

User's Guide

920D+(D19BL) COLOR MONITOR

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■ Regulatory Information - FCC Information

This equipment has been tested and found to comply with 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 can generate, use, and 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 unacceptable interference to radio and 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/TV technician for help.

Caution

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

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

As an ENERGY STAR partner, Hansol Electronics Inc. has determined that this product meets energy Star guidelines for energy efficiency.

Notice

The information contained in this document is subject to change without notice.

- Canadian Notice

- Avis Canadien

- Energy Star

■ Introduction

- Features

- 19-inch (18 inch visual) high performance display color monitor

- Automatically scans frequencies from
 - Horizontal frequency: 30 to 96KHz
 - Vertical frequency: 50 to 160Hz

- Compatible with VGA, SVGA, VESA, MAC Standards and maximum resolution modes up to 1600 × 1200

- Supports VESA flicker free modes including 85Hz refresh rate.

- On Screen menu fingertip control system to visually select and adjust screen images using control buttons on front panel and on screen menus.

- Power supply operates on AC 100-240V(± 10%), 50/60Hz for use all over the world.

- Power supply operates on AC 220-240V(± 10%), 50/60Hz for use all over the world.(Europe Version)

- Equipped with DDC 2B for Plug & Play capability.

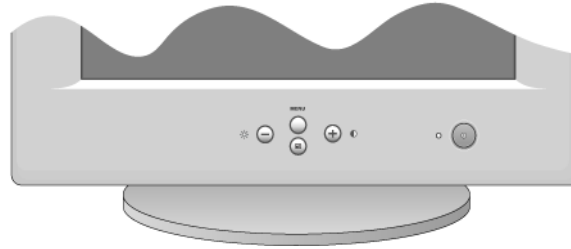
- Equipped with an energy-saving feature.
Power management circuit signaled by the computer system, will reduce power consumption when the computer system is not in use.

- Monitors with nonglare/antistatic screens are compliant with MPR 1990 Emissions standards and meets requirements for CE Marking.
 - ※ TCO : (option)

■ Controls - OSD controls

The OSD appears on the screen when you press **MENU** button.

“ON SCREEN MENU” controls include the following extended controls such as Size, Position, Geometry Distortion, Color Temp., Degauss, Moire on & off, Language, OSD-Position, Recall, Cont. & Brt., etc.





Accessing OSD

Press MENU Button.

- - : Direct Brightness access.
- + : Direct Contrast access.






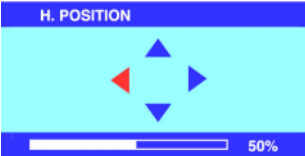


EXIT from OSD

-  : Press this () button in the main menu and submenu.

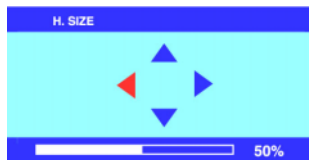
Additional front controls


- ※ Power Switch : Turn the monitor power on or off, When the power is on, the LED is lit.

■ Controls
- OSD Menu

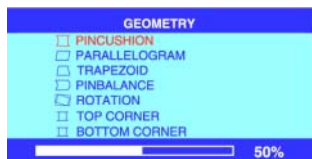
OSD MENU	CONTROL
<p>1. NO OSD</p>	<ul style="list-style-type: none"> • - Proceeds to NO.3 • + Proceeds to NO.4 •  No meaning
<p>2. MAIN MENU</p> 	<ul style="list-style-type: none"> • - + Moves to function to choose. •  Exit the OSD controls. • MENU : Proceed to the selected menu.
<p>3. BRIGHTNESS</p> 	<ul style="list-style-type: none"> • - Proceed to the Brightness menu. • - + Increases or decrease the Brightness.
<p>4. CONTRAST</p> 	<ul style="list-style-type: none"> • + Proceed to the Contrast menu. • - + Increases or decrease the Contrast
<p>5. H/V-POSITION</p> 	<p>position and size Menu control guide</p> <p> : exit to the main menu. - / + : Refer to - / + MENU :Toggle Horizontal and Vertical directly.</p> <hr/> <ul style="list-style-type: none"> • After choosing , push MENU button. • MENU : Push this button again & again to change the H/V-position. • - : Moves the image left or down. • + : Moves the image right or up.

6. H/V-SIZE




- After choosing , push MENU button.
- MEUN : Push this button again & again to change the H/V-size.
- - : Decrease the Horizontal or Vertical size of the image.
- + : Increase the Horizontal or Vertical size of the image.


7. GEOMETRY



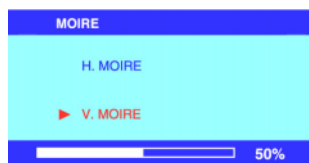
The Geometry controls allow you to adjust the curvature or angle of displayed image.


