FEDERAL COMMUNICATIONS COMMISSION (FCC) WARNING

Instruction to Users
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 and 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 the 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.

This equipment has been certified to comply with the limits for a Class B computing device, pursuant to part 15 of the FCC rules. Only peripherals (computer input / output devices, terminals, printers etc.) certified to comply to the Class B limits may be attached to this computer. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Remarks
To meet FCC requirement, shielded cables are required to connect the device to a personal computer or other Class B certified device.

Information to Users
Any change or modifications expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

DOC NOTICE
This product conforms to Canadian Class B emissions regulations.

Ce produit est conforme aux réglements d'émission Canadienne class B.

INTRODUCTION

This microprocessor-based, digital control 19" color monitor is a high performance and easy to use product.

It employs the latest on-screen-menu technology. The microprocessor capability offers 12 most commonly used VESA timing modes preset in the factory, and 8 modes for user to adjust to the special timings that user might have.

We hope that you will find this manual is helpful in obtaining the fullest use of your monitor, and in ensuring your personal safety during operation.

POWER SAVING

The monitor will be driven to different power saving states upon receiving control signals from the display controller, this meets the EPA (Environment Protection Agency) Energy Star requirements and reduces power consumption.

The monitor will work in the following 4 states according to the VESA standard Display Power Management Signal:

State	Power Consumption	LED Light
ON	Normal	Green
STANDBY	<15W	Yellow
SUSPEND	<15W	Yellow
OFF	< 5W	Amber

The power saving states will be kept until a control signal has been detected or the keyboard or mouse is activated. The recovery time from STANDBY/ SUSPEND state to ON state shall be within 3 seconds. It will take about less than 15 seconds from OFF state back to ON state.

INSTALL THE MONITOR

• To connect the tilt/swivel base to the monitor, align hooks with the sockets on bottom side of the monitor, and gently push the base towards the front of the monitor.

• The 15-pin D-shell signal connector on the signal cable will connect easily to the video adapter output on your personal computer. Lock both screws on the connector to ensure a firm connection.

• Turn the PC power switch ON. Then turn the monitor power switch ON, by pressing the switch inward. The green power indicator will light up.

• Allow about 30 seconds for the CRT tube to warm up. Data will be displayed on the screen.

• If your display fails to function properly, please first refer to the section "Troubleshooting" in this manual.
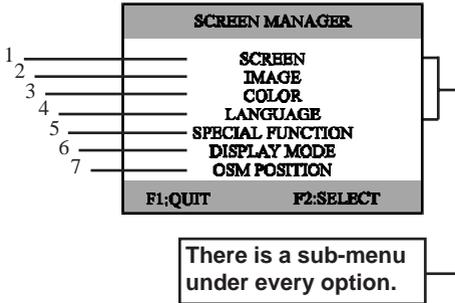
CONTROL PANEL
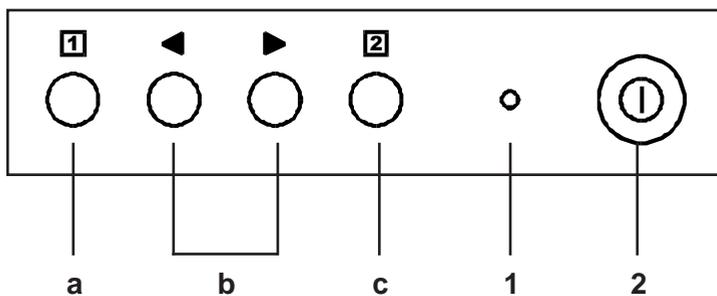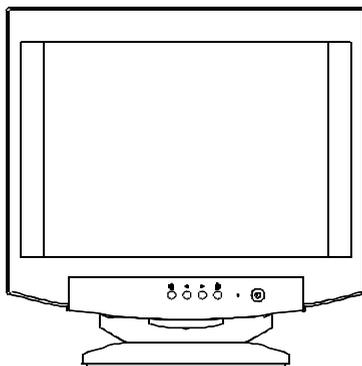
a. **Displays menu & exits menu**
b. **Scrolls through menu to choose an icon for adjustment /**
   Adjusts level of selected icon
c. **Confirms menu selection**

1. **Power LED**
2. **Power ON/OFF switch**

● USING THE ON-SCREEN MENU

1) Display the On-Screen Menu

Press the [1] button on the front panel to display the main menu as follows.

```
          SCREEN MANAGER
1
2              SCREEN
3              IMAGE
4              COLOR
5            LANGUAGE
6        SPECIAL FUNCTION
7          DISPLAY MODE
           OSM POSITION

   F1:QUIT          F2:SELECT
```

There is a sub-menu under every option.

2) Select a Sub-Menu

Move the cursor by pressing the ◀ or ▶ button to select the sub-menu that user's preferred, then press the   button to confirm your selection and enter sub-menu.

