

CVP-5468NR

SUPER VGA MONITOR

Operating Manual



3366

IMPORTANT SAFETY INSTRUCTIONS

1. Please read carefully all of these instructions below and keep the manual for later use.
2. The voltage ratings and the rated frequency are presented on the rear side of this product, please see the overlay in the center of rear side of the product. Never connect to any other voltage or frequency and 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 expose this product to rain or moisture.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Never block or cover ventilating openings with cloth or other material. This product should never be placed near or over a radiator or heat register. The product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product is equipped with a 3-wire grounding type plug. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug. Choose a Tandem Blade attachment plug configuration power cord for 250 VAC input.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. 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.
10. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risk. Refer all servicing to service personnel.

11. 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 do 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 required 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.
 - F. If the product exhibits a distinct change in performance, indicating a need for service.

FCC INFORMATION

The Federal Communications Commission Radio Frequency Interference Statement includes the following warnings.

1. Use the attached specified shielded power supply cable and the shielded signal cable with CVP-5468NR so as not to interfere with radio and TV reception. If you use other cables, it may cause interference with radio and television reception.
2. This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, interference with radio and television may occur. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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:
 - relocate the receiving antenna
 - relocate the computer with respect to the receiver
 - move the computer away from the receiver
 - plug the computer into a different outlet so that the computer and receiver are on different branch circuits.

If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

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CTX reserves the right to make changes or improvements in the product described in this manual at any time and without notice.

CHAPTER 1. INTRODUCTION

1.1 GENERAL INFORMATIONS

CVP-5468NR, a Super VGA Monitor, is equipped with triple scan capability and 14" 0.28mm Fine Pitch CRT to be compatible with IBM standard VGA, 8514A (1024 x 768 resolution interlaced and non-interlaced 60Hz) and non-IBM VGA boards supporting 800 x 600 extended display mode.

CVP-5468NR will operate with IBM PC/XT/AT/386 compatibles and IBM's Personal System/2 series computers.

1.2 FEATURES OF CVP-5468NR

- CVP-5468NR automatically scans all frequencies from 30KHz to 38KHz and 47KHz to 50KHz for horizontal and 50Hz to 90Hz for vertical. This range covers IBM standard VGA, 8514A (interlaced and non-interlaced 60Hz) and non-IBM boards supporting 800 x 600 extended display mode.
- CVP-5468NR uses 14" 0.28mm Fine Pitch non-glare CRT.
- CVP-5468NR has a maximum horizontal resolution of 1024 dots by a maximum vertical resolution of 768 lines (non-interlaced 60Hz).
- CVP-5468NR accepts ANALOG signal inputs so it can display an unlimited palette of colors. The number of colors displayed depends on the graphics board and software being used.
- CVP-5468NR is equipped with vertical auto-sizing circuit according to sync polarization of IBM VGA convention.
- CVP-5468NR has all the user controls on the front panel, they are easily accessed to adjust for optimum conditions.
- CVP-5468NR is equipped with universal power supply. It can work within AC 100V to 250V, $\pm 5\%$, 50/60Hz without any setting.
- A captive signal cable is included with a 15 PIN connector that's wired for IBM VGA configuration. Refer to appendix B for pin assignment.

