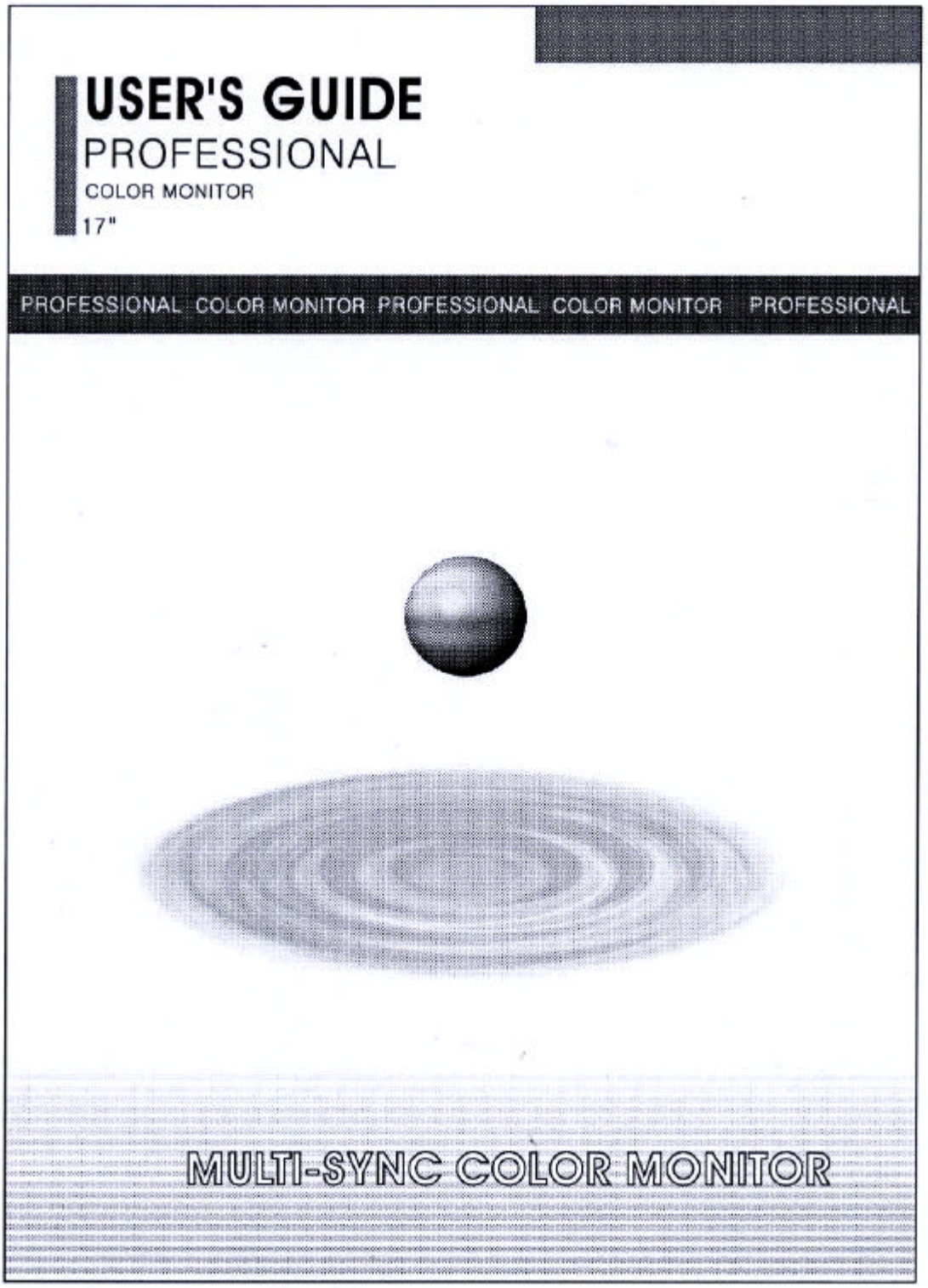

USER'S GUIDE
PROFESSIONAL
COLOR MONITOR
17"
PROFESSIONAL COLOR MONITOR PROFESSIONAL COLOR MONITOR PROFESSIONAL
MULTI-SYNC COLOR MONITOR

CONTENTS

FCC Compliance 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 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 into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Notice 1 :

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

Notice 2 :

Shielded interface cables, if any, must be used in order to comply with the emission limits.

DOC CLASS B NOTICE

This digital apparatus does not exceed Class limits for radio noise emission for a digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

INTRODUCTION

Thank you for purchasing our high quality performance color monitor, we believe that you will be pleased with this monitor.

