



15" High Resolution Color Monitor

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**KDS**  
The Vision Of Price & Performance™

**Owner's Manual**

12PF



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## 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 B limits for radio noise emission for a digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

## Safety Instructions

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1. Read these instructions. Save these instructions for later use.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord ampere rating. Also make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
10. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.

## Safety Instructions

11. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to service personnel.
12. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a. When the power cord or plug is damaged or frayed.
  - b. If liquid has been spilled into the product.
  - c. If the product has been exposed to rain or water.
  - d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
  - e. If the product has been dropped or the cabinet has been damaged.
13. Use only the proper type of power supply cord set (provided in your manual accessories box) for this unit. It should be a detachable type: UL listed/CSA certified, type SVT/SJT, rated as 10A 125V minimum, VDE approved or its equivalent.
14. The Socket-Outlet is to be installed near the equipment and is easily accessible.
15. Do not put the anything on the monitor.

## Introduction

### 1. General information

Congratulations on selecting this high resolution multi-scan color monitor.

This high performance display contains the latest technology of flat screen design and micro-processor control. This monitor has been equipped with both automatic and manual adjustments. The automatic controls are factory preset and feature automatic factory frequency scanning.

The manual controls feature use digital adjustments to personalize the display in various applications.

The ergonomic characteristics of the antiglare flat screen, high refresh rates, and tilt swivel base allow comfortable usage when operating for a long period of time in high resolutions.

This operating manual describes the functions and features in more detail so that you may obtain the maximum performance of your monitor.

### 2. Features

- 15 inch/14" (viewable) FD Trinitron® PICTURE Tube.
- 0.24mm Aperture Grille Center Pitch
- IBM compatible
- Multi-scan : horizontal frequencies 30-50KHz, vertical frequencies 50-180Hz.
- Universal auto-switching power supply.
- Power management
- PFC (operated at AC220V only)
- Digital controls for sizing & distortion
- DDC 1, DDC 2B, DDC 2B+, DDC/CI

#### DDC STATEMENTS

New DDC compatibility simplifies the installation and set-up process for users. By accessing the Plug & Play features of Windows® 95 & 98 operating software, the monitor automatically senses the optimal set-up specifications available on the host system. The monitor is configured with minimal need for interaction or expertise on the part of the user.



## Product Package

Determine the most convenient location for your monitor. Make sure that you have enough room to install cables and connect the monitor to the system and power supply.

Open the shipping carton and check the contents of the package. The package should include the following items:

- 15" Color Monitor
- This Manual

**Note :** If any item(s) are missing or damaged, contact your dealer immediately.

Remove the monitor from its shipping carton(see figure 1). Save the carton and packaging materials in case you need to relocate the monitor.

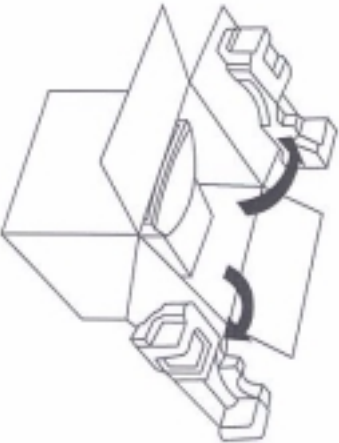


Figure 1

## Setup

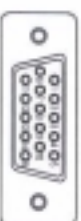
Setting up your monitor is easy. All you have to do is make a few simple connections and adjustments. The procedure is as follows:

### 1. Start up

Switch the power off to both your monitor and computer. The location of the power switch is on the lower right hand corner of the monitor.

### 2. Signal cable connection

Connect the 15 pin signal cable to the your computer. Lock both screws to ensure grounding.



D type 15pin connector

Figure 3

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	Video red	9.	N. C
2.	Video green	10.	Ground
3.	Video blue	11.	N. C
4.	N. C	12.	SDA
5.	DDC Return	13.	Hor-Sync
6.	Video red ground	14.	Ver-Sync
7.	Video green ground	15.	SCL
8.	Video blue ground		

### 3. Power on

Switch on the power to both your monitor and computer.

### 4. Adjusting the Picture

Adjust the controls, if necessary, to get the best picture.

A description of the functions of the controls may be found in the next section.

## Setup

### 5. Setup of the Video Circuitry

To use the full potential of this product, it is necessary to first set the video circuitry of the computer according to the maximum capabilities of this monitor.

This can be expressed in any of the following ways:

- 640 X 486 60Hz
- 800 X 600 60Hz
- 1280 X 1024 60Hz

#### Note:

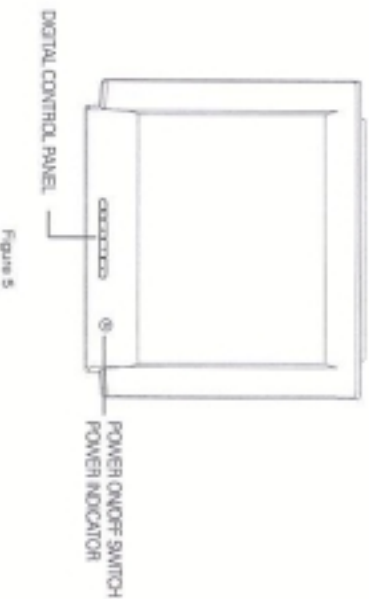
Due to the sensitivity of this monitor to earth's magnetic field, you may experience minor irregularities in the display if you swivel the monitor through more than 90° while the monitor is ON. If such behavior occurs, please press degauss key on front control panel. The display should return to normal.

