
3. In third window, we come up with the mouse setting window.
4. Configure it as opt for user system.
5. Next will be the screen for selecting Keyboard.
6. Configure it as opt for user system.
7. First, configure a horizontal frequency. Please refer to the horizontal frequency in monitor manual. (User may directly input frequency.)
8. Next, configure a vertical frequency. Please refer to the horizontal frequency in monitor manual. (User may directly input frequency.)
9. Then, configure a monitor.
10. Type in the model name of monitor. The monitor's identification and description (typed in here) aren't directly related with the execution of X-Window.
11. After complete with other hardware settings, run X-Window.
12. As the configuration has been successfully finished, save a configuration file.
13. Now run X-Window. Theoretically, it is supposed to be executed. But in some cases, it won't even start. In this case, edit a xf86config file.

3.1 Selecting and Adjusting the OSD(On Screen Display) Menu

You can select the OSD menu in the OSD window by using all the control buttons under the display. To change the current settings or adjust it to what you prefer, please follow these steps.

Selecting and Adjusting the OSD Menu



1. Press the **MENU** button to open the OSD menu window.
2. Press the **UP/DOWN** button to move the desired main menu item.
3. The main menu item you moved is highlighted, press the **SELECT** button.
4. Press the **UP/DOWN** button to move the desired submenu item.
5. The submenu item you moved is highlighted, press the **SELECT** button.
6. Press the **LEFT/RIGHT** button to modify the current value.
7. Press the **SELECT** button to save the modified value.
8. To close the OSD menu window, press the **MENU** button or select 'EXIT' (in the submenu window) in order.

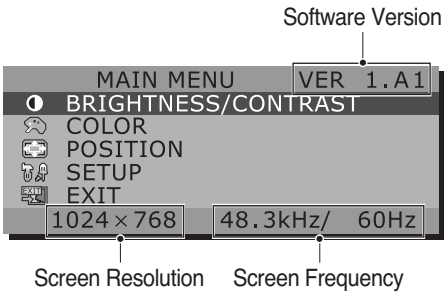
Note

OSD window will be disappeared in a few seconds if there's no input on OSD windows.

3.2 Exclusive ANALOG Monitor OSD Menus

The exclusive ANALOG monitor can use only ANALOG signals as input signals.

Main Menu



BRIGHTNESS/CONTRAST

Controls the brightness and contrast of the display.

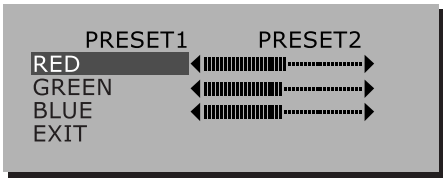
BRIGHTNESS : Controls the brightness of the display.

CONTRAST : Adjusts the level of difference between light and dark areas of the display.

EXIT : Exits BRIGHTNESS/CONTRAST menu.

COLOR

Controls the color(Red, Green, Blue) of the display.



RED : Changes the value of red.

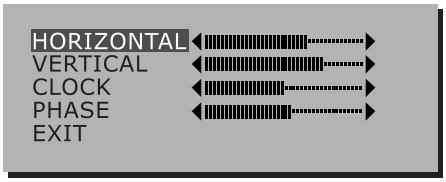
GREEN : Changes the value of green.

BLUE : Changes the value of blue.

EXIT : Exits COLOR menu.

POSITION

Adjusts the position of the display.



HORIZONTAL : Adjusts the horizontal position of the display.

VERTICAL : Adjusts the vertical position of the display.

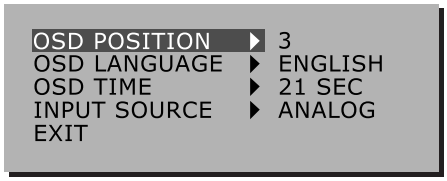
CLOCK : Increases or decreases the number of pixel to adjust the horizontal size.

PHASE : Adjusts the focus and clarity of the display.

EXIT : Exits POSITION menu.

SETUP

Controls and selects the OSD position, OSD time and OSD language of the display.



OSD POSITION : Adjusts the position of the OSD window.

OSD LANGUAGE : Adjusts the language of the OSD window. (ENGLISH, DEUTSCH, FRANAIS, ESPAÑOL, ITALIANO)

OSD TIME : Adjusts the waiting time the OSD fades away. Can adjust the waiting time up to 60 seconds the OSD fades away if you do not input the OSD button.