We recommend you to take a few minutes to read this manual in order to familiarize yourself with the full range of microprocessor controlling functions .

This 17˝color monitor is an intelligent, flat screen and auto scanning monitor.
Its advanced microprocessor based, multi frequency design adjusts automatically the scanning frequency required by any application from general VGA to the professional CAD/CAM applications.

CONTENT CHECK LIST

Please check that all the parts listed below are contained in the carton. if not, please contact your dealer.

- Monitor (complete with tilt/swivel base)
- Detachable 15 Pin Video Signal Cable
- Detachable AC power cord
- User's Manual
- Monitor driver disk
- Optional Macintosh Adapter (only if ordered)

MONITOR FEATURES

17 inch, 0.27mm dot pitch, flat screen and high performance color monitor.

Anti-static and multi coating eliminates static shock and helps to keep screen dust free.

Auto frequency scanning range from 30KHz to 70KHz (horizontal) and from 50Hz to 150Hz (vertical).

Plug and Play function will install the monitor automatically under MS windows 95/98/2000

Power Management System saves energy costs and extends product life.

Auto switching power supply allows any AC power supply range from 100volts to 240volts (60/50Hz) to be used.(PFC: 200V to 240V)

On Screen Display(OSD) system allows easy and accurate adjustment of screen controls.

Tilt and swivel base allows full adjustment to your specific requirements.

This monitor provides unlimited colors, depending on your system video card.

SAFETY

WARNING!

This equipment contains high voltage components and sub assemblies!

Do not attempt to modify or service this monitor by yourself.

Refer all servicing to qualified service personnel.

If, for whatever reason, the monitor does not operate, adjust only those controls covered in this user's manual.

Unauthorized adjustment of internal controls will invalidate guarantee and may result in an electrical shock, loss of monitor controls and function, which will lead to extensive repair work.

Unplug the monitor from main power immediately and have the monitor serviced by a qualified individual or company if;

- Liquid has been spilled into the monitor, or the monitor has been exposed to rain.
- If the monitor has been dropped or the casing has been damaged.
- If the monitor exhibits a distinct change in performance indicating the need for service.

WARNING! THIS MONITOR CONTAINS HIGH VOLTAGE COMPONENTS.

The following instructions are for your safety, please read them carefully.

Follow all of the instructions in this manual, and marked on the product. Slots and ventilation holes must not be covered.

Do not place anything on the monitor or power cord.

Ensure all cords and leads are whole. Do not use leads or cords which are worn, cut or frayed. Ensure cords and leads do not present a trip hazard and are positioned away from locations where they may be exposed to dampness or any type of fluid.

Unplug the monitor from main AC power before cleaning

Ensure the total loading of your AC power point is not exceeded by running too many electrical appliances from it.

RECOMMENDED USE

For the optimum performance, please note the following recommendations during the set up and installation of your monitor.

- To avoid eye strain and fatigue, do not use the monitor against a bright background, or where sunlight or other light sources shine directly onto the screen.
- Match the brightness of the monitor to local light conditions and levels(see monitor controls and adjustments later in this user's manual).
- For the optimum focus, the contrast level should be kept below the maximum setting.
- Keep the monitor away from the unshielded electrical equipment such as transformers, electric motors and unshielded speakers (for instance in a multimedia application).
- Place the monitor just below the eye level for an optimum viewing angle and sit from the screen leaving an interval of 18 inch.
- Although the monitor can be stored in a various temperature and humidity conditions, Do not operate the monitor below 0 degrees Centigrade, or above 40 degrees Centigrade. (for specific temperature and humidity ranges, see table B)
- Avoid operating/storing the monitor in dirty and/or dusty areas and only use it on reasonably flat and stable surface. Allow at least 4" (100mm) of open space around the monitor for air/ventilation flow.
  If the monitor is not in use for an extended period, disconnect it from AC main power.

INSTALLATION

Your multi frequency color monitor is designed to be connected to both IBM and Apple Macintosh computer system.
In either case your computer system should provide one of the following video configurations :

- The video controller is built into the computer
- The video controller is built into an add-in adapter card

Both configurations provide a video connector (or CDT port). Consult your computer system documentation to determine the location of the video connector.

STEP by STEP INSTALLATION and SET UP

1. Before connecting the monitor to your computer system, switch the computer off.

2. Connect the Video Cable, the DS-15 pin cable into your computer monitor port (CDT port). Tighten the integral screws tightly, hand tightening only is enough - do not over tighten using a screwdriver.

3. Connect the supplied power cord into the power port on back of the computer and then to that of the monitor. Or connect the power cord directly into an AC power socket and then into the power port on the back of the monitor.