## Controls and Adjustments

There are a few switches that are located on your monitor. The power indicator and adjustable controls allows the user to maximize the display for individual preferences.

The description of these functions are as follows :

### Front Control Panel



#### 1. Power ON/OFF Switch

Press this button to turn the power ON or OFF. There will be a short delay before the display appears.

#### 2. Power Indicator

This power indicator illuminates when the power is switched ON and the power cord is properly attached.

MODE	ON	STAND BY	SUSPEND	OFF
Power Indicator	Green	Green Blink 1.0 sec	Green Blink 1.0 sec	Green Blink 2.0 sec

## Controls and Adjustments

### 3. Digital Control Panel

The digital control panel is located at the bottom of your color monitor. If you are not satisfied with the factory settings, use these controls to program those you prefer in each resolution. Then, these adjusted settings are kept in memory even if you change resolution or turn off the monitor.



### KEY FUNCTION

#### 1. DEGAUSS [R]

This button manually degausses the CRT. It may be used if the display becomes discolored or washed out in appearance. This button can also be used to exit from the OSD.

#### 2. SELECT [L]

This button will enable the On Screen Display(OSD)-instructions for using the OSD are described in the following section). This button is also used to select the function in the Main Menu or to save the setting in the Sub Menu.

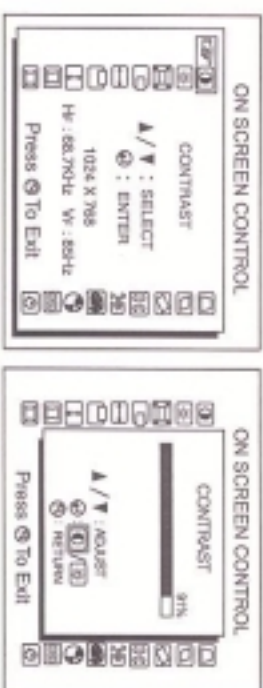
#### 3. (DOWN) [▽]

Use this button to move down the OSD selection menu and adjust the attribute of the monitor while in OSD mode. Pressing this button out of the OSD menu allows you to decrease the level of contrast of the display screen.

#### 4. (UP) [▲]

Use this button to move up the OSD selection menu and adjust the attribute of the monitor while in OSD mode. Pressing this button out of the OSD menu allows you to increase the level of contrast of the display screen.

## Controls and Adjustments



### CONTRAST [C]

Adjust the luminosity level of the display.

### BRIGHTNESS [B]

Adjust the black level of the display.

### ZOOM [Z]

Select this control and then use the ▲ and ▼ buttons to zoom IN/OUT the image on the screen.

### H - POSITION(HORIZONTAL POSITION) [H]

Select this control and then use the ▲ and ▼ buttons to center the image horizontally on the screen.

### H - SIZE(HORIZONTAL SIZE) [S]

Select this control and then use the ▲ and ▼ buttons to expand or decrease the image width to horizontally fill the screen.

### V-POSITION(VERTICAL POSITION) [V]

Select this control and then use the ▲ and ▼ buttons to center the image vertically on the screen.

### V-SIZE(VERTICAL SIZE) [S]

Select this control and then use the ▲ and ▼ buttons to adjust the image height to vertically fill the screen.

## Controls and Adjustments

### PINCUSHION

#### • SIDE-PIN

Select this control, then use the ▲ and ▼ buttons to straighten the sides of image by pulling them opposing directions.

#### • PIN BALANCE

Select this control, then use the ▲ and ▼ buttons to straighten the sides of image by pulling them corresponding directions.

### CORNER PIN

#### • TOP CORNER

Select this control, then use the ▲ and ▼ buttons to straighten the top corners of image by pulling them opposing directions.

#### • BOTTOM CORNER

Select this control, then use the ▲ and ▼ buttons to straighten the bottom corners of image by pulling them opposing directions.

### TRAPEZOID

Select this control, then use ▲ and ▼ buttons to even the widths of the top and bottom of the display (pulling the sides in opposing directions).

### PARALLELOGRAM

Select this control, then use the ▲ and ▼ buttons to center the top and bottom of the display (pulling the sides in the corresponding directions).

### ROTATION

Select this control, then use the ▲ and ▼ buttons to rotate the image, until sides of the image are parallel to the edge of the bezel.

### MOIRE


Select this control, then press the ▲ and ▼ buttons to eliminate the moire.

### VIDEO LEVEL(0.7V/1.0V)

Select this function, then use the ▲ and ▼ buttons to scroll to the desired video input level. If you don't know your video out level, please refer to your video card manual.