1.3 CAUTIONS WHEN USING CVP-5468NR

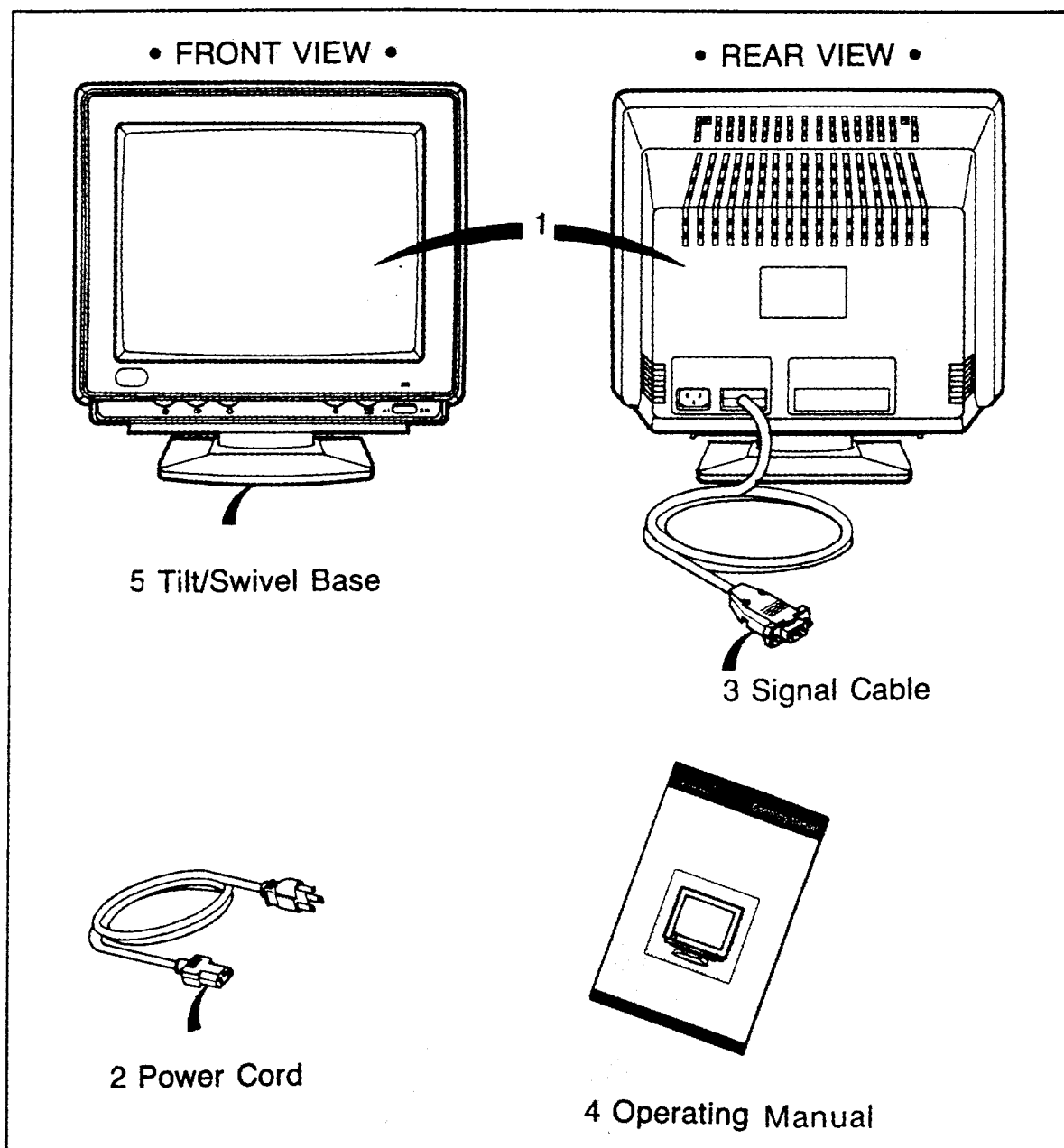
When setting up and using CVP-5468NR pay special attention to these points.

- To eliminate eye fatigue, don't use CVP-5468NR against a bright background or where the sun or other lights can directly shine on it.
- For optimum viewing, CVP-5468NR should be just below eye level.
- Allow adequate ventilation all around CVP-5468NR so that heat from the monitor can properly dissipate.
- Don't rest CVP-5468NR or other heavy objects on the power cord. A damaged power cord can cause fires or electrical shocks.
- Keep CVP-5468NR away from high capacity transformers, electric motors and other strong magnetic fields.
- Don't drop CVP-5468NR when transporting it.
- don't use CVP-5468NR in damp, dusty, or dirty places.

CHAPTER 2. USING CVP-5468 NR

2.1 MEETING CVP-5468NR, SUPERVGA MONITOR

Refer to the diagram below to be sure that your CVP-5468NR package includes all the items in this picture. Save the original box and packing materials in case you have to ship or transport CVP-5468NR.