* Either you are in main menu or sub-menu, you can press the [1] button to quit the screen menu or sub-menu.

3) Level Adjustment

Use the ◀ or ▶ button to adjust value to the appropriate level. When the [2] button is pressed, the adjustment level will be stored into memory.

4) Quit the On-Screen Menu

When all the adjustments are finished, press the [1] button to exit the On-Screen Menu.

● OSM INTRODUCTION

1) Screen

If the digital value at right side of bar is flash, it means that the level is available to adjust the value now. Otherwise, you can continue to choose any item which you want to change its level.

```
          CONTRAST

  ◐  ☼  ↔  ⟥  ↕  ⟤
  ⟏  ⟰  ⟮  ⟱  ↑□ ↓⟦⟧
  –  ███████████  +100

   F1:QUIT        F2:ADJ.
```
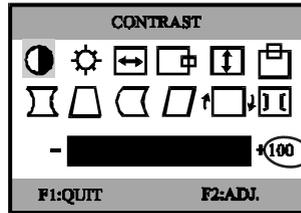
Fig. 1

Current Level

2) Image

The moire reduction function is designed to reduce the dark wavy line Moire patterns on the screen. You can choose 🯅 or 🯆 icon to minimize the vertical or horizontal moire image by using ◀ or ▶ to adjust the image on the screen.

```
          V.MOIRE

     🯅            🯆

  –  ███████████  ✦ 100

   F1:QUIT        F2:ADJ.
```
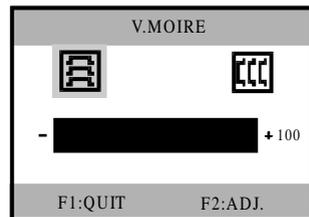
Fig. 2

3) Color

The color temperature of the white image can be adjusted.

(1)Use the ◀ or ▶ button to select 9300°K, 6550°K or the user's preferred color.

(2)If user color is selected, press the [2] button to display the *"COLOR ADJUST"* adjustment screen, then use the [2] , ◀ or ▶ button again to adjust the color as desired.
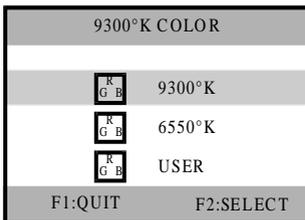
*The GREEN color is fixed and cannot be adjusted.

```
┌─────────────────────────────────┐
│        9300°K COLOR             │
│                                 │
│        [R/G/B]   9300°K         │
│                                 │
│        [R/G/B]   6550°K         │
│                                 │
│        [R/G/B]   USER           │
│   F1:QUIT        F2:SELECT      │
└─────────────────────────────────┘
```

Fig. 3

4) Language

The language of the On-Screen-Menu can be selected among English, German, Italian, Spanish and French.

```
┌─────────────────────────────────┐
│           ENGLISH               │
│                                 │
│           ENGLISH               │
│           DEUTSCH               │
│           ITALIANO              │
│           ESPAÑOL               │
│           FRANÇAIS              │
│   F1:QUIT        F2:SAVE        │
└─────────────────────────────────┘
```
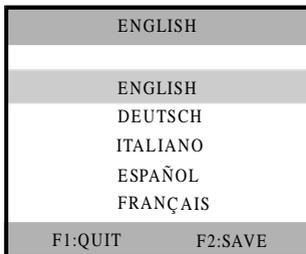
Fig. 4

5) Special Function

a. DEGAUSS

Magnetic field can build up on the CRT components and cause color impurity. Use this function to clear the impurities.

b. RECALL

It is possible to restore adjustments to the original factory settings. If the monitor is operating in the user defined mode, this control is invalid.

c. OSM SHOW TIME

User can set the on screen menu display time between 10 seconds and 35 seconds. The on screen menu will disappear automatically if no adjustment action is taken in user's defined time.
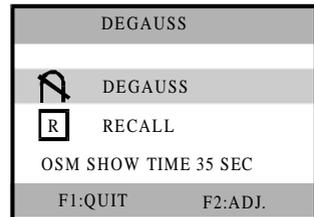
```
┌─────────────────────────────────┐
│           DEGAUSS               │
│                                 │
│   N      DEGAUSS                │
│                                 │
│   [R]    RECALL                 │
│                                 │
│   OSM SHOW TIME 35 SEC          │
│   F1:QUIT        F2:ADJ.        │
└─────────────────────────────────┘
```

Fig. 5

6) Display Mode

This item will show the correct display mode ststus.

```
┌─────────────────────────────────┐
│         DISPLAY MODE            │
│                                 │
│   H.FREQ. :    31.49KHZ         │
│   V.FREQ. :    59.95HZ          │
│   H.POL.:      -                │
│   V.POL. :     -                │
│   F1:QUIT                       │
└─────────────────────────────────┘
```
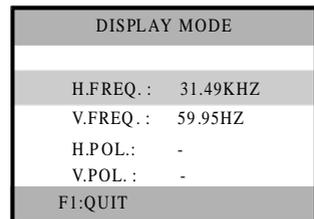
Fig. 6