- After choosing , push MENU button.
- Pincushion : Increase or decrease the curvature of the sides either inward or outward.
- Parallelogram : Increase or decrease the tilt of the sides either to the left or right.
- Trapezoid : Increase or decreases the bottom of the screen to be the same as the top.
- Pin Balance : Increase or decrease the curvature of the sides.
- Top Corner : Increase or decreases the curvature of the top sides.
- Bottom Corner : Increase or decrease the curvature of the bottom sides.
- Rotation : Rotate the entire display to clockwise or counterclockwise.



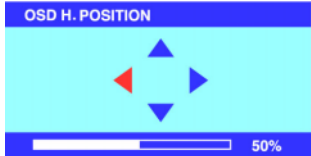

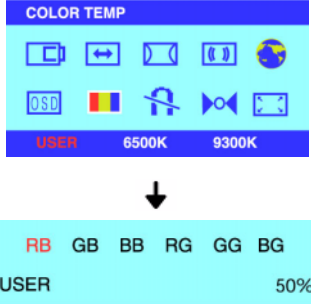




Geometry Menu control guide

-  : Exit to the main menu.
- / + : Move the function to choose.
- MENU : Function to choose.
- / + : Increase or decrease the adjustment.

8. MOIRE



- After choosing , push MENU button.
- Select ON or OFF with - / + key.
- Select H.MOIRE or v.MOIRE with - / + key.
- - / + : Adjust the Moire Control.

<p>9. LANGUAGE</p> 	<ul style="list-style-type: none"> • After choosing , push MENU button. • - / + : Select the language. 	
<p>10. OSD POSITION</p> 	<ul style="list-style-type: none"> • After choosing , push MENU button. • MENU : Push this button again & again to change the H/V-OSD position. • - : Move the OSD position left or down. • + : Move the OSD position right or up. 	
<p>11. COLOR TEMP</p> 	<p>※ Presetting : Select the desired color setting. The bar is replaced by the color setting choice. " USER, 6500k, 9300k " Color adjustment is available only in USER mode.</p> <ul style="list-style-type: none"> • - / + : Move the bar with - or + key to select the user • MENU : Press MENU button to access the sub-menu. • - / + : Increase or decrease the selected color adjustment. •  : Exit to the main menu. 	
<p>Controls</p>	<p>ICON</p>	<p>Function</p>
<p>Degauss</p>		<p>This control removes the build-up of magnetic fields that can affect color purity and convergence. Note : The picture shakes while degaussing is taking place. After internal degaussing the circuitry takes about 30 minutes to regain its maximum power.</p>
<p>Recall</p>		<p>This controls recalls certain factory setting such as size, position, geometry and color by pressing MENU button. If the monitor is operating in a user mode, this controls has no effect.</p>
<p>Zoom</p>		<p>- / + : Increase or decrease the Vertical and Horizontal size of image at the same time.</p>

Power Management Feature

The monitor is equipped with a power saving circuit that conforms to the world-standard Display Power Manager Signalling (DPMS) mode of Video Electronics Standard Association(VESA).

The power management feature requires that the video card of the computer should support DPMS function.

Status	LED Sign	Power Consumption
Normal mode	Green ON	110 Watts
Stand-by mode	Green Blinking(0.5Sec)	Less than 15 W
Power-Off mode	Green Blinking(1Sec)	Less than 5 W

No image is displayed with Green blinking

Monitor is in power saving mode.

Use mouse or keyboard to release power saving mode.

No image is displayed without LED on.

Power cable plug must be pulled out.

Check the power plug on monitor and on the wall.

"Out of range" displayed on the screen.

This message is displayed when the signal from video card exceeds the maximum frequency of the monitor. Readjust resolution and frequency in accordance with the monitor capacity.(Refer to Standard Signal Table)

Standard Signal Table

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)	Clock Frequency (MHz)	Sync Polarity (H/V)
VGA (720 x 400)	31.469	70.087	28.322	- / +
VGA (640 x 480)	31.469	59.940	25.175	- / -
VGA (640 x 480)	37.500	75.000	31.500	- / -
VGA (640 x 480)	43.269	85.008	36.000	- / -
SVGA (800 x 600)	46.875	75.000	49.500	+ / +
SVGA (800 x 600)	53.674	85.061	56.250	+ / +
XGA (1024 x 768)	60.023	75.029	78.750	+ / +
XGA (1024 x 768)	68.677	84.997	94.500	+ / +
SXGA (1280 x 1024)	79.976	75.025	135.000	+ / +
SXGA (1280 x 1024)	91.146	85.024	157.500	+ / +
UXGA (1600 x 1200)	93.750	75.000	202.500	+ / +

