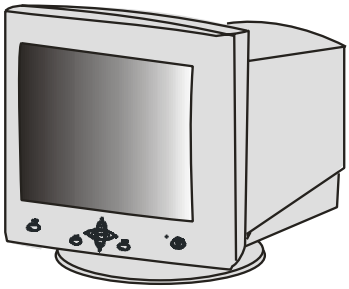
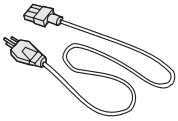
Chapter 1
Unpacking the Package

Check following items. If they are missing or damaged, consult your place of purchase immediately.

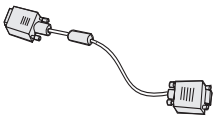


2107e color monitor

User's manual



Power cord



15-pin D-SUB signal cable

Macintosh adapter

✍ ***Locate the model name and the serial number labeled on the back of your monitor. Write down the related information of your monitor and dealer in the space on page iii for future reference.***

Features

Super-fine Dot Pitch	With 0.25mm super-fine dot pitch and anti-static coating, 2107e color monitors offer strikingly sharp and high resolution image up to 1600 × 1200.
Wide Range AutoScan	Horizontal frequency ranges from 30KHz to 107 KHz to support 1600 × 1200 @ 90Hz resolution. Flicker-Free design for vertical frequency of up to 160Hz.
Auto key	Pressing the Auto key, the monitor will automatically adjust display's size and position to the optimum. No re-configuration or adjustment is needed when a user changes display mode.
Low radiation	2107e meets strictest low radiation regulations of "MPRII".
Users and Environment	2107e is produced by the ISO 14001 certified manufacturer, and in compliance with the global environmental labelling scheme- MPRII.
Plug'n Play Compatibility	Supporting VESA DDC 1™ and DDC 2B™ standards, 2107e is compatible with Plug'n Play feature of Window® 95 and Window 98®

Power Management

The Power management of this monitor complies with these VESA power saving modes:

Mode	Power Consumption	Horizontal Syne	Vertical Sync	LED
On	Normal	On	On	Green
Stand-by	< 15 W	Off	On	Amber
Suspend	< 15 W	On	Off	Amber
Off	< 5 W	Off	Off	Amber Blinking
Overide	Normal	Off	Off	Green

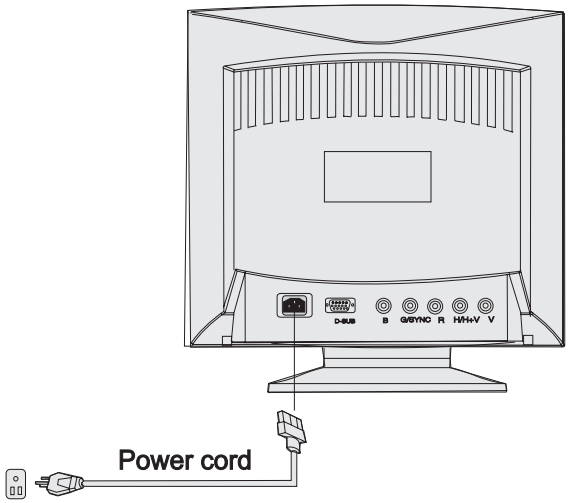
Factory Preset Timings

Resolution	Vertical Frequency (Hz)	Horizontal Frequency (KHz)
640 × 400	70	31.47
640 × 480	60	31.47
640 × 480	75	37.50
800 × 600	75	46.88
1024 × 768	75	60.02
1024 × 768	85	68.68
1280 × 1024	75	79.98
1280 × 1024	85	91.15
1600 × 1200	75	93.75
1600 × 1200	85	106

**** All above timings are non-Interlace timings.**

Chapter 2
Installing the Monitor

This monitor is equipped with an autosensing universal compatible power supply for voltage ranges 100-120/200-240V AC, 50~60Hz.. Please confirm the line voltage designation at the rear panel of the monitor before connecting the machine.