7) OSM Position

Change the OSM appearance position using this function.

```
┌─────────────────────────────┐
│        V.POSITION           │
│                             │
│       V.POSITION    ▲ ▼     │
│       H.POSITION    ◄ ►     │
│                             │
│   F1:QUIT       F2:ADJ.     │
└─────────────────────────────┘
```
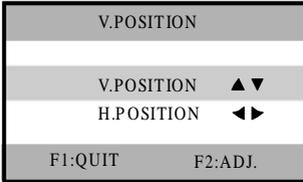
Fig.7

TROUBLESHOOTING

If your monitor fails to operate functionally, it may be possible to correct the problem by making simple checks as follows:

Problem	Check & Adjust
Blank screen (* note.)	Monitor power switch, power cord, signal cable, or connector PC power switch Brightness & contrast controls
Display position off-center	Vertical centering & horizontal phase controls
Display too small or too large	Vertical & horizontal size controls
Display too bright or too dim	Brightness & contrast controls

Refer to the operation instructions for your computer/ video adapter to ensure that you have the correct signal output source for the monitor. Ensure that the switches on the video adapter are set correctly for operation with this monitor.

If the above steps fail to correct the problem contact your dealer for servicing by qualified service personnel.

Please remember that the monitor should be returned for servicing together with the power cord.

* Note: You can easily distinguish the problem is on the monitor or on the computer by using the monitor's built-in selftest function.

   With the monitor power ON, disconnect the signal cable from monitor. If you see a "NO SIGNAL" image on the screen, (shown below) the monitor is function properly, and the problem is at PC side, or signal cable.
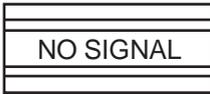
NO SIGNAL

SERVICING

Refer all servicing to qualified service personnel.
Serious shock hazards exist within the covers of this monitor.
Do not open the covers under any circumstances - there are no serviceable parts inside.

SIGNAL CONNECTOR INFORMATION
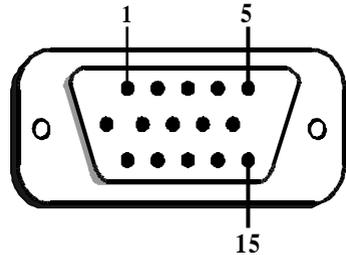
Pin	Function	Pin	Function
1	Red signal	9	NC
2	Green signal	10	Digital ground
3	Blue signal	11	Ground
4	Ground	12	SDA (DDC1/DDC2B)
5	*	13	Horizontal Synchronization
6	Red return	14	Vertical synchronization & VCLK (DDC1)
7	Green return	15	SCL (DDC 2B)
8	Blue return		

*Note: This pin is used for self test detection; at PC side, this pin has to be connected to ground.

TECHNICAL SPECIFICATIONS

Screen Size	19" visual diagonal, Viewable screen size 18"; Anti-Statis, Anti-Glare, Anti-Reflection, etched dark	Current Rating	2.0 A
Dot Pitch	0.26 mm	Power Consumption	120 W (MAX.)
Display Area (H x W)	350 x 262 (mm), typical	Dimension	470 X 470 X 480 (mm)
Display Colors	Infinite	Weight	21kg
Max. Resolution	1600 Dots x 1200 Lines	Operating Temperature	5 C to 35 C
Compatibility	All graphic modes with horizontal frequencies between 30 KHz to 95 KHz	Storage Temperature	-40 C to 65 C
Synchronization Horizontal Sync.: Vertical Sync.:	30 to 95 KHz 50 to 120Hz	Humidity	20% to 80% (non-condensing)
Input Signal	Video RGB Analog Sync. TTL Separate	Altitude	Up to 7000ft
Signal Cable	15-pin D-sub connector	TCO	Meet TCO95
Power Input Voltage Frequency	100 to 240V AC 50 - 60 Hz		

*Specifications are subject to change without notice.

PRESET MODES

Mode	Resolution (H x V)	H. Freq. (KHz)	V. Freq. (Hz)	Mode	Resolution (H x V)	H. Freq. (KHz)	V. Freq. (Hz)
1	640 x 480	31.4	60	7	1024 x 768	60.0	75
2	720 x 400	31.4	70	8	1024 x 768	68.6	85
3	640 x 480	37.5	75	9	1600 x 1200	75.0	60
4	640 x 480	43.2	85	10	1280 x 1024	80.0	75
5	800 x 600	46.8	75	11	1280 x 1024	91.1	85
6	800 x 600	53.6	85	12	1600 x 1200	93.7	75