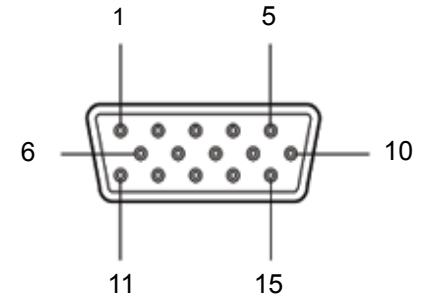
Specifications

ITEM		920D+(D19BL)
CRT Type		19", 90° deflection, FLAT
CRT Horizontal Dot pitch		0.20mm
CRT Surface		Non-glare, Anti-Reflection & Anti-Static
Input Signal	Sync.	H/V Separate, TTL, positive/negative H/V Composite, TTL, positive/negative
	Video	RGB Analog (0.7Vp-p), positive 75 Ω Terminated
Scanning frequency	Horizontal	30KHz~96KHz (Automatically)
	Vertical	50Hz~160Hz (Automatically)
Maximum Resolution		1600Dots x 1200Lines (Non-interlace)
Pixel Clock(Max.)		210 MHz
Display Size (Standard)		Horizontal 350mm, Vertical 262mm
Power Consumption(Max.)		110 Watts
Power Supply		AC 100~240V(± 10%), 50/60Hz ± 3Hz AC 220~240V(± 10%), 50/60Hz ± 3Hz (Europe Version)
Input Connector		D-Sub, 15Pin Connectors(3layer)
Display Colors		Unlimited
Dimension	Unit	18.5" (W) x 18.4" (D) x 18.3"(H) / 470mm(W) x 466.5mm(D) x 466mm(H)
	Carton	22.6" (W) x 24.4" (D) x 22.2"(H) / 573mm(W) x 620mm(D) x 564mm(H)
Weight	Net	47.3lbs (21.5kg)
	Gross	55lbs (25kg)
Temperature	Operating	32°F to 104°F (0°C to 40°C)
	Storage	-4°F to 140°F (-20°C to 60°C)
Humidity		10% to 85% R.H. Non-condensing

■ Pin assignment table D-Sub Mini 15pin connector


Pin No.	Assignment
1	Red Video
2	Green Video
3	Blue Video
4	Frame Ground
5	Ground
6	Red Video Ground
7	Green Video Ground
8	Blue Video Ground
9	N.C
10	ID
11	Monitor Ground
12	SDA
13	H-Sync
14	V-Sync
15	SCL

The 15-pin D-Sub connector (male) of the signal cable (IBM Systems) :



(15 Pin D-Sub)

■ Troubleshooting

Problem	Solution
<p>No picture</p>	<ul style="list-style-type: none"> ■ Check that the AC cord is correctly connected. ■ Check that the AC socket is live by plugging in another piece of equipment. ■ Power switch and computer power switch should be in position. ■ Ensure that the signal cable is properly connected to the video card or PC. ■ Ensure that the video card is securely seated in the PC. ■ Check the connector for bent or pushed-in pins. ■ Press a key on the keyboard or move the mouse, in case the screen power-saver mode has blanked the screen.
<p>Image is scrolling or unstable</p>	<ul style="list-style-type: none"> ■ Signal cable should be securely attached to the computer. ■ Check the pin assignments and signal timings of the monitor and your video card with respect to recommended timings and pin assignments. ■ Ensure that the video card is securely seated in the PC.
<p>Picture is fuzzy</p>	<ul style="list-style-type: none"> ■ Adjust the Contrast and Brightness Controls. ■ Push the Degauss Button once. <p> Caution <i>A minimum interval of 20 minutes should exist before the Degauss Button is used a second time. Do not hold the button down continuously.</i></p>
<p>Picture bounces or a waving pattern is present in the picture</p>	<ul style="list-style-type: none"> ■ Move electrical devices that may be causing electrical interference away from the monitor. ■ See the inside front cover of this manual for FCC information. ■ Unshielded audio speakers placed next to the monitor can cause picture distortion. Move the speakers away.
<p>Edges of the display image are not square</p>	<ul style="list-style-type: none"> ■ Adjust the distortion using the Side Pincushion or Trapezoid Pincushion Balance, Parallel adjustment controls under the on screen menu.
<p>Display image is not centered, too small, or too large</p>	<ul style="list-style-type: none"> ■ Adjust the horizontal and vertical image sizes using the Horizontal and Vertical Size adjustment controls under the on screen menu.