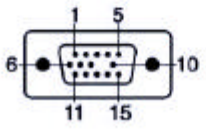
4. Switch your computer system on.

5. Turn on your monitor by pressing the power switch.

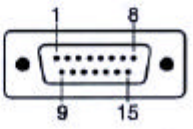
PIN ASSIGNMENTS

D-SUB Signal Input (Female Type : Figure)

Pin-No	Both Ends of the Signal Cable (Figure 1)		Cable Adapter (Figure 2)
	Separate	Composite	Apple Macintosh
1	Red	Red	GROUND-R
2	Green	Green	Red
3	Blue	Blue	H/V Sync
4	GROUND	GROUND	Sense 0
5	DDC Return	DDC Return	Green
6	GROUND-R	GROUND-R	GROUND-G
7	GROUND-G	GROUND-G	Sense 1
8	GROUND-B	GROUND-B	Not Used
9	Reserved	Reserved	Blue
10	GROUND-Sync /Self-Raster	GROUND-Sync /Self-Raster	Sense 2
11	GROUND	GROUND	GROUND
12	DDC Data	DDC Data	V-Sync
13	H-Sync	H/V-Sync	GROUND-B
14	V-Sync	Not Used	GROUND
15	DDC Clock	DDC Clock	H-Sync

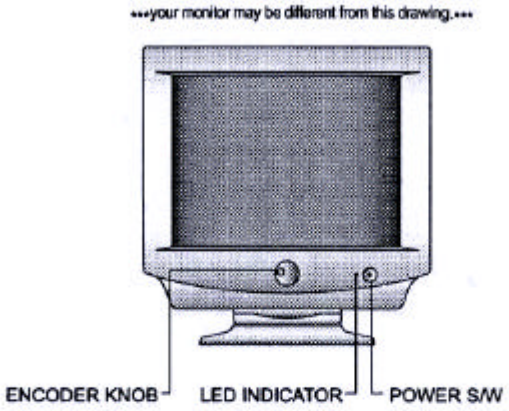


(Figure 1)



(Figure 2)

CONTROLS and ADJUSTMENTS



Basic Controls

Power switch (S/W): Press to turn Monitor ON and OFF.

LED indicator : LED is green in Normal operation.
LED is orange/green blinks in Power save mode(s).

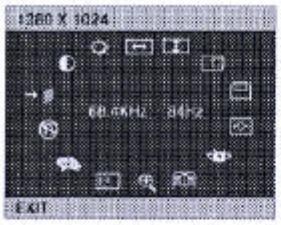
Encoder knob : Use these adjustment controls to adjust the display image when an OSD (On Screen Display) menu is being used.

Note : The monitor automatically saves display settings 0.5 to 1 second after the last adjustment.

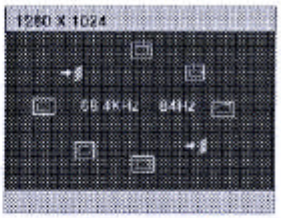
Microprocessor Controls

This Monitor employs advanced microprocessor controls for each of the standard timing signals listed in the timing charts later in this manual. This allows the Monitor to adjust itself automatically for various timing signals. Although the Monitor comes with preprogrammed factory settings, the Monitor automatically saves user's settings.

CONTROLS and ADJUSTMENTS -Continued



Main OSD MENU



Sub OSD MENU:
Inside ADV. CONTROL

Sub OSD MENU:
Inside MISCELLANEOUS

Sub OSD MENU:
Inside COLOR Control

OSD (On Screen Display)

The OSD appears on the screen when a function/menu button is pressed. The name, range and current settings appear on the screen. The OSD remains active for approximately 5 seconds after completing any necessary adjustments.

CONTROLS and ADJUSTMENTS -Continued

Menu and control function buttons

MENU		
Up → Turn to the right, Down → Turn to the left		
CONTRAST Press knob button and then adjust the difference between dark and light display areas rotating up/down control button.	BRIGHTNESS Press knob button and then adjust the overall display brightness rotating up/down control button.	H-SIZE Press knob button and then adjust horizontal size rotating up/down control button.
V-SIZE Press knob button and then adjust the Vertical size rotating up/down button.	H-POSITION Press knob button and then adjust the horizontal position rotating up/down control button.	V-POSITION Press knob button, and then adjust the Vertical position rotating up/down control button.
ADV. CONTROL Press knob button, and then adjust the geometry condition.	INFORMATION Press knob button to check the video signal information.	MISCELLANEOUS Press knob button and choose the function. (with sub OSD Menu)
RECALL Press knob button to return the original setting mode.	ZOOM Press knob button, and then adjust zoom size rotating up/down control button.	COLOR Press knob button, and then adjust the display color rotating up/down control button. (user & 6500°K & 9300°K)
DEGAUSS Press knob button to demagnetize the CDT.	EXIT Press knob button, and then the OSD disappears from the screen .	

