ImageQuest

A727
Mutiscanning Color Monitor

User's Guide

HYUNDAI
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U.S.A.

U.S.FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT
INFORMATION TO THE USER

NOTE : 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 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 of a circuit different from that to which
   the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for assistance.

Changes or modification not expressly approved by the party responsible for
compliance could void the user's authority to operate the equipment.
Connecting of peripherals requires the use of grounded shielded signal cables.

DECLARATION OF CONFORMITY

WE   HYUNDAI ImageQuest CO., LTD.
             Ami-ri Bubal-Eub Ichon-Si Kyungki-Do
             467-860 KOREA

declare under our sole responsibility that the product:

Kind of equipment   :   COLOR MONITOR

Type-Designation   :   A727

to which this declaration relates is in conformity with the
following standard(s) or other normative document(s)

Safety   :   EN60950 : 1992 + A1, A2, A3, A4, A11
EMC   :   EN 55022/1998, EN 55024: 1998
             EN 61000-3-2: 1995+A1 : 1998+A2 : 1998
             EN 61000-3-3: 1995

following the provisions of the Low Voltage Directive 73/23/EEC,
93/68/EEC and the EMC Directive 89/336/EEC.

Accredited testlaboratory:
TÜV Rheinland
Am Grauen Stein
51105 Köln

KOREA / Apr. 02, 2001   HONG KI, KIM
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(Place and date of issue)   *(Name and signature of*
                                authorized person)

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Contents

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1. Introduction

This manual contains instructions for installing and operating NEC CI A727.

NEC CI A727 is a highly ergonomic color display unit;

- 17" diagonal (15.7" viewable) 0.27mm dot pitch CDT
- Supporting high screen refresh rates and full scan flicker-free picture quality
- With On Screen Display menus for user control
- 100-240V AC input voltage
- VESA DPMS (Display Power Management Signaling)
- VESA DDC1/2B compatibility

2. Safety Information

When you set up and use your display unit, follow the safety instructions below.

- Do not use the display unit in humid environments like bathrooms, damp cellars, swimming pools, etc.
- This equipment must be connected to an earthed outlet which is close to the display unit and accessible in case you need to disconnect the display.
- Do not connect an extension cord.
- Never insert objects into the openings on the outside of the device as you can come into contact with live electrical components. This can cause fire or give strong electrical shocks.
- Slots in the cabinet are provided for ventilation. Do not block the ventilation slots in the display unit cabinet.
- Do not under any circumstances open the display unit cabinet.
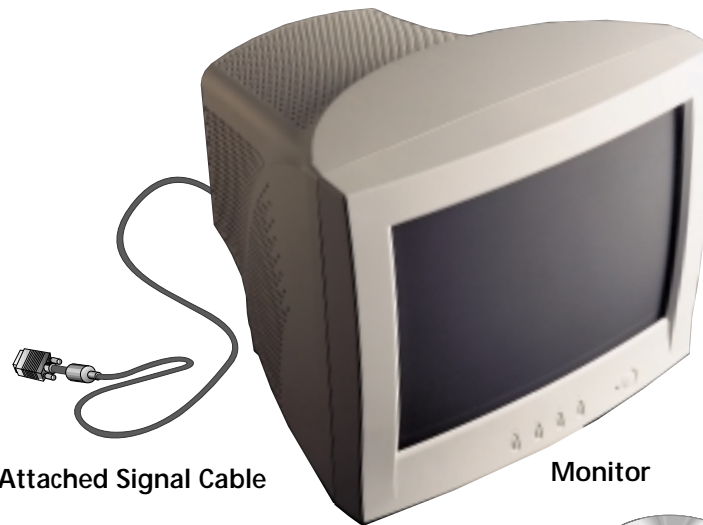
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Cleaning and Maintenance

- To avoid risk of electric shock, do not disassemble the display unit cabinet. The unit is not user-serviceable. Remember to unplug the display unit from the power outlet before cleaning.

- Do not use alcohol (methyl, ethyl or isopropyl) or any strong dissolvent. Do not use thinner or benzene, abrasive cleaners or compressed air.

- Do not wipe the screen with a cloth or sponge that could scratch the surface.

- To clean your antistatic screen, use water and a special microfiber screen cleaning tissue used in optical lens cleaning, or lightly dampen a soft, clean cloth with water or a mild detergent.

- To clean display unit cabinet, use a cloth lightly dampended with a mild detergent.