User's Guide

COLOR MONITOR



Visit for more Information www.hansolel.co.kr

THE NEW LEADER
IN DIGITAL IT

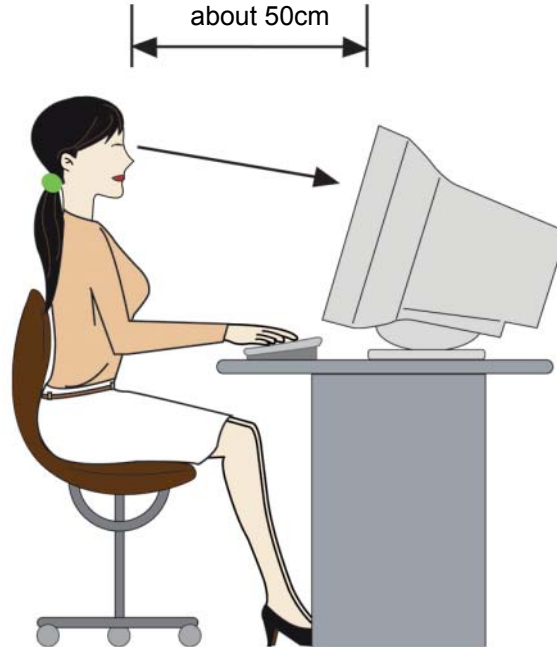
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■ Introduction - Good Posture Guide

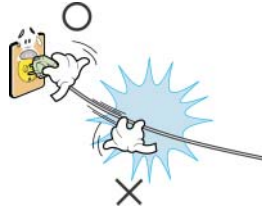
- * Place the monitor to face the user and then adjust the monitor angle.
- * Take a break(for about 10 minutes) at every hour during the work with monitor.
- * Refer to the following figure to take the correct posture



- Look down the monitor below the horizon.
- Adjust the monitor to prevent reflection.
- Relax shoulders and arms, and sit back on the chair.
- Adjust the monitor stand to acquire required angle.
- Maintain the arms horizontally and place hands softly on the keyboard.
- Keep feet flat on the ground.

■ Introduction
- Safety information

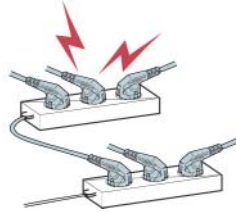
To prevent damage or loss, please read this warning carefully.



- When connecting/disconnecting the plug, pull out the plug itself, and never pull the cord to prevent fire caused by short.



- To prevent electric shock, do not connect/disconnect the plug with wet hand.



- To prevent fire, do not connect a large number of equipments in a single line.

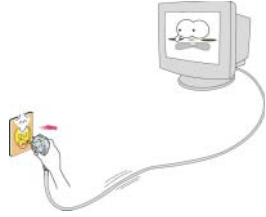


- If you see smoke or smell something burning, stop using the unit, switch off the power, pull out the plug, and then contact your local service station.



- To prevent fire and electric shock, pull out the plug in case of thunder and lightening.

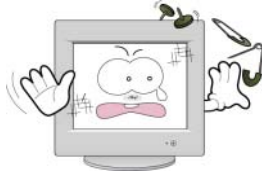
Color Monitor



- Install the monitor near an outlet that you can reach easily. Disconnect the product by grasping the plug firmly and pulling in from the outlet. Never disconnect it by pulling the cord.



- Slots and openings in the cabinet are provided for ventilation; these openings must not be blocked or covered. Never push objects of any kind into cabinet slots or other openings.



- Never insert anything metallic into the monitor openings. Doing so may create a danger of electric shock.



- To prevent fire and electric shock, do not try to take the monitor apart or repair it your self. Contact your local sevice station or customer sevice center for inspection, modification or repair.



- Unplug the monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp, lint-free cloth for cleaning.