## Controls and Adjustments


### COLOR-CONTROL(TEMPERATURE)

Select this control and then use the ▲ and ▼ buttons to scroll to select the desired color temperature. Use the  button to select the "19300K", "216500K", "315000K" or "4(User)" for a custom setting.

### LANGUAGE

Select this control, then use the ▲ and ▼ buttons to choose from English, German (Deutsch), Spanish (Español), Italian (Italiano), French (Français) or Japanese ( ).

### OSD POSITION

Select this control, then use the  button to select in which direction to move the OSD menu. Use the x and y buttons to move the menu.

### RECALL

Resets the display settings to the original factory preset values. Press and hold down the Enter button until the progress bar disappears.



## Timing Guide

The 15" color monitor is a Analog multi-scan monitor. It operates at horizontal frequencies of anywhere between 30 KHz and 50 KHz. Because of its microprocessor-based design, it offers auto-synchronization. At the preset status, this monitor offers 8 pre-programmed settings for more common graphics standards. They are listed in the table below.

Preset	Resolution	Frequency H (KHz)	Frequency V (Hz)	Polarity	Interlaced
M1	640 X 477	31.5	60	- / +	N
M2	700 X 360	31.5	70	- / +	N
M3	640 X 400	31.5	70	+ / -	N
M4	640 X 480	31.2	50	- / -	N
M5	800 X 600	37.8	60	- / -	N
M6	640 X 480	31.5	60	+ / +	N
M7	596 X 480	31.5	60	- / -	N
M8	636 X 477	31.2	50	- / -	N

\* In addition to 8 factory modes, there are 4 additional user modes. If more than 12 modes are input, it will be overridden in accordance with saving order of additional modes.

## Specifications

Picture tube	15" True Flat (14.0" viewable) nonglare, anti-static, dark FD Trinitron® PICTURE Tube with tinted Aperture Grille and 90° deflection Aperture Grille Center Pitch 0.24mm
Resolution	1024 X 768 addressable 1024 X 768 physical
Video input	Analog, positive going signal(0.7Vp-p/1.0Vp-p)
Horizontal input	TTL, positive or negative going pulse(2.4~5 Vp-p)
Vertical input	TTL, positive or negative going pulse(2.4~5 Vp-p)
Scan frequency	Horizontal: 30~50KHz Vertical: 50~160Hz
Standard display area	270mm(H) X 202mm(V) / 10.6"(H) X 7.95"(V)
Display color	Unlimited
Power Input	100~240V AC, 50/60Hz
Fuse rating	250V, S 3.0A(U.L., CSA, T) or T 3.15A(TUV)
Power consumption	On : Less than 100W Stand by : Less than 10W Suspend : Less than 10W Off : Less than 7W
Operating temperature	0 To 40 Degree C.
Dimensions	366mm(W) X 330mm(H) X 400mm(D) / 14.4"(W) X 13.0"(H) X 15.7"(D)
Weight	19.0kg(net) / 41.8 lbs

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## Troubleshooting

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The following questions and answers are some of the most common problems related to your monitor.

**The monitor is turned on, but the Power LED indicator is not lit and there is no display on the screen.**

Check all the power connections and make sure they are secure. If the monitor is plugged into a surge protector, make sure that the surge protector is switched on.

**The Power LED indicator is green and lit, but there is no display on the screen.**

Check all of the signal cable connections and make sure that they are secure. Adjust both the contrast and brightness controls to the highest settings. If you see a faint gray color appearing on the screen, the monitor is functioning properly, but not receiving any signal from the video card.

**Why do I hear a humming sound when I first switch on the monitor?**

The sound you hear indicates that the degauss function is activated. Every time the monitor is switched on, it will go through the degaussing process which helps eliminate any purify problems.

**How do I change the resolution the monitor displays?**

The frequency and resolution displayed on a monitor is controlled by the video card display driver and operating system. The monitor simply responds to the signal it receives from the video card and is not able to change the resolution on its own. Most video card manufacturers provide software drivers and utilities that allow you to use different resolutions for different applications. Please consult your video card manual or dealer for more information.

**What are the benefits and uses of a microprocessor?**

The microprocessor allows precise screen size control of the image for several different modes. Normally, the image size will vary when changing between different resolutions. With the microprocessor, the monitor is able to remember the size for each different mode and recall them automatically.

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## Troubleshooting

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**The display does not appear to be level.**

The earth's magnetic field may be interfering with the magnetic field generated by the monitor causing a slight rotation of the image. The higher the performance of a monitor, the more susceptible the monitor will be to such interference. To get the best alignment, orient the monitor so that the face of the screen faces east, and choose the Rotate control from the OSD menu.

**There appears to be a thin white horizontal stripe on my screen.**

When using a white background, very thin horizontal stripe on the screen may be visible. This stripe is damper wire. This wire is attached to the aperture grille inside the Trinitron® True Flat tube and is there to damp vibrations of the aperture grill in order to prevent them from influencing the picture quality.

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