SUB MENU(ADV. CONTROL)		
Up → Turn to the right, Down → Turn to the left		
PINCUSHION Press knob button, and then adjust the correct vertical alignment sides of display rotating up/down control button.	PIN BALANCE Press knob button to adjust the correct center pin alignment rotating up/down control button.	ROTATION Press knob button, and then adjust the display rotation rotating up/down control button.
CORNER Press knob button, and then adjust the correct up/down corner side pin alignment rotating up/down control button.	PARALLEL Press knob button, and then adjust the correct center pin alignment rotating up/down control button.	TRAPEZOID Press knob button, and then adjust the correct and Trapezoidal display distortion rotating up/down control button.
RETURN Press knob button to return to the Main Menu from the state of ADV.CONTROL		

SUB MENU		
Up → Turn to the right, Down → Turn to the left		
LANGUAGE Press knob button, and select the language (English, French, Germany, Spanish, Italian, Portuguese, and Korean)using up/down control button.	DEGAUSS Press knob button to demagnetize the CDT.	MOIRE Press knob button and then remove the display moire rotating up/down control button.
OSD TIME Press knob button, and then select the OSD display time (5 to 15 sec)rotating up/down control button.	OSD V-POSITION Press knob button and adjust the OSD-Vertical position rotating up/down control button.	OSD H-POSITION Press knob button, and then adjust the OSD-Horizontal position rotating up /down control button.
RETURN Press knob button to return to the Main Menu from the state of MISCELLANEOUS.		

POWER MANAGEMENT

POWER SAVING MODE(S)

If your computer system features a display power management function, the Monitors enter into the power saving modes as follows.

When it is used with a computer system equipped with DPMS(VESA) this Monitor provides an EnergyStar compliant function. If your computer does not feature display power management, please source an optional DPMS software program.

Power saving modes greatly reduce power consumption when the computer is temporarily not in use. Simply press any key or mouse button to return the Monitor display to normal operation.

	Normal Operation	Power Saving function EPA		
		stand-by	suspend	Power Off
H-Sync	Active	Inactive	Active	Inactive
V-Sync	Active	Active	Inactive	Inactive
Video	Active	Blanked	Blanked	Blanked
LED Color	Green	Amber/Green Blinking(1sec)	Amber/Green Blinking(0.5sec)	Amber
Power Consumption	78 Watts	Less than 15 Watts	Less than 15 Watts	Less than 5 Watts

PLUG and PLAY

The new Microsoft Windows 95/98/2000 Plug and Play solution eliminates the need for often complex, time consuming hassle adding set-ups.

Your PC system identifies and configures itself to the optimum condition and operates the monitor in the best status using Display Data Channel (DDC) protocols and Extended Display Identification Data (EDID).

If you wish you can select different settings but, in most cases, monitor installation is automatic.

CLEANING and CARE

WARNING !
TURN OFF ALL COMPUTER SYSTEM AND MONITOR POWER BEFORE CLEANING THE MONITOR. THIS EQUIPMENT CONTAINS HIGH VOLTAGE COMPONENTS AND SUB-SYSTEMS!

To clean the monitor case, lightly moisten a lint-free cloth with tepid (not warm) water.

If the case is heavily soiled, a mild detergent (such as dish washing liquid) may be used.

Gently wipe and dry off the case being careful not to get water into the monitor.

A careful wiping it with a clean, dry (or barely moist) lint-free cloth or towel will be enough for the screen cleaning. Ensure that no liquid enters the monitor.

ON NO ACCOUNT SHOULD ANY CHEMICAL BASED CLEANER BE USED ON THIS MONITOR CASE OR SCREEN. SUCH USE WILL CAUSE DAMAGE AND INVALIDATE ANY AND ALL GUARANTEES.

TROUBLESHOOTING GUIDE

Your monitor will operate best in a clean environment, free from contaminants such as dust, smoke, and carpet/material fibers. Excessive moisture or oil particles in the air can also hinder your system's performance.

Whenever it is possible, position your monitor away from the ground level to prevent dust/carpet fibers and dirt from entering into the ventilation ducts.