Introduction

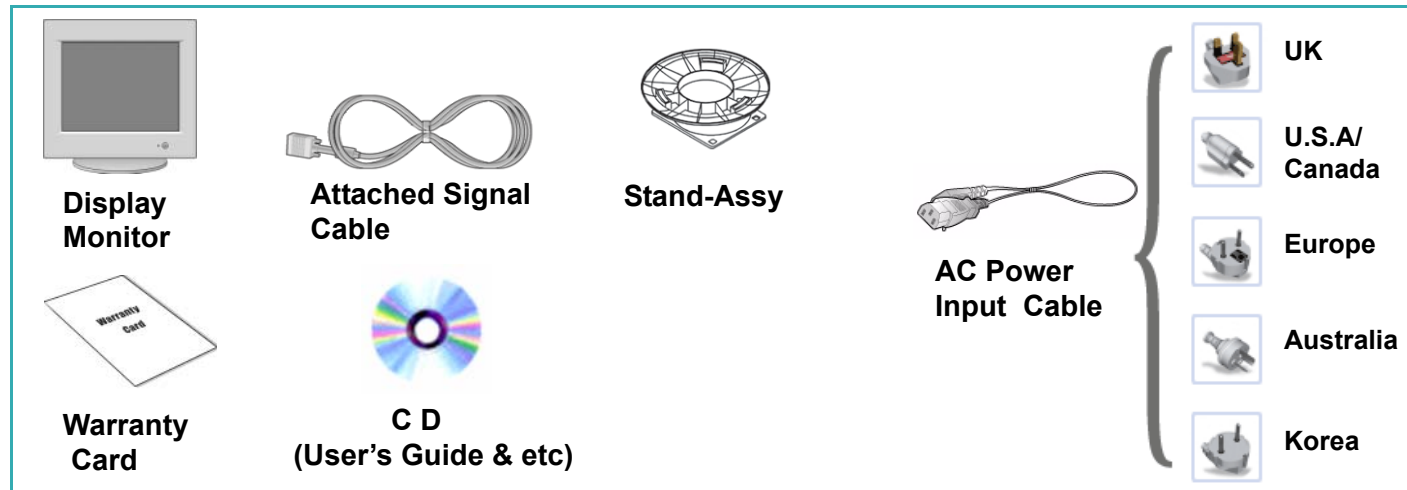
- Package

Congratulations on your purchase of this top quality color monitor!

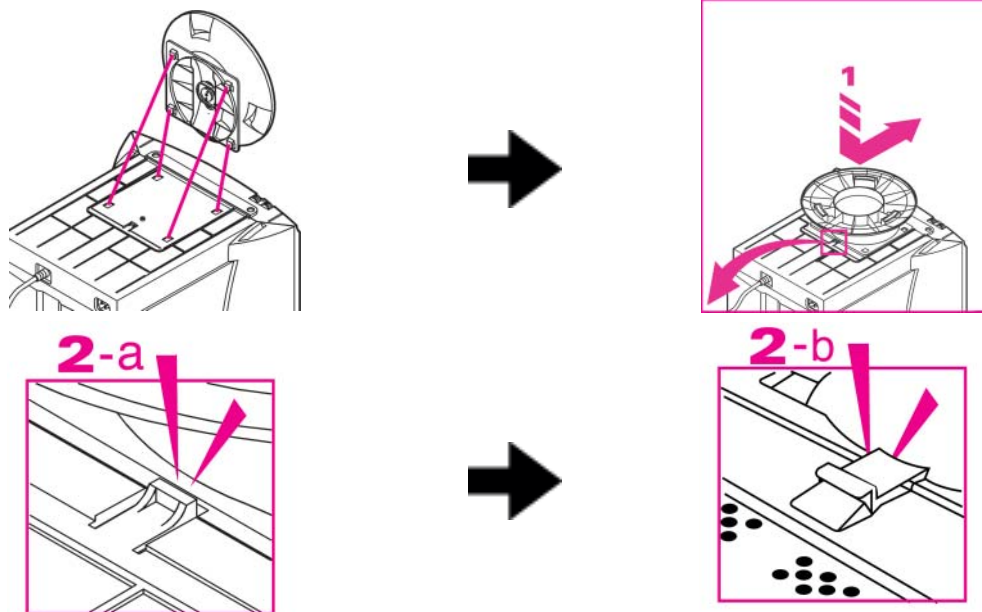
The items illustrated below are contained in the carton.

First, be sure that your carton includes all of them.

If any items are missing or damaged, please contact your local dealer or supplier.



