

ATTACHMENT E.
- USER'S MANUAL

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.

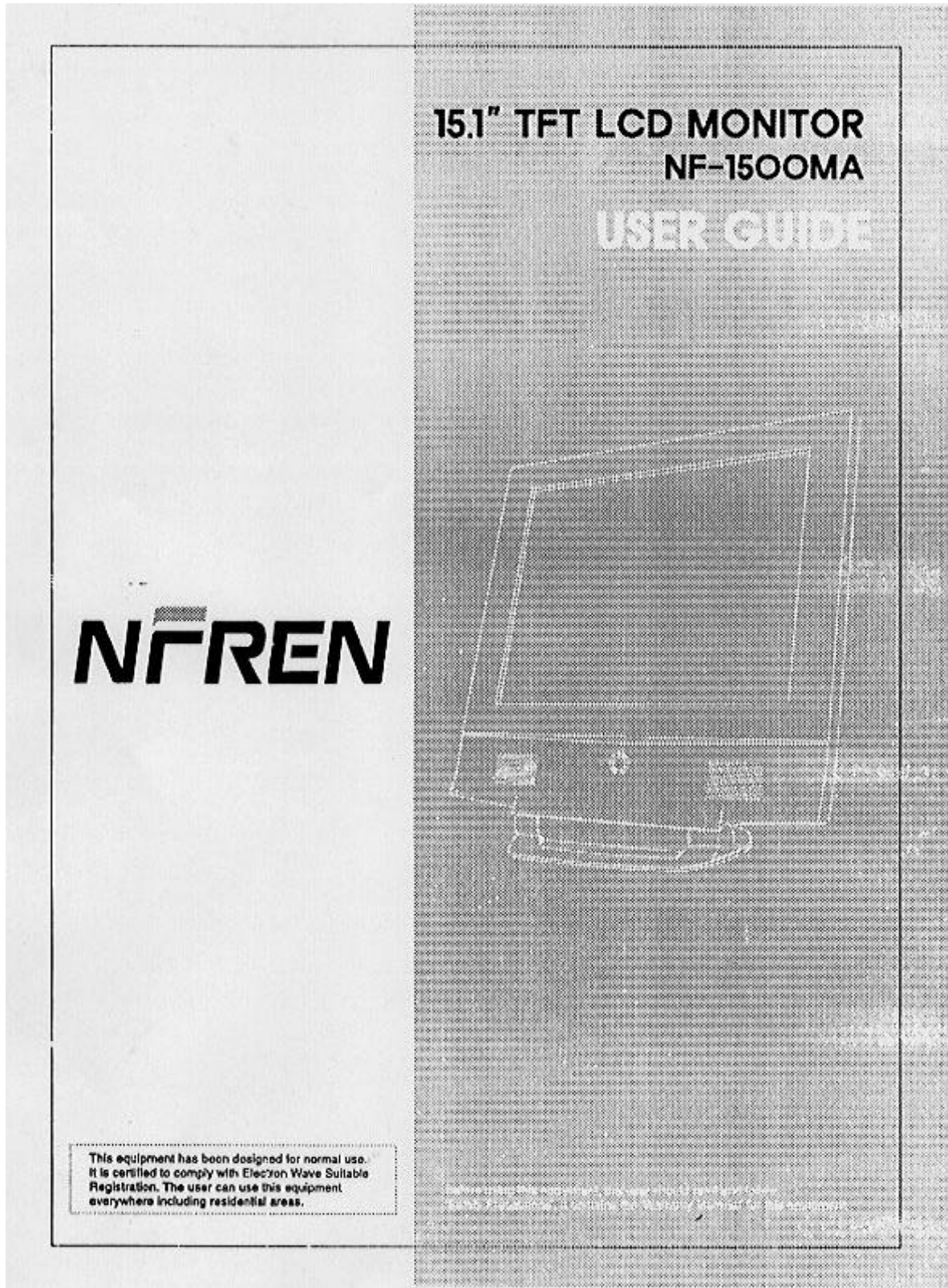
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

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.