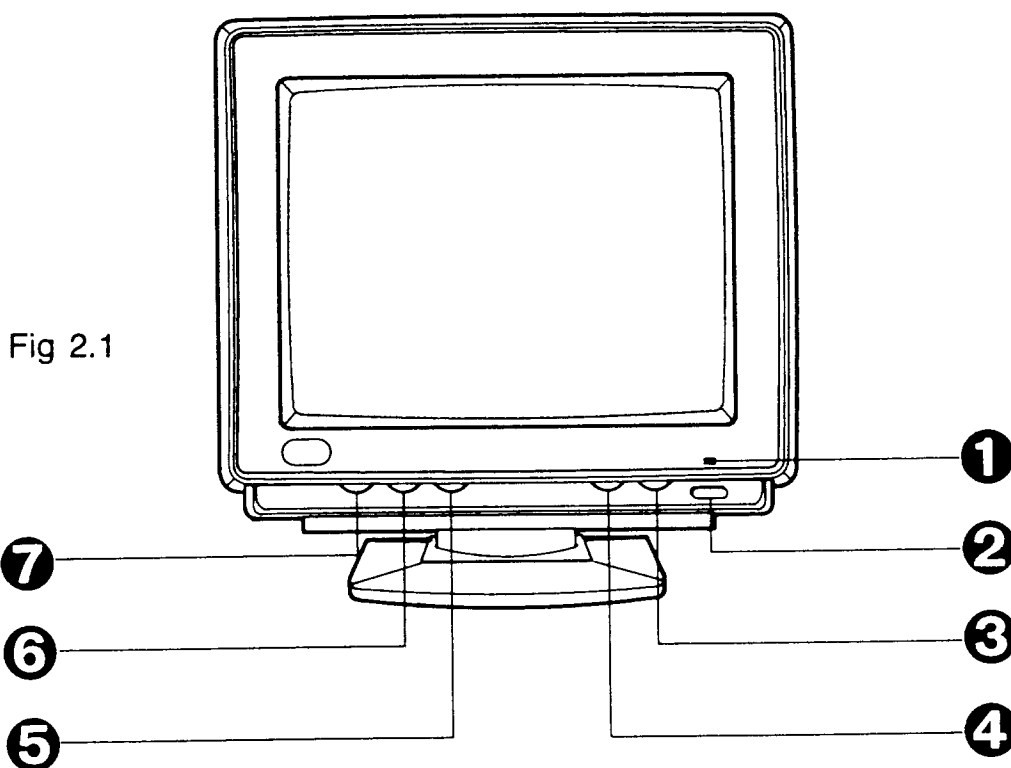


1. CVP-5468NR
2. Power Cord.
3. Signal Cable: Connects CVP-5468NR to the IBM VGA graphics boards.
4. Operating Manual
5. Tilt/Swivel Base: Enable you to position the monitor at the best angle for maximum viewing comfort.

2.2 ADJUSTING CVP-5468NR CONTROLS

Before connecting CVP-5468NR with IBM personal computers or compatibles and IBM graphics adapters, take time to familiarize yourself with the switches and controls that give CVP-5468NR all its capabilities. This section outlines the controls and switches of CVP-5468NR. Chapter 2.3 shows you how to connect CVP-5468NR with your IBM personal computer and graphics adapter. And Chapter 2.4 includes a quick operation chart summarizing the steps necessary to connect and adjust CVP-5468NR for the optimum in high resolution color display viewing.

ADJUSTING THE FRONT CONTROLS



- 1** POWER INDICATOR
When the power is ON, the LED is lit.
- 2** POWER SWITCH
Used to push the power ON or OFF.
- 3** BRIGHT CONTROL
Used to adjust the picture brightness of the screen.
- 4** CONTRAST CONTROL
Adjusts the display to the contrast preferred by the user.
- 5** H. PHASE CONTROL
Turn this knob for the proper horizontal position of the display. Turn the knob clockwise to reposition display to the right; turn it counterclockwise to reposition to the left.
- 6** V. SIZE CONTROL
Turn this knob for the proper vertical size of the display. Turn the knob clockwise for a larger display; turn it counterclockwise for a smaller display.
- 7** V. CENTER CONTROL
Turn this knob for the proper vertical position of the display. Turn the knob clockwise for a higher display position; turn it counterclockwise for a lower display position.

2.3 CONNECTING CVP-5468NR

2.3.1 WITH THE IBM PC/XT/AT/386

IBM PC/XT/AT/386 equipped with the IBM VGA card or compatible boards.