- Stand Assembly



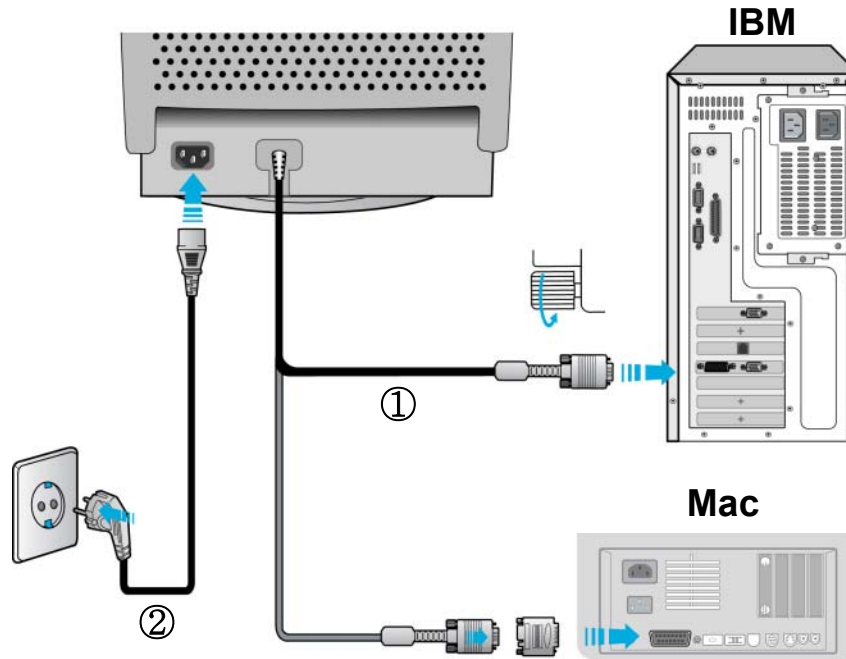
■ This stand is applied to the several monitors.
Your monitor may be look different, but the installation procedure is the same.

■ Introduction

- Connection to
your computer



Ensure that both the PC and the display monitor are switched off.



To attach the monitor to your system, as shown in the following illustrations.

1. Insert the AC power cord ② into monitor and then into an AC power outlet.
2. Connect the signal cable ① to the 15pin graphics connector of the system and tighten the fastening screws.
3. To turn on the monitor, push the power switch.

Note

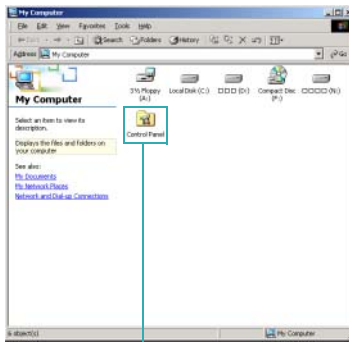
To attach the monitor to the Macintosh system, please contact an authorized dealer.

■ Installing Monitor Driver - Automatic Installation

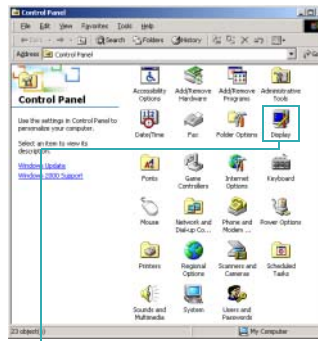
1. Insert the CD to the CD-ROM driver.
2. Double-click "Install.exe".
3. Select the model and click "OK" button.
4. Select inf file, and then click "OK" button.
5. Click "Exit" button to close the installation.

- Manual Installation (Windows 2000)

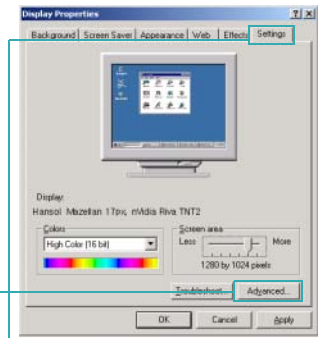
1. Insert the CD to the CD-ROM driver.
2. Click 'My Computer' and follow the procedure below.



① Click 'Control Panel'.

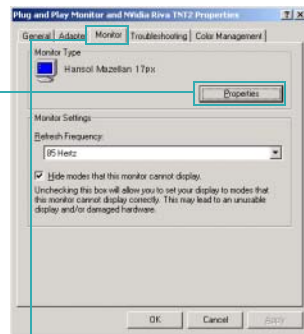


② Click 'Display'.



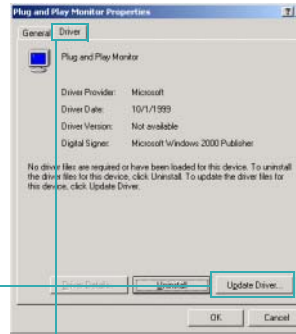
③ Click 'Settings'.

④ Click 'Advanced..'



⑤ Click 'Monitor'.

⑥ Click 'Properties'.



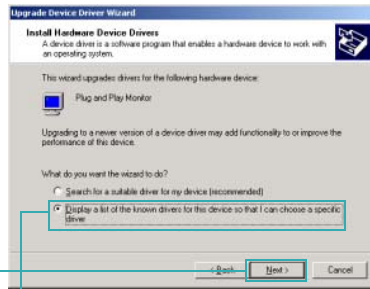
⑦ Click 'Driver'.

⑧ Click 'Update Driver'.