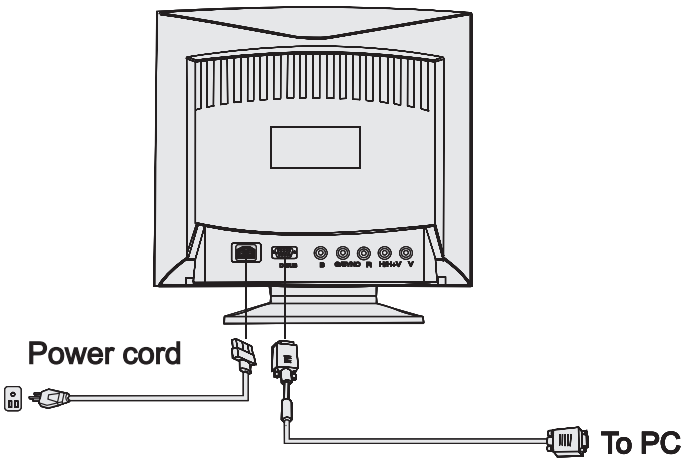


1) Make sure that the system power is turned off.
2) Please refer to the instructions below to connect the signal cable through D-SUB or BNC.
3) Connect the power cord to the monitor and attach it to power source.
4) Turn on the computer and the monitor.

Connecting the Signal Cable

Your 2107e provides both D-SUB and BNC signal connectors. The D-SUB or BNC signals can automatically be detected by its microprocessor.

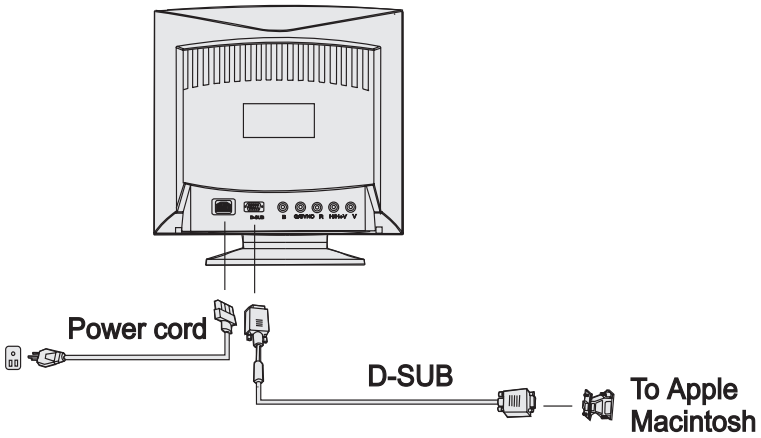
Connecting through D-SUB signal connector



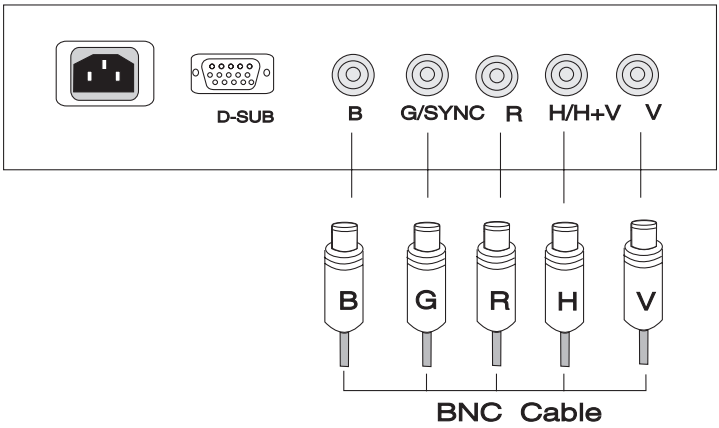
1) Make sure that the system power is turned off.
2) Connect the computer end of the D-SUB cable to the 15-pin output connector on the video board of your computer.
3) Connect the monitor end of the D-SUB cable to the D-SUB receptacle on the back of the monitor.

Connecting to An Apple

If you connect the monitor to an Apple Macintosh through a D-Sub cable, you need to add the Macintosh adapter to connect the video signal port of your computer and the monitor signal cable. Before connecting the adapter please refer to the user's guide of the adapter to set the switches of the adapter.