▼ Follow these steps

1. Make sure the power to CVP-5468NR and IBMPC/XT/AT/386 is turned off.
2. Install the VGA card according to the instructions accompanying the graphics cards. (Fig 2.2)
3. Connect CVP-5468NRD-SUB15 PIN to signal cable ANALOG output of the VGA card. (Fig 2.3)

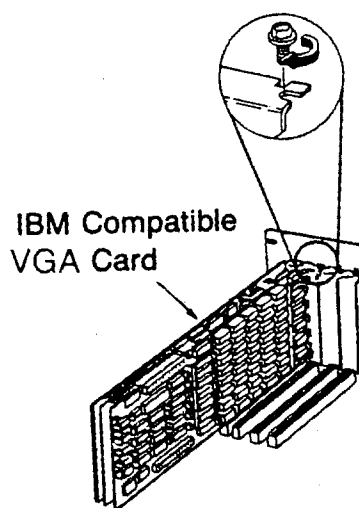


Fig 2.2

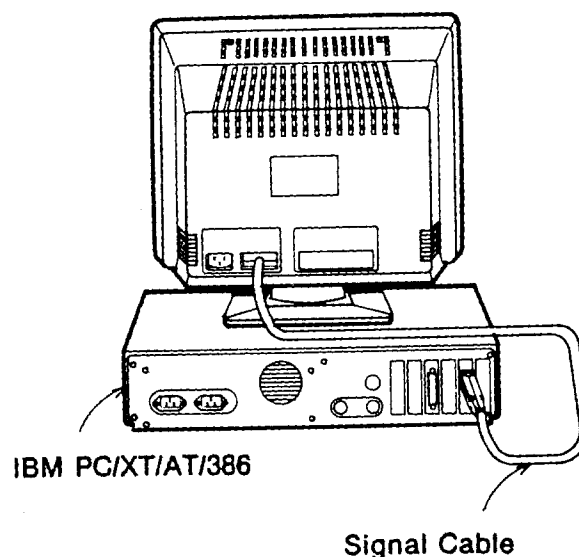