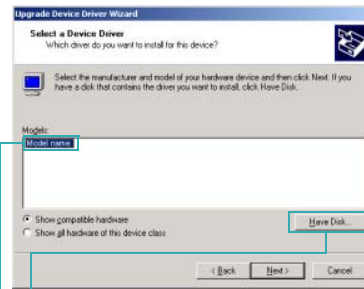
⑨ Click 'Next>'.





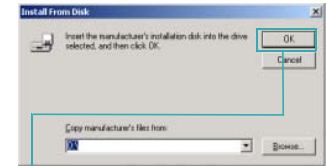
⑩ Click 'Display a list of all...'

⑪ Click 'Next>'.

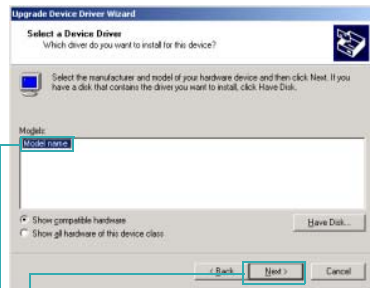


⑫ Click 'Have Disk...'

(ex : H711, 730ED...)

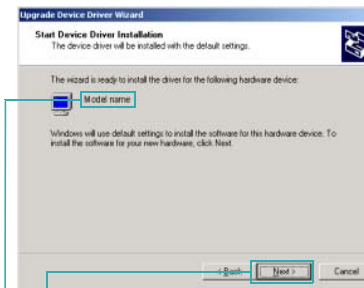


⑬ Select the driver and click 'OK'.



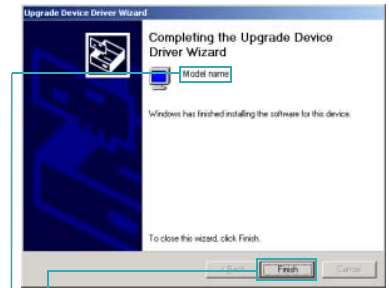
⑭ Click 'Next>'.

(ex : H711, 730ED...)



⑮ Click 'Next>'.

(ex : H711, 730ED...)



● Click 'Finish'.

(ex : H711, 730ED...)

3. Select "Exit" if the monitor model is changed, and then reboot the Windows.

(Windows XP)

Microsoft® Windows® XP Operating System

1. Insert CD into the CD-ROM driver.
2. Click **"Start"** → **"Control Panel"** then click the **"Appearance and Themes"** Icon.
3. Click **"Display"** icon and choose the **"Settings"** tab then click **"Advanced.."**.
4. Click the **"Properties"** button on the **"Monitor"** tab and select **"Driver"** tab
5. Click **"Update Driver.."** and select **"Install from a list or.."** then click **"Next"** button.
6. Select **"Don't search ,I will.."** then click **"Next"** and then click **"Have disk"**.
7. Click the **"Browse"** button then choose A:(D:\Driver) and choose your monitor model in the model list and click the **"Next"** button.
8. Click the **"Close"** button then click **"OK"** button continually.
9. Monitor driver installation is completed.

(Windows Me)

Microsoft® Windows® Millennium Operating System

1. Click **"Start"** , **"Setting"** , **"Control Panel"**.
2. Double click **"Display"** icon.
3. Select the **"Settings"** tab and click **"Advanced Properties"** button.
4. Select the **"Monitor"** tab.
5. Click the **"Change"** button in the **"Monitor Type"** area.
6. Choose **"Specify the location of the driver"**.
7. Choose **"Display a list of all the driver in a specific location.."** then click **"Next"** button.
8. Click the **"Have Disk"** button.
9. Specify A:\(D:\driver) then click **"OK"** button.
10. Select **"Show all devices"** and choose the monitor that corresponds to the one you connected to your computer and click **"OK"**.
11. Continue choosing **"Close"** button and **"OK"** button until you close the Display Properties dialogue box.
(You can get some other screen for warning message or others, then click the appreciate option for your monitor.)

(Windows 98)

Microsoft® Windows® 98 Operating System

1. Click **"Start"** , **"Setting"** , **"Control Panel"**.
2. Double click **"Display"** icon.
3. Select the **"Settings"** tab and click **"Advanced Properties"** button.
4. Select the **"Monitor"** tab.
5. Click the **"Change"** button in the **"Monitor Type"** area then click **"Next"** button.
6. Choose **"Display a list of all the driver.."** then click **"Next"** button.
7. Click the **"Have Disk"** button, then click **"browse.."** button.
8. Specify A:\(D:\driver) then click **"OK"** button.
9. The **"Select Device"** dialogue box will appear. Select **"Show all devices"** then choose the monitor that corresponds to the one you connected to your computer and click **OK**.
10. Continue choosing **"Close"** button and **"O.K"** button until you close the Display Properties dialogue box.

