

*EXHIBIT 5*

*User's Manual*

*User's Manual*

15" COLOR

**Monitor**

DIGITAL



15" SVGA / EVGA COLOR MONITOR

**C578D**

# **OPERATION MANUAL**

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## Introduction

Congratulations! You are now the owner of our Color Monitor. To ensure proper operation, please carefully read this manual. After you've read this manual, keep it in a safe place for future reference.

This SVGA / EVGA AutoScan Color Display is a monitor designed for use with IBM PS/2 PCs (Personal Computers) and compatibles which can utilize the Video Graphics Array (VGA) standard. Typical examples are IBM compatible PC, PC /AT, 386, 386sx, 486, 486sx, Pentium, and Personal System 2 (PS/2).

### IMPORTANT

#### Model C578D

This multi-synchronous auto-scanning monitor is capable of displaying VGA, SVGA (VESA/60, VESA/72) AND EVGA (VESA/60) video modes, can automatically detect and display several video modes falling within the monitor's scanning range of 30-65KHz Horizontal and 50-120Hz Vertical. In the PC area, this relates to a maximum flicker free usable resolution of 1024x768 at a non-interlaced refresh rate of 75Hz Vertical.

This model also has a built-in power management system that allow the monitor to automatically reduce its power consumption when not in use. This unique ability to reduce power consumption functions ONLY when used with VESA DPMS (Display Power Management Signaling) compatible PC's or video controllers. This model complies with the new Energy Star Computers Program initiated by the EPA.

In the display card setting, please setting the vertical frequency  $\geq 70\text{Hz}$  to protect your eyes and decrease the strength of glaring.



IBM IBM PC/XT, PC/AT, PS/2 (Personal System/2), VGA (Video Graphics Array) are registered trade marks of International Business Machines Corporation. Pentium is registered trade marks of Intel. VESA means Video Electronics Standard Association.

## **Safety Precautions**

- \* Disconnect the monitor from the supply main if the monitor is not to be used for an extended period of time.
- \* Do not attempt to remove the back cover, as you will be exposed to a shock hazard. The back cover should only be removed by qualified service personal.
- \* Do not place objects on top of the monitor cabinet, which could fall into vents or which could cover them and prevent proper cooling of the monitor's electronics.
- \* Do not expose the monitor to rain or excessive moisture to avoid the risk of shock or permanent damage to the set.
- \* This product can be damaged by detergents , thinners , etc. If necessary, clean with a slightly damp cloth. Disconnect the monitor from the main supply before cleaning.
- \* Consult a service technician if the monitor does not operate normally when the operating instructions are followed.

## **Package**

After unpacking, check to make sure the following items are included:

1. The monitor : one
2. Tilt / Swivel base : one
3. Operation Manual : one
4. Power cord : one

## Before Use

### Install the tilt / swivel base

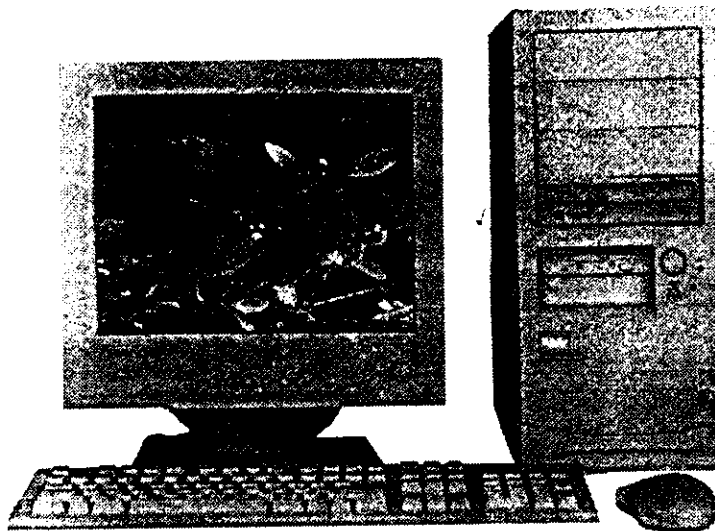
- \* Place the monitor upside-down with the screen facing you.
- \* Hold the base upside-down.
- \* Insert the tab into the slot on the monitor
- \* Rotating the base clockwise until hearing a clicking sound.