- During the transportation of the monitor, the swivel base has to be removed in every case.
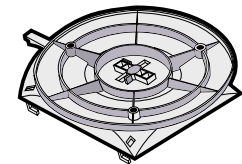
3. Installing the monitor

3-1. Packing List

The following items should be found in the packaging.
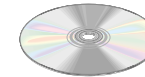

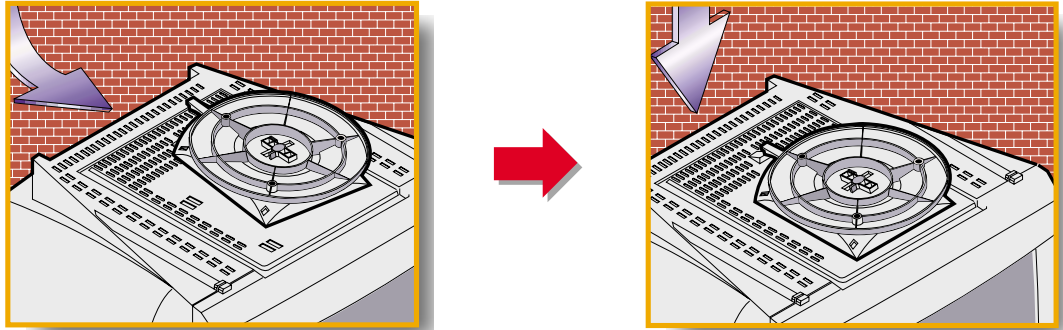Attached Signal Cable

Monitor

Tilt and Swivel

Power cord

Compact Disc

> **!** Above power cord can be changed upon different voltage areas. Please contact your dealer if anything is missing or damaged.

3-2. Fastening the swivel and tilt base

- Place the base against the bottom of the monitor so that the base fasteners are aligned with appropriate slots.
- Push the base towards the front of the monitor until the latch locks into position.

3-3. Selecting a suitable location

- Place the monitor at least 30cm from other electrical or heat-emitting equipment and allow at least 10cm on each side for ventilation.
- Place the monitor in a position where no light shines directly onto or is reflected on the screen.
- To reduce eye strain, avoid installing the display unit against a bright background such as a window.
- Position the monitor so that the top of the screen is no higher than eye level.
- Position the monitor directly in front of you at a comfortable reading distance (around 45 to 90cm)
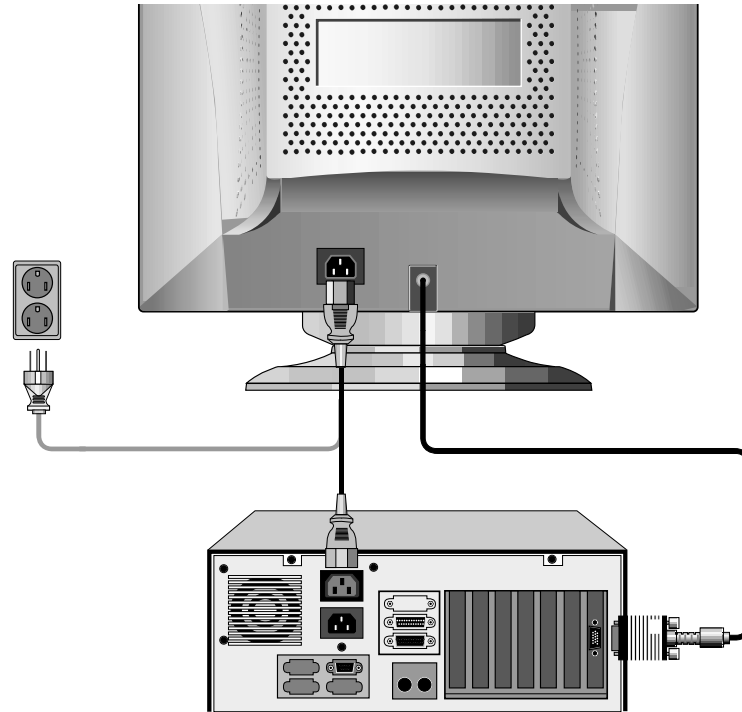
3-4. Connecting the monitor

!

Before you start cabling your monitor, check that the power is off on all units. To avoid any possibility of electric shock, always connect your equipment to properly earthed outlets.
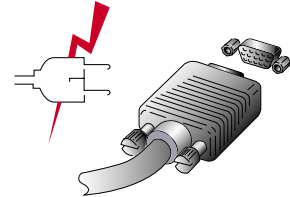
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1. Insert the 15-pin signal cable connector to the VGA connection on your computer and screw it down.
2. Plug the display unit's power cable first to the back of the display unit.
3. Then plug the power cable to a 100V - 240V earthed electrical outlet or to the system unit, if it has an outlet for the display power cable.
4. Turn on the display unit using the Soft power switch and check that the power LED is on. If not, repeat steps 2, 3 and 4 or refer to the Troubleshooting section of this guide.