(Windows 95)

Microsoft® Windows® 95 Operating System

First determine the Windows 95 version installed on your computer by right-clicking the My Computer icon on PC and selecting Properties. The version number is listed under System. Perform the steps for the appropriate version.

Version 4.00.950A

1. Click **Start, Settings, Control Panel**, and then double-click "Display" icon.
2. In the "Display Properties" window, click the "Settings" tab and click "Change Display Type".
3. In the "Change Display Type" window, click "Change" and then click "Have Disk".
4. Click "browse.." button and specify A:\(D:\driver) and click "OK".
5. In the Select Device window, click the appropriate monitor model and then click OK.
6. Continue choosing "Close" button and "OK" button until you close the "Display Properties" dialogue box.

Version 4.00.950B

1. Click **Start, Settings, Control Panel**, and then double-click "Display" icon.
2. In the "**Display Properties**" window, click the Settings tab and then click "**Advanced Properties**" button.
3. In the "**Advanced Display Properties**" window, click the "**Monitor**" tab and then click "**Change**" button.
4. In the "**Select Device**" window, click "**Have Disk**" button.
5. Click "**browse..**" button and specify A:\(D:\driver) and click "**OK**".
6. In the "**Select Device**" window, click the appropriate monitor model and then click "**OK**".
7. Continue choosing "**Close**" button and "**OK**" button until you close the "**Display Properties**" dialogue box.

(Windows NT)

Microsoft® Windows® NT Operating System

1. Click **Start, Settings, Control Panel**, and then double-click **Display** icon.
2. In Display Registration Information window, click Settings Tab and then click All **Display Modes**.
3. Select a mode that you wish to use (Resolution, Number of colors and Vertical frequency) and then click **OK**.
4. Click **Apply** button if you see the screen working normally after clicking Test. If the screen is not normal, change to a different mode (lower mode of resolution, colors or frequency).

Note: If there is no Mode at **All Display Modes**, select the level of resolution and vertical frequency by referring to the Preset Display Modes in the user guide.

(Linux)

Linux Operating System

To execute X-Window, you need to make the X86Config file, which is a type of system setting file.

1. Press Enter at the first and the second screen after executing the X86Config file.
2. The third screen is for **setting your mouse**.
3. Set a mouse for your computer.
4. The next screen is for **selecting a keyboard**.
5. Set a Keyboard for your computer.
6. The next screen is for **setting your monitor**.
7. First of all, set a **horizontal frequency** for your monitor. (You can enter the frequency directly.)
8. Set a **vertical frequency** for your monitor. (You can enter the frequency directly.)
9. Enter the **model name of your monitor**. This information will not affect the actual execution of X-Window.
10. You have **finished** setting up your monitor.

Execute X-Window after setting other requested hardware.

Service Center

■ EUROPE

Country	ASC	Tel	Country	ASC	Tel
U. K	Pulse Service Centre Ltd.	44-(0)-870-013-4470	Hungary	Profit Service Center Kft.	36 1 399 0405
Germany	BITRONICS GmbH	49-3634-683313	Bulgaria	RTS	359-2-971-2020
France	DATEX	33-1- 69- 310101	SWITZERLANDS	TPA PANATLANTIC AG	41 1 886 10 16
Spain	FREE ELECTRONICA S.A	34 91 6774787	SLOVAKIA	BGS-Distribution a.s	421 7 49101563
Finland	PowerMill OY	358 9 561 86130	LATVIA	ELKO-RIGA	371-709-3240
Ireland	Power Supplies Repair Agency LTD	353 1 286 1343	Greece	Alman Hellas Ltd.	3010 2409150
Belgium	SIMEX NV	32 16 40 58 44	SLOVENIA	ACORD 92 d.o.o.	386 1 583 72 62
Norway	Effekt A/S	47 333 00 630	Croatia	ZEL-COS d.o.o	358-1-615-9644
Portugal	CorpoTecnico	351 21 317 0210	Romania	S.C. Shark Industries S.A	40 1 224 22 58
Sweden	ANOVO Nordic	46 13 202 428	Romania	Flamingo Computers SA	4 236 2000(231)
Denmark	Strax	45 70 10 7101	Yugoslavia	PAKOM A.D.	381 18 52 11 16
Czech	ExtraPoint(Karma)	42022576650	Ukraine	MTI	380 44 458 00 32

■ U.S.A , CANADA

Country	ASC	Tel
USA	Think AT(West Area)	1-562-531-3815
	Far East(East Area)	1-201-935-5939
	Techpoint(South Area)	1-813-249-5808
CANADA	Ko-Am Electronics(West Area)	1-604-273-5622
	Electrodesign(East Area)	1-514-331-3202