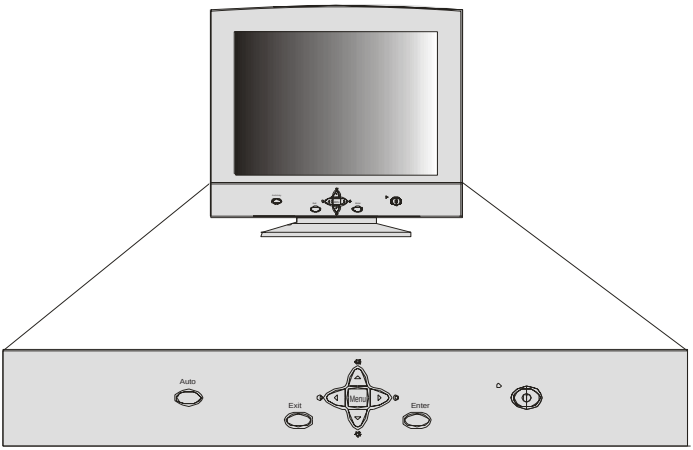


Connecting through BNC Signal Connector



1) Make sure that the system power is turned off.
2) Connect the computer end of the BNC cable to the output connector on the video board of your computer.
3) Connect the monitor end of the BNC cable to the BNC receptacle on the back of the monitor.

Chapter 3
A Look at the Control Panel



- **Menu key :** enters or changes Main menus. There are three main menus.
- **Enter key :** enters sub-menus or selects items.
- **Exit key :** goes back to main menus (auto save), or leaves OSD.
- **▲ & ▼ key :** scrolls the light coloured bar up or down and represents HOT KEY for brightness adjustment.
- **◄ & ► key :** scrolls the light coloured bar left or right and represents HOT KEY for contrast adjustment.
- **Auto key :** is used for Fuzzy Automatic calibration adjustment.

Making Adjustments

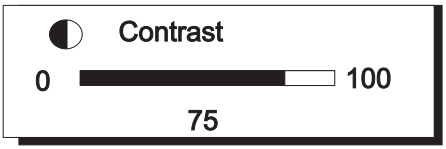
Auto key(Fuzzy Auto Calibration)

Just push the Auto key, then the monitor will automatically adjust display's size and position to the optimum. No re-configuration or adjustment is needed when a user changes display mode.

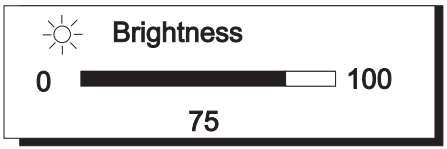
The Auto key function is different from "Reset" function. "Reset" function for display's geometry, size and position only works under the factory preset timings (please see page 3). The Auto key function will work under "ANY" display timings which 2107e can support.

Hot Keys

Press ◀ or ▶ key to adjust contrast directly.



Press ▲ or ▼ key to adjust brightness directly.

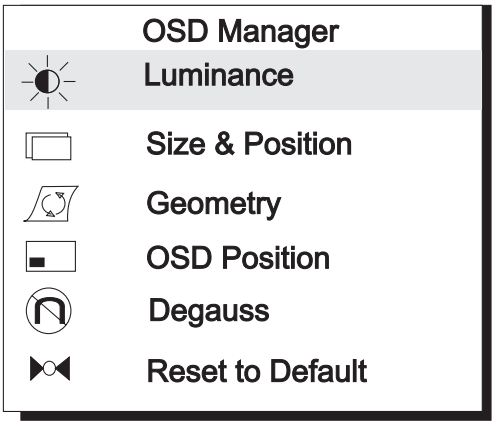


OSD Operation

1) Press **Menu** key to enter or change Main menus (there are three main menus)
2) Press ▲ or ▼ keys to scroll light coloured bar to desired items.
3) Press **Enter** key to enter sub-menus.
4) Press ◄, ► (▲ ,▼) key to do the adjustments. If the sub-menu contains multiple items. Press ▲ or ▼ keys to scroll light coloured bar to desired items. Then press ◄ or ► key to adjust as required.
5) Press **Exit** key to save and return to main menus.
6) Press **Exit** key to save and leave OSD

> ✍ ***Reset to the factory default settings, please see General Settings Reset and Color Temperature Reset.***