Power LED   Soft Power Switch

5. Turn on the power to the computer. The picture will appear within about 15 seconds. Adjust the picture to obtain optimum picture quality. See the section *Adjusting the picture* in this guide for more information.

3-5. Installing the driver
3-5-1. Windows 95/98/2000

This monitor complies with Microsoft Windows Plug and Play standard.
The monitor will be detected automatically when starting Windows 95/98 or 2000.

1. Switch on the monitor.
2. Start Windows. New hardware will be found (Plug and Play monitor) and the
    'Add New Hardware Wizard' will start up.

Add New Hardware Wizard

This wizard searches for new drivers for:

Plug and Play Monitor

A device driver is a software program that makes a
hardware device work.

< Back   Next >   Cancel

Figure : Installing the driver

3. Click on 'Next' to continue.
4. Follow the on-screen
    instructions for installing the
    proper driver. Windows will
    locate the driver for the Plug
    and Play monitor.
5. Follow the on-screen
    instructions for installing the
    proper driver.
6. Select 'NEC CI A727'
    and click on 'Next' to continue.
7. Follow on-screen instructions to
    complete the installation.

The computer does not need to be restarted following installation.

3-5-2. Other operating systems

3-6. Setting the refresh rate

No drivers are required for other operating systems, such as DOS, Windows 3.1x or Windows NT.

Follow the instructions below to set your refresh rate in Windows 98.

1. Go to the configuration window (Start-Settings-Configuration window).
2. Double click on the 'Display' icon.
3. Click on the 'Settings' tab.
4. Click on the 'Advanced' button.
5. Click on 'Adapter' and select 85Hz from the list.
6. Click on 'Apply' to accept the selected value.

The recommended setting is a resolution of 800x600 and a refresh rate of 85Hz.

Preset Timing Table

No.	Resolution	Horizontal Frequency	Refresh rate
1	640×480	31.5 KHz	60 Hz
2	640×480	43.3 KHz	85 Hz
3	640×480	50.0 KHz	100 Hz
4	720×400	31.5 KHz	70 Hz
5	800×600*	46.8 KHz	75 Hz
6	800×600	53.6 KHz	85 Hz
7	800×600	63.9 KHz	100 Hz
8	1024×768*	68.7KHz	85 Hz
9	1280X1024	63.9 KHz	60Hz

* Recommended primary mode.

4. Adjusting the picture

You can adjust the screen display by using the buttons located below the screen.

1024 × 768   68.7K   85

H-SIZE   50

MENU   SELECT
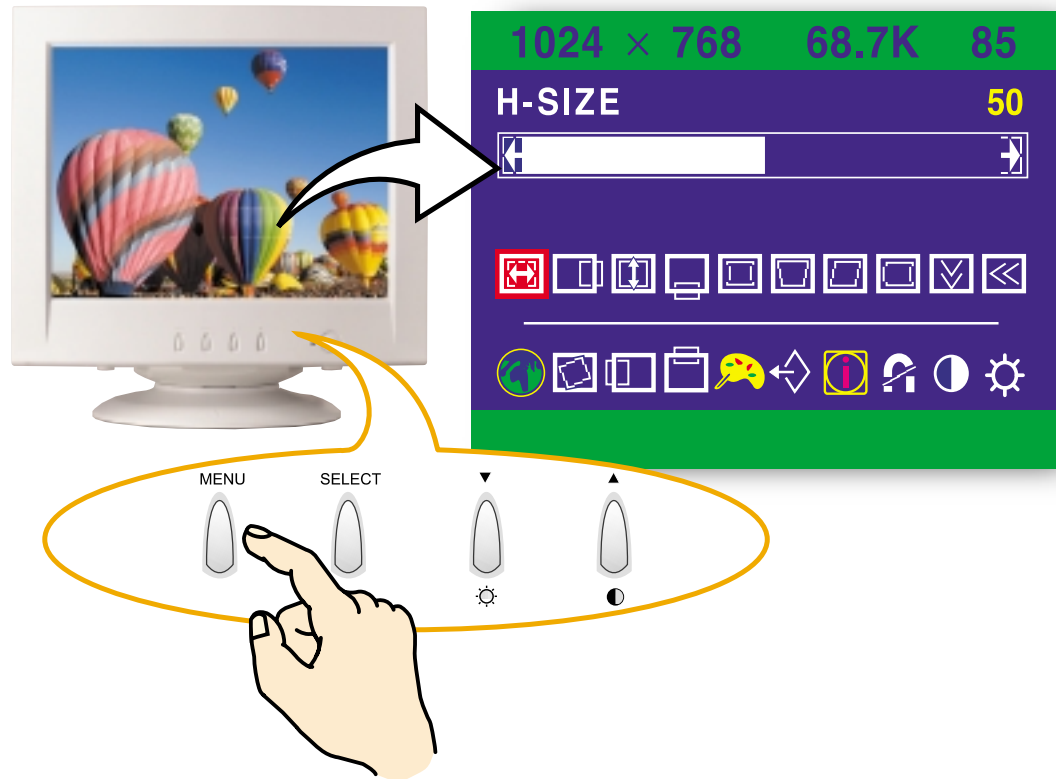
4-1. Using the On Screen Display