### Computer connection

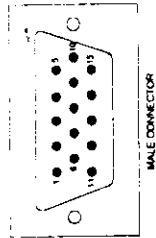


Notice: Shut down the power of the computer before connecting the monitor.

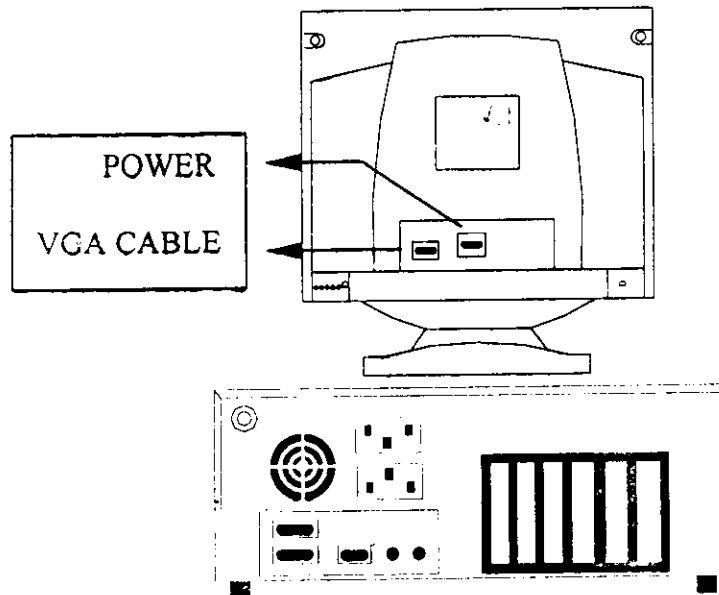
- Connect the monitor power.
- Connect the monitor signal cable.



# Signal Cable Description:

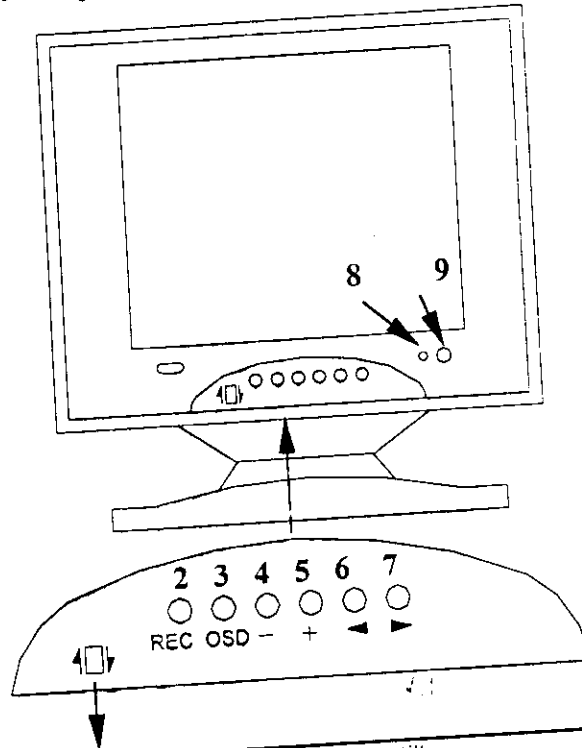


PIN NO.	DESCRIPTION
1	RED
2	GREEN
3	BLUE
4	GROUND
5	SELF-TEST
6	RED GROUND
7	GREEN GROUND
8	BLUE GROUND
9	NC
10	GROUND
11	GROUND
12	SDA
13	HOR-SYNC
14	VER-SYNC
15	SCL



## Control panel function

All functions are adjusted from the microprocessor based digital controls. Buttons on the front of the monitor allow you to adjust image easily through an OSD menu. The following is a description of use for each button.



1.	Rotation control knob: to adjust tilt
2.	REC: recall the factory preset mode.
3.	OSD on/off: on screen display on/off button
4.:Increase	Use this knob for selecting the level of the selected item to be adjusted (increase)
5.:Decrease	Use this knob for selecting the level of the selected item to be adjusted (decrease)
6.:Left	Use this knob for selecting (highlighting) an OSD icon to be adjusted (left direction)
7.:Right	Use this knob for selecting (highlighting) an OSD icon to be adjusted (right direction)
8.	Power Indicator: This Indicator lights up green when the monitor operates normally. If the monitor is in DPM (Energy Saving) mode (stand-by/suspend/power off) this indicator color changes to orange.
9.	Power On/Off button: This button is used to turn the monitor on and off. In case the monitor is in a energy saving mode, indicated by an orange color Power Indicator, push the Power Button again to return the monitor to its normal display operation.