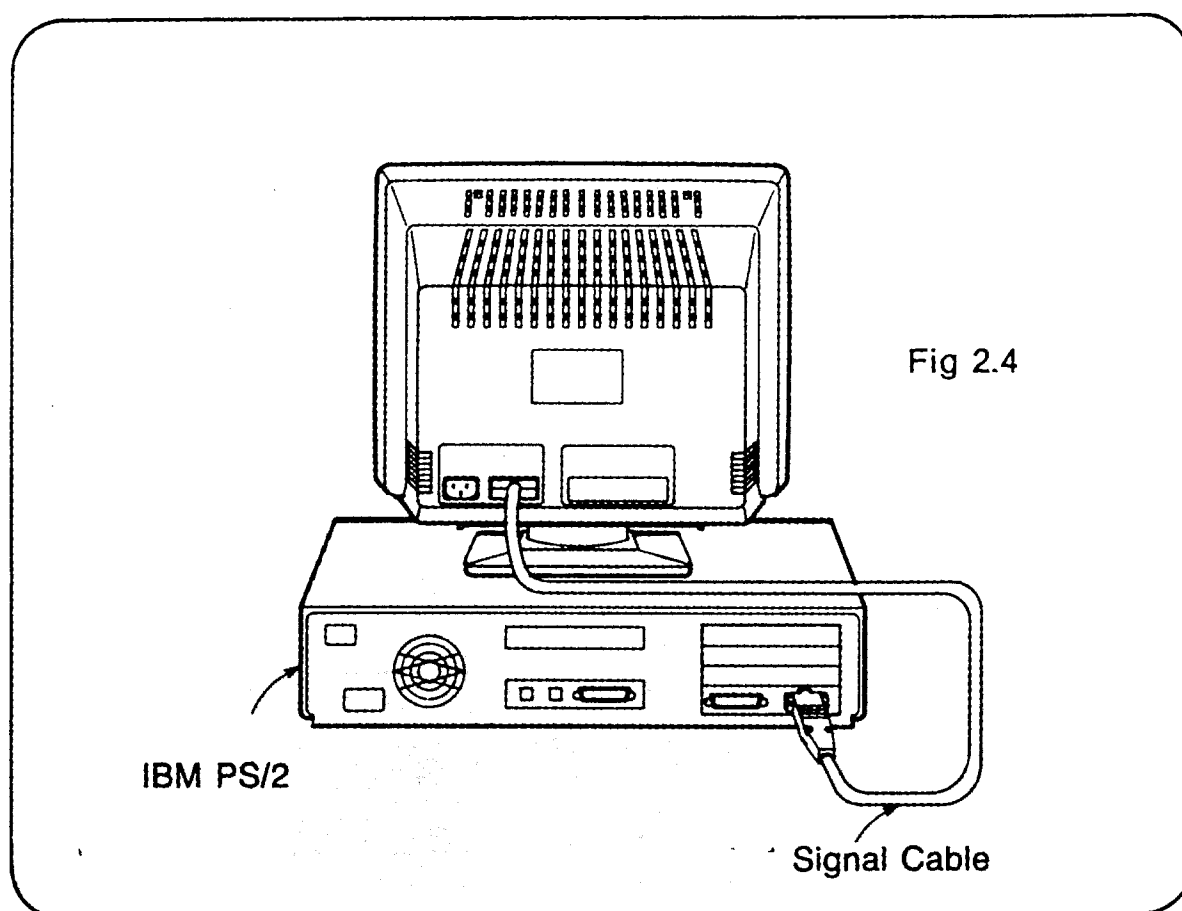
Fig 2.3

2.3.2. WITH THE IBM PS/2

The CVP-5468NR monitor can be used with an IBM Personal System/2 in the following configuration.

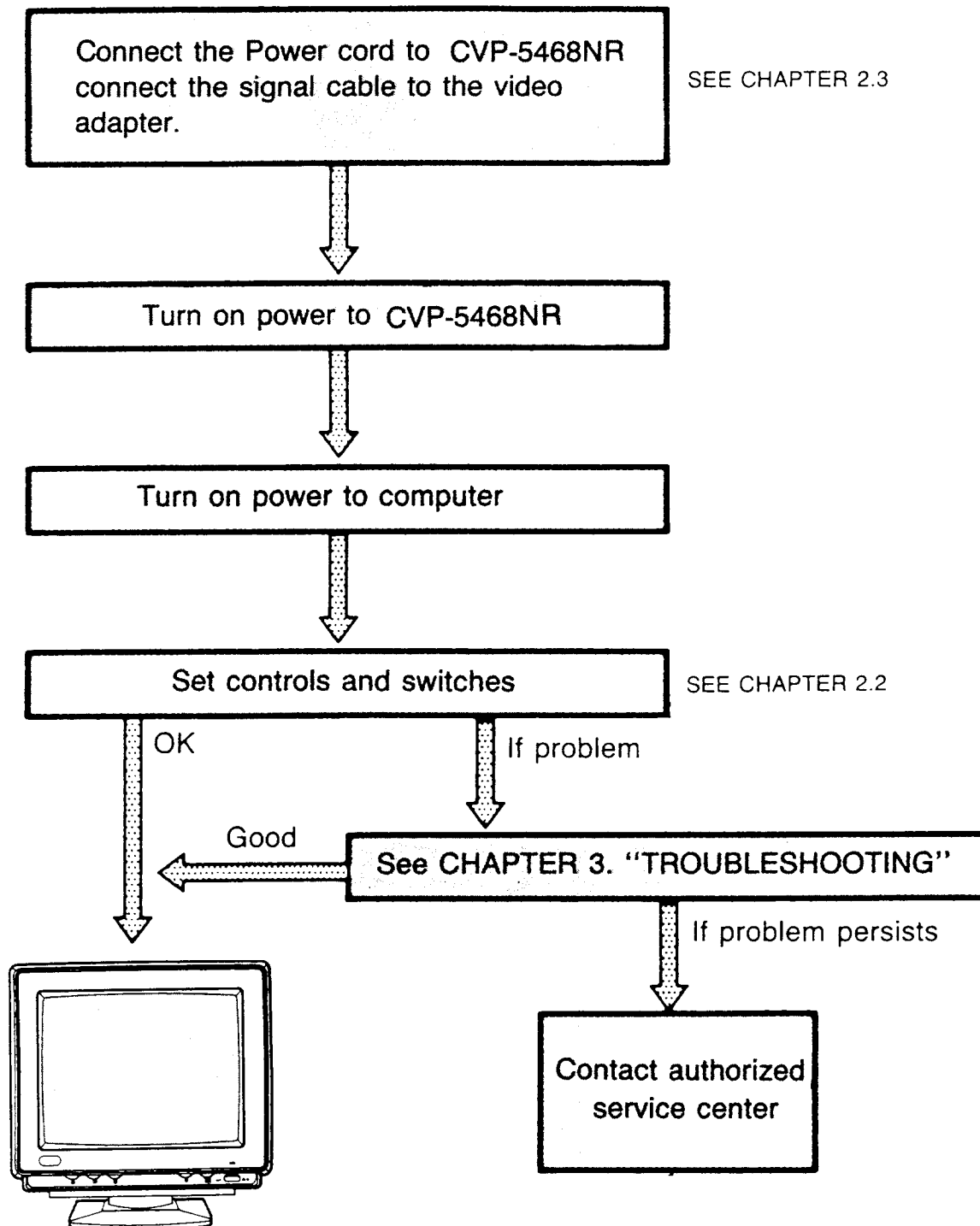
For an IBM PS/2 equipped with either the IBM Multicolor Graphics Array (MCGA) or the IBM Video Graphics Array (VGA), follow these steps:

1. Make sure the power to the CVP-5468NR and the IBM PS/2 is turned OFF.
2. Connect the end of the CVP-5468NR signal cable to the display connector of the PS/2.
3. Connect one end of the power cable to the CVP-5468NR.
4. Connect the other end to a power outlet.



2.4 QUICK OPERATION CHART

To summarize the steps in connecting your computer and adapter with CVP-5468NR and setting the necessary controls and switches, refer to the chart below.



CHAPTER 3. TROUBLE SHOOTING

If an unrecommended computer is connected, make sure the signal timing and pin assignments meet the specifications outlined in Appendix B or C.

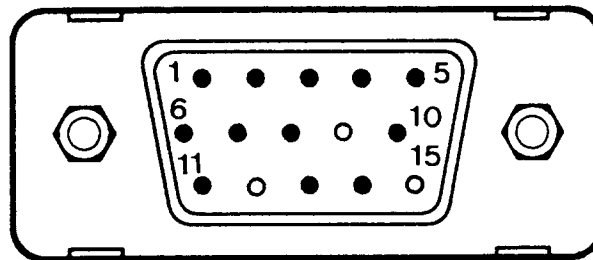
PROBLEM	CHECK THESE ITEMS	
	CONTROLS SWITCHES	LOCATION
No picture	POWER SWITCH signal cable	Front
Abnormal picture 1. Display locks or center shifts 2. Display is too large or too small	V. CENTER CONTROL H. PHASE CONTROL V. SIZE CONTROL	Front Front Front

APPENDIX A. SPECIFICATIONS

MODEL CVP-5468NR	Specifications		
Picture tube	13 visual diagonal inches 0.28mm Trio Dot Pitch Dark blub, Nonglare etching Medium short persistance Low radiation/Anti-static/Anti-magnetic		
Input signal	Video: Analog 0.7V/75 Ohm Positive Sync: Separate sync. TTL level Horizontal sync. Positive/Negative Vertical sync. Positive/Negative		
Display colors	Analog Input Unlimited colors		
Synchronization	Horizontal:	30-38/47-50KHz (Automatically)	
	Vertical:	50 - 90 Hz (Automatically)	
Resolution	Horizontal:	1024 dots (60Hz)	
	Vertical:	768 lines	
Video band width	60 MHz		
Active display area	Horizontal:	248mm	
	Verical:	186mm	
	* Refer to Preset Timing Chart		
Misconvergence	Less than 0.4mm		
Power supply	AC 100V to 250V, $\pm 5\%$, 50/60Hz without changing any setting		
Power Consumption	80W		
Dimensions	364(W) x 370(H) x 378(D)mm		
Weight	11.9kgs		
Environmental Considerations	Operating	Temperature	0°C to 40°C
		Humidity	20% to 80%
	Storage	Temperature	- 20°C to 60°C
		Humidity	10% to 90%