1. Push the MENU button to call the OSD to the screen. The resolution and frequency are displayed at the top of the menu box for your information.
2. Push the ▲ or ▼ button to choose the item you want to adjust. The selected item is highlighted.
3. Push the SELECT button to adjust the highlighted item.
4. Use the ▲ or ▼ button to adjust the selection.
5. Push the MENU button to return to the previous menu if you are in a submenu.
6. The display unit automatically saves the new settings in 3 to 4 seconds after your last adjustments and the menu disappears. You can also push the MENU button to make the menu disappear.

4-2. Direct access buttons

Brightness :
Use the button ▼ to select the brightness adjustment.
Adjust with ▲ or ▼ button.

Contrast   :
Use the button ▲ to select the contrast adjustment.
Adjust with ▲ or ▼ button.

4-3. OSD Adjustments

You can play the movie file to see how to adjust the picture image by clicking each icon or title hereunder.

The OSD adjustments available to you are listed below.

H. SIZE
Adjusts the horizontal size of the entire screen image.

H. POSITION
Adjusts the horizontal position of the entire screen image.

V. SIZE
Adjusts the vertical size of the entire screen image.

V. POSITION
Adjusts the vertical position of the entire screen image.

PINCUSHION
If the vertical sides of the picture curve in or bulge out, you can correct the pincushion distortion by using this adjustment.

TRAPEZOID
If the picture is wider at the top or at the bottom, you can correct the trapezoid distortion by using this adjustment.

PARALLEL
If the sides of the screen image are tilted, you can correct the parallel distortion by using this adjustment.

PIN BALANCE
If the sides of the picture are bowed to the right or to the left, you can correct the pincushion balance by using this adjustment.

V. MOIRE
Clears vertical moire if a series of concentric circles or arcs appear on your screen.

H. MOIRE
Clears horizontal moire if a series of concentric circles or arcs appear on your screen.

Moire is an interference pattern that makes the screen seem to have faint lines. A picture that is rasterised or consists of (small) repeating figures is sensitive to moire interference. Strong colors are also liable to intensify moire.

The moire pattern on the screen does not affect the printout of the image.

LANGUAGE
You can select the language in which adjustment menus are displayed. The following languages are available; English, French, German, Italian, Spanish, Swedish, Finnish, Danish and Portuguese.

ROTATION
If the entire screen image is tilted, you can correct the distortion by using this adjustment.

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OSD H. POSITION
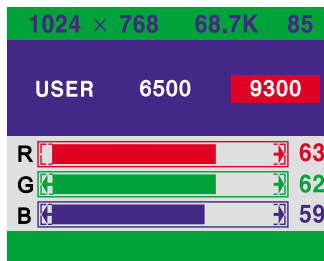Adjusts the OSD menu's horizontal position on the screen.

OSD V. POSITION
Adjusts the OSD menu's vertical position on the screen.

COLOR CONTROL

1024 × 768	68.7K	85
USER	6500	**9300**
R		63
G		62
B		59

Color temperature affects the tint of the image. With lower color temperatures the image turns reddish and with higher temperatures bluish.

There are three color settings available: 9300K, 6500K or USER. With the USER setting you can set individual values for red, green and blue.

RECALL
If you operate your display unit in a factory preset mode, this function deletes adjustments you made for size, position and shape, and restores the properties which have been set in the factory. If you operate your display unit in a user mode, this function has no effect except that the contrast will be reset to the maximum value and the brightness to the cut-off level.

INFORMATION
Information shows horizontal and vertical sync polarity of current timing set.

DEGAUSS

External magnetic fields may cause distortion or discoloration in the picture. Demagnetizing takes place automatically when the display unit is switched on, and the unit normally maintains faultless color purity during operation.