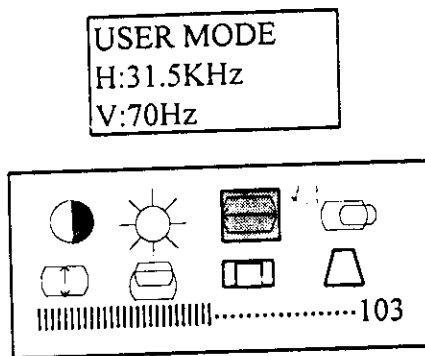


## On Screen Display (OSD) Control Adjustment

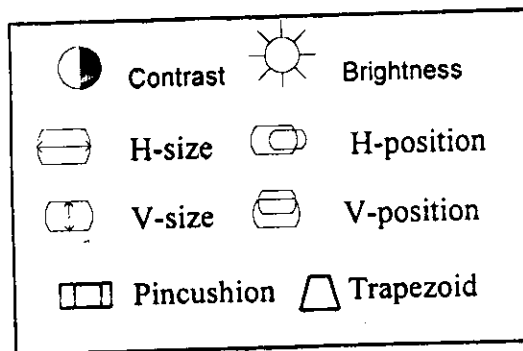
Making adjustments to the image size, position and operating parameters of the monitor are quick and easy with the On Screen Display Control system, using only the OSD button, increase & decrease button, left & right button. A quick example is given below to familiarize you with the use of the controls. Following is an outline of the available adjustments and selections you can make using the OSD.

Example:

Note: (Monitor and PC should be ON, with an image or prompt on the screen) Turn the OSD on, the screen will present you the On Screen Display system, with one item highlighted, here H-size. If you press left or right button, a different icon may be highlighted. Move the control until what you want is selected. The OSD system should look like:



NOTE: The icon and a brief description.



The bar graph shows you the current level of the selected H-size control. Use the Increase or Decrease button to adjust the level to fit the screen or your desired size. When you have finished, press the OSD button again to exit OSD.

### **OSD Button**

Use this button to start/enter and exit from the On Screen Display (OSD). If there is no OSD, One press of this button will show the OSD. To remove the display, either wait 20 seconds or press this button again.

Listed below are the icon names and icon descriptions of the items that are shown on the OSD:

- Contrast (Adjust the display to the contrast desired)
- Brightness (Adjust the brightness of the screen)
- H-Position (To move picture image left and right)
- H-Size (To adjust image width)
- V-Position (To move image up and down)
- V-Size (To adjust image height)
- Pincushion (To correct the bowing in and bowing out of the image)
- Trapezoid (To correct geometric distortion)

### **Power Management System**

For the power saving feature to operate, the monitor must be used with either a PC having power saving circuitry or a PC running screen blanking software. The monitor has three power-saving states, and the power saving operation is indicated by the power indicator on the front panel.

When the power indicator is green, operation is normal. When the power indicator is orange (stand-by, suspend states) or off (off state), the monitor is in a power saving mode. If the power indicator is orange or off and you wish to use the PC again, move your mouse pointer or touch a keyboard button. When the monitor is not in use, save energy by turning it off.

## Image Adjustment

This monitor has a microprocessor-based On Screen Display (OSD) control system for adjusting the following items: Contrast, Brightness, Horizontal width, Horizontal position, vertical height and position, Side pincushion and trapezoid. When you make adjustments to any of the above items, the microprocessor will automatically memorize the adjustments you made. Your setting will be maintained even if you turn off the monitor and turn it on again.

## Video Memory Modes

For convenience, the monitor has a 14 mode memory, of which 6 modes come from the factory preset to popular video modes as described below.

	Model	Resolution	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	H. Polarity	V. Polarity
1	VGA	720x400	31.47	70	-	+
2	VGA	640x480	31.47	60	-	-
3	VESA	640x480	37.50	75	-	-
4	SVGA/ VESA75	800x600	46.88	75	+	+
5	VESA	1024x768	56.47	70	-	-
6	VESA	1280x1024	64.3	60	+	+

Modes 7-14 are empty and can accept new video data.