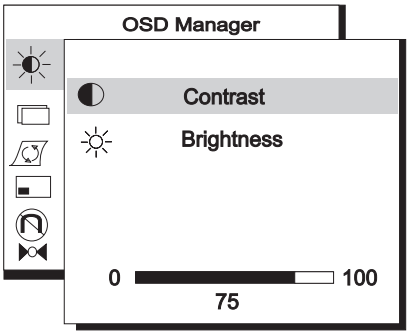
Main Menu 1 Display Control



This main menu includes six items. Scroll the light coloured bar to desired items and press **Enter** to sub-menus.

Luminance

Contrast and Brightness adjustments

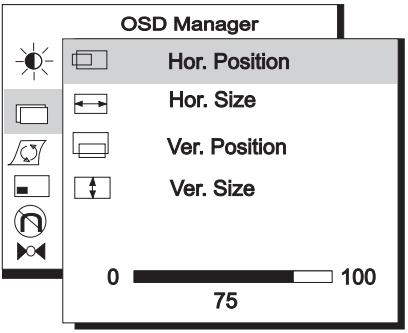


Contrast adjusts the difference between the light and dark areas.

Brightness adjusts the brightness of the display.

Size & Position

Display size and position adjustment



Hor. Position adjusts the horizontal position of the display.

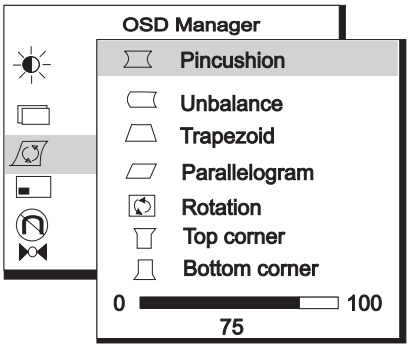
Hor. Size adjusts the width of the display.

Ver. Position adjusts the vertical position of the display.

Ver. Size adjusts the vertical height of the display.

Geometry

Advanced geometry adjustments



Pincushion controls the straightness of the vertical edges of the display.

Unbalance adjusts balance when the sides of display are bowed towards left or right

Trapezoid makes the vertical edges of the display parallel.

Parallelogram corrects image leaning left or right.

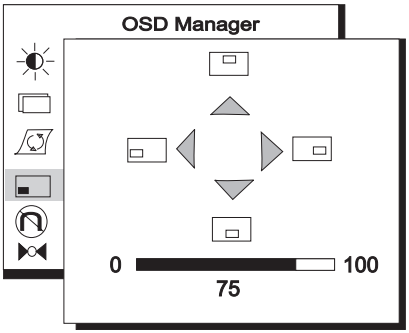
Rotation corrects screen tilt.

Top Corner adjusts the edges on the top corners of the screen image.

Bottom Corner adjusts the edges on the bottom corners of the screen image.

OSD Position

OSD position adjustments



adjusts the OSD menu position up.

adjusts the OSD menu position down.

adjusts the OSD menu position left.

adjusts the OSD menu position right.

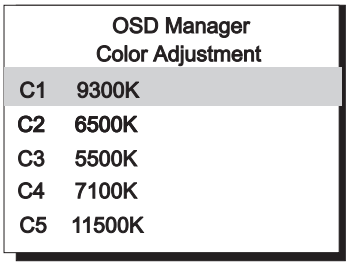
Degauss

Manual Degauss. To eliminate color shading or impurity induced by magnetism, press **Enter** to active Degauss function.

Reset to Default

Reset the monitor to the default factory settings including H/V position, H/V size, Pincushion, Unbalance, Trapezoid, Parallelogram, Rotation, Corner, H/V Convergence, H/V Moie and Moire. For preset timings, in order to reset to factory default values, press **Enter**. To reset color Temperature, plsease see page 15.