APPENDIX B. PIN ASSIGNMENTS

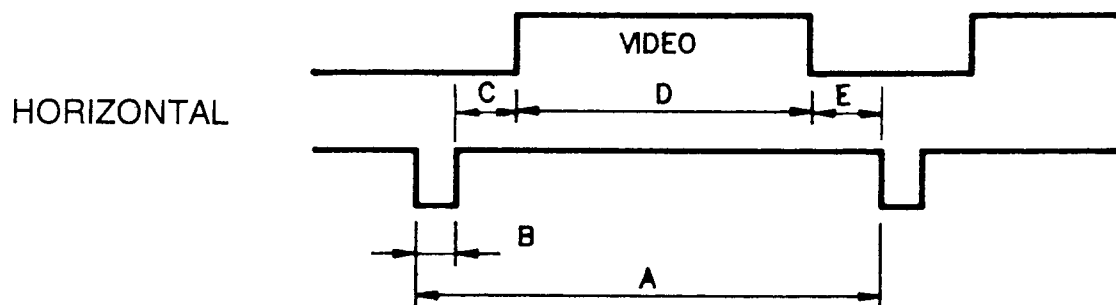
D-SUB Type 15P



PIN	COLOR	PIN	COLOR
1	Red	9	No-Connection
2	Green	10	Ground
3	Blue	11	Ground
4	Ground	12	No-Connection
5	Ground	13	H. Sync
6	Red Rtn	14	V. Sync
7	Green Rtn	15	No-Connection
8	Blue Rtn		

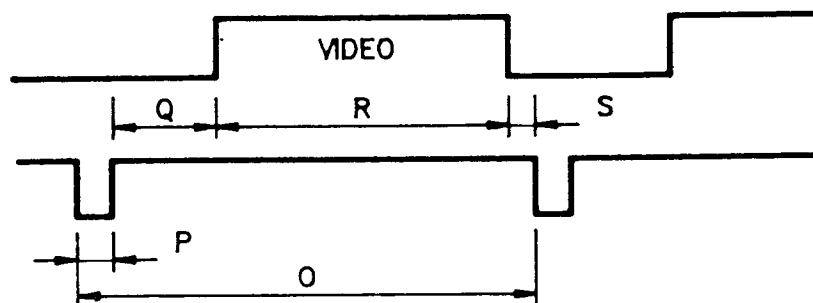
APPENDIX C. TIMING CHARTS

SEPARATE SYNC.



DISPLAY FORMAT	VGA			1) VESA	2) VESA	8514A	NI
Horizontal Dots	640			800	800	1024	1024
Vertical Lines	350	400	480	600	600	768	768
Horizontal Frequency	31.5kHz			35.2kHz	37.9kHz	35.5kHz	48.89
Sync. Polarity	+	—	—	+ / —	+ / —	+ / —	+ / —
A μ s	31.78	31.78	31.78	28.44	26.40	28.10	20.431
B μ s	3.81	3.81	3.81	2.00	3.20	1.15	1.723
C μ s	1.91	1.91	1.91	3.56	2.20	3.91	1.969
D μ s	25.42	25.42	25.42	22.22	20.00	22.80	15.754
E μ s	0.64	0.64	0.64	0.67	1.00	0.24	0.985

VERTICAL



Sync. Polarity: Positive/Negative

DISPLAY FORMAT	VGA			1) VESA	2)VESA	8514A	NI
Horizontal Dots	640			800	800	1024	1024
Vertical Lines	350	400	480	600	600	768	768
Vertical Frequency	70Hz	70Hz	60Hz	56Hz	60Hz	87Hz	60Hz
Sync. Polarity	—	+	—	+ / —	+ / —	+ / —	+ / —
O ms	14.27	14.27	16.68	17.78	16.58	11.50	16.713
P ms	0.06	0.06	0.06	0.06	0.11	0.11	0.123
Q ms	1.91	1.11	1.05	0.63	0.61	0.56	0.592
R ms	11.12	12.71	15.25	17.07	15.84	10.80	15.691
S ms	1.18	0.38	0.32	0.03	0.03	0.02	0.307

- 1) 800 x 600 timing proposed by Video Electronic Standard Association.
- 2) In VGA mode, the vertical auto sizing circuit is active according to sync polarization of IBM convention.
- 3) 8514A uses both interlaced and non-interlaced (60Hz) mode.