If your monitor is not performing correctly, please refer to the guidelines below. On no account should you attempt to open the monitor casing and carry out repairs due to the risk of high voltage discharge – **EVEN THE SYSTEM IS NOT CONNECTED TO A POWER SUPPLY!**

If the suggestions below do not solve the apparent malfunction, refer to your dealer of an authorized repair/service centre.

- Make sure that the monitor is installed and set up correctly.
- Check power supply is on and fuse systems.
- Make sure that your computer system and any installed sub-systems or software are operating correctly.
- Inspect the monitor for the following

- are any visible components broken or burned?
- are all connection/power leads whole?
- are all connectors securely fixed?

If all of the above are OK, then carry out systemized checks as follows ;

Power LED is not on

The monitor power switch is in the ON position.
The power cord is connected securely.
All fuse system (i. e. in the plug) have been checked.
The power cords are not cut, frayed or broken.

Power LED blinks ORANGE/GREEN (About 1sec)
Check the signal cable is connected correctly (Computer).

Power LED On ORANGE or Power LED blinks ORANGE/GREEN (About 0.5sec)
Check the signal cable is connected correctly (Computer).

TROUBLESHOOTING GUIDE
-Continued

No picture - Image is unstable - Image is scrolling

Monitor power switch is in On position.

- Computer power switch is in On position.
- Check power and data leads are connected correctly to power and data/CDT/Monitor ports.
- Check power and data leads are connected securely.
- Check the connectors for bent pins.
- Is the monitor in power save mode? (If so simply press any key on the keyboard or mouse button to reactivate screen).
- Ensure (if applicable) the correct software drivers for your video card are installed.
- Check (if applicable) the video card is installed correctly.
- If an optional Video Adapter Card is used, ensure it is installed correctly.

Image is fuzzy - Image is not adjusted correctly

- Adjust the appropriate monitor control(s)-see Controls and Adjustments section of this guide.
- Adjust Contrast and Brightness for the optimum focus.
- Degauss screen by turning monitor off and on again after 30 minutes.

Image bounces or appears wavy

- Move any unshielded electrical devices from vicinity of monitor.

APPENDIX A SIGNAL TIMING CHART

No	MODE NAME	RESOLUTION	H/V Frequency	Polarity	Remark
1	IBM VGA 1	720×400	31.469KHz 70.087Hz	(−) (+)	
2	IBM VGA 2	640×480	31.469KHz 59.995Hz	(−) (−)	
3	VESA	640×480	43.269KHz 85.008Hz	(−) (−)	
4	VESA	800×600	46.875KHz 75.000Hz	(+) (+)	
5	VESA	800×600	53.674KHz 85.061Hz	(+) (+)	
6	VESA	1024×768	60.023KHz 75.029Hz	(+) (+)	
7	VESA	1024×768	68.677KHz 84.997Hz	(+) (+)	
8	VESA	1280×1024	63.981KHz 60.020Hz	(+) (+)	

APPENDIX B SPECIFICATION

CDT	17" (40.7㎝) Full square/Flat Face Tube, 90° deflection, 0.27mm Dot pitch, Non-Glare, Anti-Static Silica Coating, Semi-Tint, Invar Shadow Mask
ACTIVE DISPLAY AREA (4:3Ratio)	Horizontal : 306mm±5mm Vertical : 230mm±5mm
SCANNING FREQUENCY	Horizontal : 30KHz to 70KHz Vertical : 50Hz to 150Hz
DISPLAY COLORS	Analogue input : Unlimited Colors
MAXIMUM RESOLUTION	Horizontal : 1280 Dots Vertical : 1024 Lines
INPUT VIDEO SIGNAL	Analogue 0.714 Vp-p Positive at 75 (Ω)
INPUT SYNC SIGNAL	Separate Sync : TTL Level Positive/Negative Composite Sync : TTL Level Positive/Negative
MAXIMUM PIXEL CLOCK	110MHz (-3dB)
INPUT VOLTAGE	100V ~ 240V AC, 60Hz/50Hz (PFC 200V~240V)
POWER CONSUMPTION	78 Watts (Max)
ENVIRONMENTAL	Operating Temperature Humidity 32° F to 104° F (0°C to 40°C) 10% to 80% Storage Temperature Humidity -4° F to 113° F (-20°C to 45°C) 5% to 95%
DIMENSIONS / WEIGHT	Unit (D × W × H) 414.5 × 414 × 432 (mm) Carton (D × W × H) 511 × 485 × 495 (mm) Net Weight :15Kg (33.1 lbs) / PFC (15.3Kg) Gross Weight :18.2Kg (40.1 lbs) / PFC (18.5Kg)

Note : All designs and specifications are subject to change without prior notice