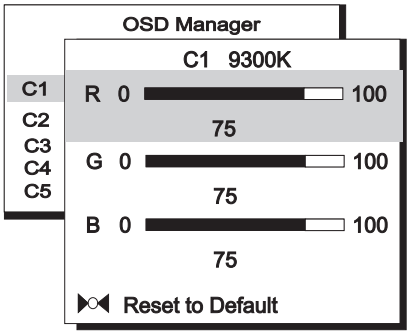
Main Menu 2 Color Control



This main menu is defined as color weight adjustment. C1 ~ C5 are color storage areas, which are factory preset but can also be modified by user. The preset information as follows :

Factory Default	Color Temperature
C1	9300K
C2	6500K
C3	5500K
C4	7100K
C5	11500K

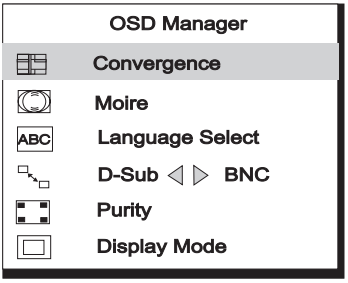
Scroll the light coloured bar to desired color temperature, then press **Exit** to save the setting and leave OSD. Press **Enter** key to sub-menus and adjust RGB color weight.



This sub-menu adjusts RGB (Red, Green, Blue) color weight. Press ▲ or ▼ keys to scroll light coloured bar to desired items then press ◀ or ▶ key to do the adjustments.

> ***To reset to factory default values, scroll light coloured bar to item " ⋈ Reset to Default".***

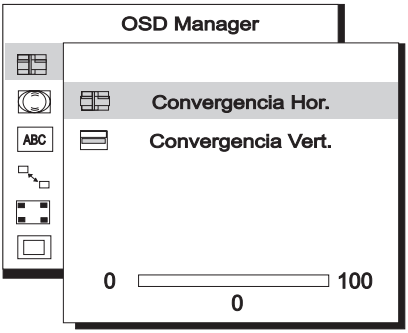
Main Menu 3 Advanced Display Control



This main menu includes six items, scroll light coloured bar to desired items. Press **Enter** key to enter sub-menus.

Convergence

Horizontal & Vertical Convergence adjustment



Hor. Convergence: adjusts Horizontal Convergence

Ver. Convergence: adjusts Vertical Convergence

Convergence is the monitor's ability to precisely illuminate specific phosphors and line them up properly in order to produce pure color. Displayed characters and images may appear fuzzy or have tinges of red , green, or blue if the electron beams do not converge correctly.

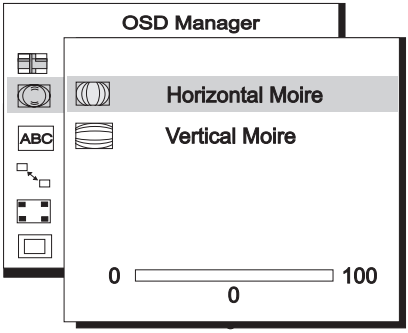
2107e offers a convergence adjustment feature. To properly adjust convergence, it is best to have an image that makes it easy to see any convergence error. A black background with white letters or lines is recommended. When adjusting convergence, look at the adjustment across the whole screen. When adjusting horizontal convergence, look at the left and right edges of vertical lines or characters. When adjusting vertical convergence, look at the top and bottom edges of horizontal lines or characters. The monitor is properly adjusted when the effects of red and blue tinges are minimized.

The convergence adjustment adjusts the entire screen. It is not possible to limit adjustment to specific screen areas.

Factory default setting values : 0

Moire

Horizontal & Vertical Moire adjustment



Horizontal Moire: adjusts horizontal Moire

Vertical Moire: adjusts vertical Moire

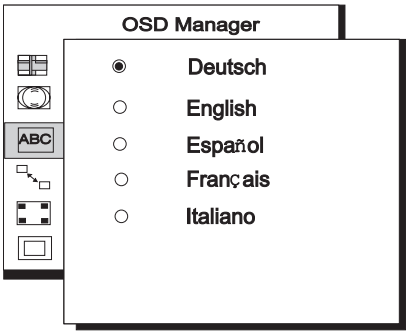
Moire refers to an interference pattern of dark wavy lines on the screen. It is an interference phenomenon caused by the relationship between the phosphor layout and the imaging signal. In fact, it is often considered an indication of good focus level.