If you have tilted, swiveled or moved the display unit, you can perform demagnetization. During this process the picture is distorted for a few seconds. After demagnetizing, the color impurities have disappeared if caused by stray magnetic fields.

Do not use the degauss feature more than once every half hour.

BRIGHTNESS

Adjusts the brightness of the screen.

CONTRAST

Adjusts the contrast of the screen.

5. Display power management

Reducing power consumption

If the power management function of your computer is enabled, your monitor turns on and off automatically. You can control power management features from your computer.

Your computer may have power management features which enable the computer or monitor to enter a power saving mode when the system is idle. You can reactivate the system by pressing any key or moving the mouse.

Mode	LED	Power consumption
Normal	Green	$\leq$ 90 W
Standby	Amber	$\leq$ 15 W
Suspend	Amber	$\leq$ 15 W
off	Amber	$\leq$ 5 W
Soft Power Switch off	Not illuminated	$\leq$ 4 W
Unplugged	Not illuminated	0 W

! The power button does not disconnect the display unit from the mains. The only way to isolate the display unit completely from the mains supply is to unplug the mains cable.

6. Troubleshooting

If your monitor is not functioning properly, you may be able to solve the problem by reading followings.

Problem	Possible solution
Blank screen	If the power LED is not lit, push the power switch to turn the monitor on. If the display unit is powered through the computer, check that the computer is switched on. The display unit might be in standby mode. Push one of the keyboard keys. Check that the keyboard is properly connected to the computer. Check that the power cable is correctly connected to the display unit and to the power outlet.
Error message: *OUT OF RANGE*	The graphics adapter is set for too high refresh rate or line frequency. Select another display mode with lower frequencies in computer.
Self diagnostics message *NO SIGNAL*	This message indicates that the signal is missing or faulty. Check that the signal cable connector is properly connected and that the connection pins are not bent or damaged. If the connector is loose, tighten the connector's screws.

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Problem	Possible solution
The display does not enter power management mode	The video signal from the computer does not comply with VESA DPMS standard. Either the computer or the graphics adapter is not using the VESA DPMS power management function.
Screen flickers	The screen may seem to flicker when the refresh rate is less than 75Hz. See the list of recommended modes in the section *Preset timing table.*
Color defects	If your color is not uniform, demagnetize the display unit as described in the section Degause under *OSD adjustments*, and make sure that the display unit is at least 30cm from any other electrical equipment. Check that the signal cable connector is properly connected and that the connection pins are not bent or damaged. Try another color temperature. If the picture has strong color defects, switch off the display unit and the computer.
Size, position, shape or quality unsatisfactory	Make sure that other electrical devices are at least quality 30cm away. Adjust the picture characteristics as described in the section *Adjusting the picture.*
Duplicated images	A problem with your graphics adapter or display unit. Contact your service representative.

Contacting service

If the above troubleshooting hints do not help you find a solution to the problem, contact an authorized service agent. If the monitor is sent for service, use the original package if possible.

Unplug the display unit from the power outlet and contact a service agent when:

- The monitor does not operate normally according to the operating instructions.
- The monitor exhibits a distinct change in performance.
- The monitor has been dropped or the cabinet has been damaged.
- The monitor has been exposed to rain, or water or liquid has been spilled onto the monitor.

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7. Specifications

Picture tube	17"(viewable size : 15.7") Dot pitch 0.27 mm Anti-Static, anti-glare, TCO treatment coated.
Display area	factory preset area : 306X230 mm
Number of color	Infinite
Input signals	R.G.B Analog, 15 pin D-sub
Frequency rate	Horizontal : 30 to 70kHz Vertical : 50 to 150Hz
Maximum bandwidth	108MHz
Maximum resolution	1280X1024@60Hz
Input voltage	100-240 VAC 1.5A
Power consumption	$\leq$ 90W
Power Management	VESA DPMS
Plug & Play	Lower than EPA recommendation VESA DDC 1/2B
OSD menu	H/V POSITION, H/V SIZE, PINCUSHION, TRAPEZOID, PARALLEL, PIN BALANCE, H/V- MOIRE, LANGUAGES, ROTATION, OSD H/V POSITION, COLOR CONTROL, RECALL, INFORMATION, DEGAUSS, BRIGHTNESS, CONTRAST
Ergonomics, Safety and EMC	TCO FCC Class B, CE cULus, TÜV-GS, DHHS, NEMKO, DEMKO, FIMKO, SEMKO
Operating Temperature	0 ~35 °C
Weight	13.7Kg unpacked, 16.0Kg packed
Dimensions (W X H X D mm)	404 X 408 X 420 mm

- *Specification is subject to change without notice for performance improvement.*