If the monitor detects one of the above signals from your computer's video card, it will recall that mode and any stored image adjustments you may have made before. If the monitor detects a new video mode that had not been present before or is not one of the above listed factory presets, it will store a new mode automatically in one of the blank (empty) memory modes (in this example, mode 7). When you now adjusted the OSD controls to your preference, these image settings will also be stored in mode 7. Whenever your video card or PC switches to the mode that the monitor recognizes as mode 7, your personal image setting also be recalled.

## A Note About The Video Memory Modes

There is a total of 14 video memory modes, generally more modes than you will use at any one time. Of these 14 modes, 6 are factory fixed modes that can not be changed. The remaining 8 modes are left blank (empty). If you use up the 8 blank modes and still have more new video modes, the monitor will delete the lowest memory mode and add the new mode.

If you use a video card that has a number of resolutions and frequencies that do not correspond to any of the monitor video modes set at the factory, here's what will happen:

1) As the monitor encounters new video data, if you adjust the image control icons, the monitor will save the new information in the next available empty mode (mode 7 if this is the first new data encountered).

2) If you have used modes 14 with 8 new video modes, and the monitor encounters another mode (15th mode), it will store the new data in mode 7 and the old data of mode 7 is deleted.

In you have used modes 14 with 8 new video modes, and the monitor encounters 16th data will replace the mode 8, with above method, when this monitor encounters new mode, it can update from mode 7 to mode 14 sequentially and continuously.

Example: All 14 modes are filled with following data

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Factory fixed						User modes							

When new data is encountered

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Factory fixed						User modes (old mode 7 deleted)							

Because the monitor is designed this way, you will always have the most common 8 video modes generated by your graphics card available with your own image setting recalled automatically.

## DDC (Display Data Channel)

DDC is a communication channel over which the monitor automatically informs the host system (PC) about its capabilities. This monitor has DDC functions: DDC1, DDC2B.

NOTE: The PC must support DDC functions to do this.

## Specifications

### 1. General Information

<b>Model</b>		<b>C578D</b>
<b>CRT</b>	<b>SIZE (VIEWABLE)</b>	15" (13.8")
	<b>TYPE</b>	15" CONVENTIONAL
	<b>DOT PITCH</b>	0.28mm
	<b>FACE PLACE</b>	NON-GLARE
<b>VIDEO</b>	<b>INPUT SIGNAL</b>	ANALOGUE
	<b>AMP BANDWIDTH</b>	85MHz
<b>HORIZONTAL</b>	<b>FREQUENCY</b>	30-65KHz
	<b>RESOLUTION</b>	MAX 1280 DOTS
<b>VERTICAL</b>	<b>FREQUENCY</b>	50-120Hz
	<b>RESOLUTION</b>	MAX 1024 LINES (NI)
<b>DATA</b>	<b>MISCONVERGENCE</b>	LESS THAN 0.3mm (CENTER) LESS THAN 0.5mm (CORNERS)
	<b>LINEARITY</b>	MAX 10%
<b>DISPLAY</b>	<b>AREA</b>	280mmX210mm
<b>CONTROL</b>	<b>EXTERNAL or DIGITAL</b>	BRIGHTNESS, CONTRAST, V-SIZE, H-SIZE, V-POSITION, ROTATION, H-POSITION, PINCUSHION, TRAPEZOID
<b>POWER</b>	<b>INPUT VOLTAGE</b>	100-240V AC (AUTO VOLTAGE) 60/50Hz
	<b>CONSUMPTION</b>	MAX 80 WATTS
	<b>EPA (POWER MANAGEMENT)</b>	ON, OFF, SUSPEND, STAND BY
<b>ACCESSORY</b>	<b>VIDEO CONNECTOR</b>	15PIN D-SUB CONNECTOR
	<b>POWER CORD</b>	6 FEET AC POWER CORD
<b>REGULATIONS</b>	<b>SAFETY</b>	UL, CUL, TUV/GS, CE, DHHS, FCC, MPR-II (OPTION)



Notice: Design and specifications are subject to change without notice.

## **Federal Communications Commission (FCC)**

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 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 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/TV technician for help.

**FCC Caution:** To assure continued compliance, use only the provided shielded signal cable when connecting to computer. Also, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Use only RF shielded cable that was supplied with the monitor when connecting this monitor to a computer device.

**THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.**