> ***It is especially noticeable when using a light-gray or every-other-dot pattern. Moire cannot be eliminated. However, it can be reduced with the moire reduction feature.***

Moire can be reduced by adjusting the iscreen moire reduction function. Prior to adjustment, set the screen to a full white pattern so that moire will be visible. After this adjustment, make changes to a different screen background in order to reduce moire even further.

> ***If the picture is unstable when you adjust the moire reduction setting, over-adjustment has occured. Please lower the moire reduction setting level. (Factory default setting value : 0).***

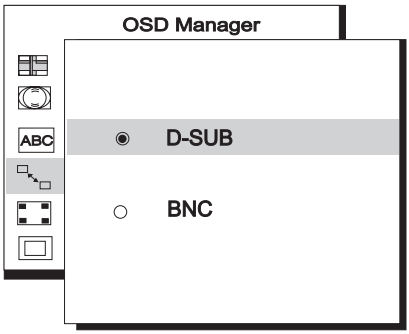
Language Select



The sub-menu is defined as language selection and there are five languages to choose from.

D-Sub ◀▶ BNC

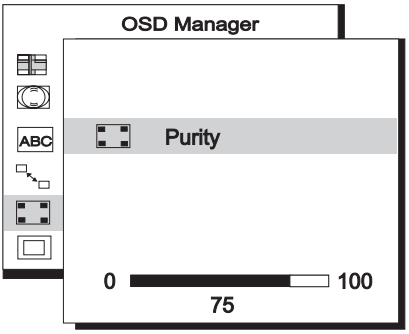
Input connector select.



There are two kinds of input connectors for 2107e. One is a BNC connector, the other is a DB-15. The 2107e is capable of automatically detecting the type of connector used (either BNC or DB-15). If the two connectors are connected simultaneously, the user can select the desired connector.

Purity

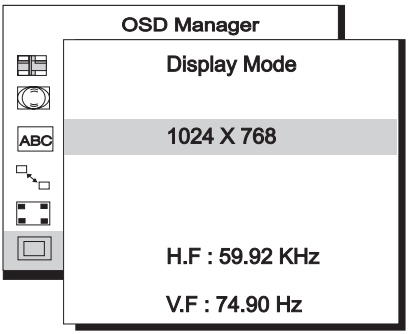
Colour purity adjustment



To adjust Purity, choose a full white picture and adjust to get a pure white picture at the corner of the screen image.

Display Mode

Current resolution, horizontal and vertical frequency status presentation.



Timing Setting

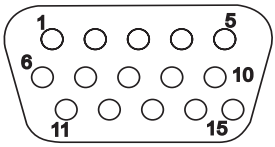
By making adjustments to your video card settings, you can set the timing and the refresh rate according to your preferences. The monitor will automatically save the settings. Your monitor can accept a vertical frequency ranging from 50 Hz to 160 Hz and an horizontal frequency from 30 KHz to 107 KHz. However, due to different video card and resolution settings, we recommend that you do not exceed the maximum refresh rate, 160 Hz for vertical frequency and 107KHz for horizontal frequency to avoid possible damage to your monitor.

Resolution	Recommended Maximum Vertical Refresh Rate(Hz)
640 × 480	160
800 × 600	145
1024 × 768	135
1280 × 1024	100
1600 × 1200	90

To set the timing and the refresh rate, please see the user's guide of your video card.

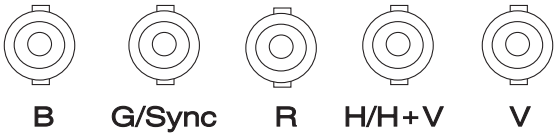
Pin Assignments

D-SUB Connectors



Pin No	Signal		
	Separate	Composite	Sync-on-green
1	Red	Red	Red
2	Green	Green	Green + SYNC
3	Blue	Blue	Blue
4	NC	NC	NC
5	GND	GND	GND
6	R-GND	R-GND	R-GND
7	G-GND	G-GND	G-GND
8	B-GND	B-GND	B-GND
9	PC5V(For DDC)	PC5V(For DDC)	PC5V(For DDC)
10	GND-SYNC	GND-SYNC	GND-SYNC
11	GND	GND	GND
12	DDC Data	DDC Data	DDC Data
13	H-SYNC	H/V-SYNC	Not Used
14	V-SYNC	Not Used	Not Used
15	DDC Clock	DDC Clock	DDC Clock