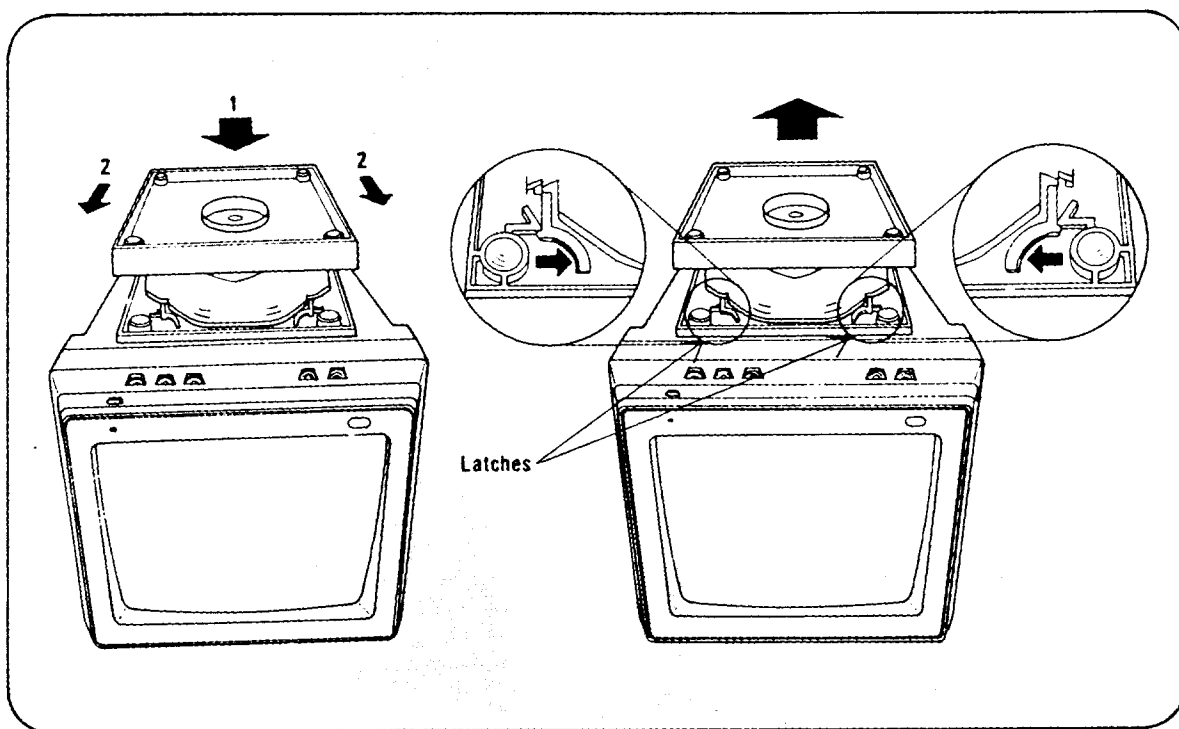
REMOVE OR INSTALL A TILT SWIVEL BASE

Note: Some displays may not have a Tilt Swivel Base

1. Turn off the system and all attached options.
2. Carefully set the display upside down.

Removing the Tilt Swivel Base

1. Push the base of the Tilt/Swivel Base to the rear of the display.
2. Squeeze and hold the latches.
3. Push the Tilt/Swivel Base to the rear of the display and lift to remove the Base.



Installing the Tilt Swivel Base

1. Align the base with the slots in the bottom of the display and insert the Tilt Swivel Base into the slots.
2. Pull the Tilt/Swivel Base firmly toward the front of the display until the latches click into the locked position.

LIMITED WARRANTY

ONE YEAR PARTS AND LABOR

WE WILL WARRANT TO THE PURCHASER OF THE COLOR MONITOR THAT IN THE UNLIKELY EVENT OF ANY FAILURE DUE TO DEFECT IN MATERIAL OR WORKMANSHIP, OCCURRING WITHIN ONE YEAR OF PURCHASE, THE COLOR MONITOR WILL BE REPAIRED AND/OR REPLACED WITHOUT ANY CHARGE FOR PARTS OR LABOR.

IN ADDITION, IF THE PICTURE TUBE SHOULD PROVE TO BE DEFECTIVE WITHIN ONE YEAR OF DATE OF PURCHASE, PICTURE TUBE WILL BE REPAIRED AND/OR REPLACED WITH ONLY CHARGE OF LABOR.

THE DEFECTIVE MONITOR SHOULD BE RETURNED INSURED AND PREPAID WITH A COPY OF YOUR SALES SLIP SECURELY PACKAGED TO YOUR DEALER.