EXIT

Exits the OSD menu.

A.1 Troubleshooting

Please check the below particulars before you contact the service center to notify an abnormality of the monitor.

The window doesn't show anything	◉ **Is the monitor power cord inserted?** Please connect the power cord correctly to the concent. ◉ **Is the power turned off?** Please press the power button. ◉ **Is the power turned on and the power pilot lamp blinking amber?** The monitor is in the power saving mode. Please therefore move the mouse or press any key on the keyboard. ◉ **Is the message 'Out Of Range' shown?** If a power indicating lamp of amber color blinks, press any key to go back to previous mode. As it passes over the frequency limit of horizon (31.5-80 kHz) and verticality (60-75 Hz) in computer (video card), you'd reconfigure it as referring to the specification of this manual. (If you install the monitor driver that we have provided, it won't come up with the message 'OUT OF RANGE'.) ◉ **Is the message 'No Input Signal' shown?** It shows up as computer changes to power-saving mode or the signal cable between computer and monitor isn't rightly connected. Move your mouse or press keyboard button. But it won't still show you a right screen, then recheck a signal cable connection.
The color of the window is not normal	◉ **Has a discoloration (into 16 colors) of the screen occurred?** Set the number of colors to more than 256 colors. On the Windows 95/98/XP, perform the following process [Control Panel] ▶ [Display] ▶ [Setting] ▶ [Color Table/Screen Resolution] ▶ [256 Colors] ▶ [OK] ◉ **Do you see a spot on the screen?** You may see a few spots (in red, green, white and black) on the screen during the operation. Occurrence of such a phenomenon is not a failure but a characteristic of the LCD panel, and therefore has no relation to the performance of the monitor.
The window is under a bias toward one side, or is not centrally positioned	◉ **Is the positional adjustment made correctly?** Press the **AUTO** button, then the screen will be adjusted automatically into the optimal state applicable to the current mode. If you are not satisfied with the auto adjustment, you can directly adjust the H Position (Horizontal Position), V Position (Vertical Position), and Clock (Horizontal Size) of the OSD menus. ◉ **Is the Phase adjustment made properly?** Press the **AUTO** button, then the screen will be adjusted automatically into the optimal state applicable to the current mode. If you are not satisfied with the auto adjustment, you may manually adjust the Phase (Focus) of the OSD menus.
A faint letter is shown, or the phase is out of focus. Noise is also generated horizontally	◉ **Is the screen set in the best state?** While you are using this product in the mode of 1024 x 768 and 60Hz, the best condition of the screen is available. In the mode of VGA(640 x 480), SVGA(800 x 600) the outline of a letter may be seen dimly or unevenly.

A.2 Specification

The details of product specification can be changed without notice to improve the product.

LCD Panel	Type	a-Si active matrix TFT-LCD
	Size	15.0″ (380.16 mm)
	Pixel Pitch	0.297 mm x 0.297 mm
	Color depth	8 bit(16,777, 216 colors)
Video Signal	Recommended Resolution	1024 x 768
	Horizontal frequency	31.5 ~ 60 KHz
	Vertical frequency	56 ~ 75 Hz
Speaker	Output	Stereo 2 Watt x 2
Signal Input	Input Connectors	15pin D-Sub
	User's control	Auto Configuration, Brightness, Language, Contrast, H-Position, V-Position, Color RGB, Phase, Clock, Volume etc.
Power	On Working	40 Watts (Max.)
	DPMS	VESA DPMS Standard
Measurement	Size of Monitor (W x H x D)	353 x 354 x 169.9 mm
Special	Low-Radiation	TCO 99, C-UL, FCC, CE, CB, MIC

Factory-specified Mode

	Factory-specified Mode		Horizontal Frequency(kHz)	Vertical Frequency(kHz)
1	VGA	640 x 350	31.47	70
2	VGA	640 x 480	31.47	60
3	VGA	640 x 480	37.86	72
4	VGA	640 x 480	37.50	75
5	VGA	720 x 400	31.47	70
6	SVGA	800 x 600	37.88	60
7	SVGA	800 x 600	48.68	72
8	SVGA	800 x 600	46.88	75
9	XGA	1024 x 768	48.36	60
10	XGA	1024 x 768	56.48	70
11	XGA	1024 x 768	60.02	75

Caution

The indication in above diagram and actual value shall not be always coincident. This product automatically adjusts for optimum condition by itself.