BNC Connectors



Pin Assignment	Signal		
	separate	composite	sync-on-green
B	Blue	Blue	Blue
G/SYNC	Green	Green	Green + SYNC
R	Red	Red	Red
H/H+V	H-SYNC	H/V-SYNC	NC
V	V-SYNC	NC	NC

Chapter 4
Troubleshooting

Make sure that your monitor is properly installed. If you have encountered any trouble in using this product, for hardware installation problems, see **Chapter 2, Installing the Monitor**. If the problems persist, check this chapter for possible solutions.

§ If there is no picture on the screen, check:

- Power outlet type.
- Video sync signal. The video sync signal must be specified for the monitor.
- Power saving mode. Press any key & use the mouse to deactivate the mode.
- Signal cable connector pins. If pins are bent or missing, consult your dealer.

§ If the picture is scrolling or unstable, check:

- Signal connector pin assignments. Replace with a functional one if inoperative.
- Signal cable connector pins. If pins are bent or missing, consult your dealer.
- Graphics card. See if the settings are made properly.
- Scanning frequency. Change the settings of your graphics card to acceptable options
- Remove magnetic objects near the monitor.
- Over-adjusting moire reduction setting, please check the moire reduction setting level. See **Chapter 3, A Look at the Control Panel**.

§ If the characters look dark, the picture is too small, too large or not centered etc.

- Adjust related settings. See **Chapter 3, A Look at the Control Panel**.

§ If colors are impure.

- Check signal cable connector pins. If pins are bent or missing, consult your dealer
- Adjust the Purity setting. See **Chapter 3, A Look at the Control Panel.**

Maintenance

✘ Do not expose the monitor to direct sunlight or heat.

✘ Do not spill liquid on the monitor.

✘ Do not attempt to open the monitor. You may be hurt by electric shock. For service, call your dealer.

✘ Do not use your monitor when magnets or electronic products are operating nearby.

✘ Do not use harsh chemicals or strong cleaning solvents to clean the monitor screen. Wipe it with mild solution applied on clean and soft cloth.

✘ Do not place anything on your monitor. Bad ventilation may elevate tempera ture within the monitor.

Need More Help?

If your problems remain after checking this manual, please contact your place of purchase.

Chapter 5
Specifications

Picture	
Size	21"(53.34cm) diagonal
Dot Pitch	0.25mm dot pitch
Surface/Transmission	AR,AS/semi-tinted
Maximum Viewable Size	20" (51 cm) diagonal
Video Input	15-pin, mini D-SUB Connector/BNC Connector
Bandwidth	230MHz
Display Area	380mm(H) x 285mm(V) (Preset) 408mm(H) x 306mm(V) (Full Scan)
Power Supply(Universal)	
Input voltage	100~120/200~240 VAC, 50~60 Hz (Universal compatible)
Power consumption	150Watts max./165 Watts max.(With USB)
External Controls	Power switch, Auto key auto-calibration, Contrast, Brightness, Horizontal Position, Horizontal Size, Vertical Position, Vertical Size, Pincushion, Unbalance, Trapezoid,Parallelogram, Rotation, Top Corner, Bottom Corner, Color Weight, Degaussing, Horizontal Convergence, Vertical Convergence, Horizontal Moire, Vertical Moire, BNC and DB-15 Selection, Reset, Language Select, Purity
Max. Resolution	1600 x 1200

Horizontal Frequency	30-107 KHz
Vertical Frequency	50-160 Hz
Dimensions (with stand)	508mm(W) x 515mm(H) x 512mm(D)
Weight	29.4Kg
Ambient Temperature	
Operating	+5C ~ +40C
Storage	0C ~ +60C
Humidity	
Operating	20% ~ 90%
Storage	10% ~ 90%
Regulatory Compliance	TÜV-GS, TÜV-ergo, C-tick, MPR-II