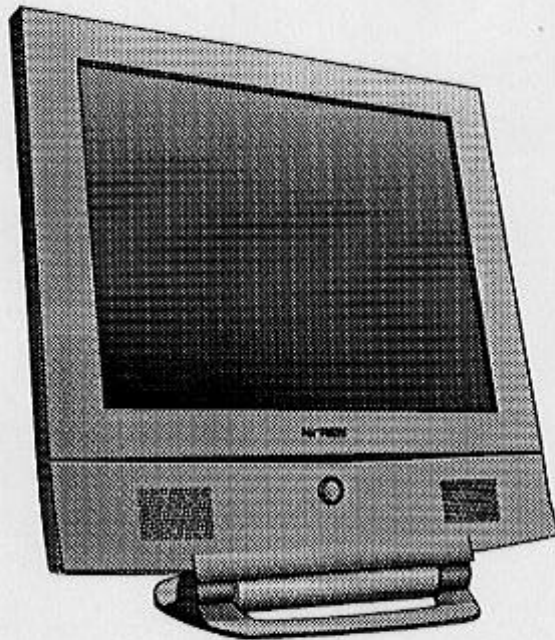
HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.

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NIREN 151" TFT LCD MONITOR

NF-1500MA



Notice

This equipment is of first class quality. The LCD Panel is composed of more than 2 Million pixels and may have some faulty pixels. LCD panels with a maximum of 10 faulty pixels are classified as products of good quality. This standard is accepted by other manufacturers of LCD panels. An LCD panel without any faulty pixels is too expensive for the average customer. Our "A" class panels have the least 10 faulty pixels. We guarantee that our panels will provide the user with high quality performance. Therefore, no product exchanges or refunds will be made in regards to this matter. .

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Initial Preparations



1) Safety Precautions

- Observe the following basic rules for installation, usage, and service in order not to defeat the safeguards incorporated into this monitor.
- Safety precautions are divided into Warning and Attention.



Warning : Breaking the basic rules can cause serious injury or death.



Attention : Breaking the basic rules can cause minor injury to yourself or damage to this equipment.

Save the manual near to future users after you read it.

Do not open the monitor.
Contact your dealer if the monitor is not operating properly.

Do not place the monitor in direct sunlight or close to heaters.
▶ Product malfunction or fire hazard may result.

Do not drop metal objects like coins or hairpins into the monitor.
▶ Electrical shock or fire hazard may result.

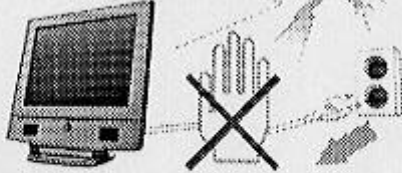
Provide a secure connection to the power supply and do not use damaged power cords or plugs.
▶ Electrical shock or fire hazard may result.

Do not place the monitor in exposed places and near water.
▶ Electrical shock, fire hazard, or malfunction may result.

Do not clean the monitor with water or touch it with wet hands.
▶ Electrical shock or fire hazard may result.

Safety Precautions (cont)

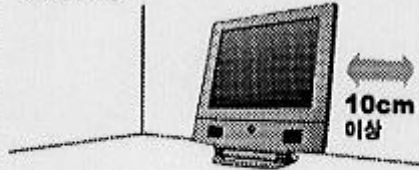
- ⚠ **During lightning storms, unplug the monitor from the wall outlet and do not touch it.**
- ▶ Electrical shock or fire hazard may result.



- ⚠ **Not using the monitor for hours, unplug the monitor from the wall outlet.**
- ▶ Dust may cause heat, fire, shock or short circuit.



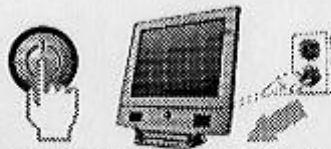
- ⚠ **Install the monitor at the specified position from the wall to be well ventilated.**
- ▶ A rise in temperature of monitor may cause fire.



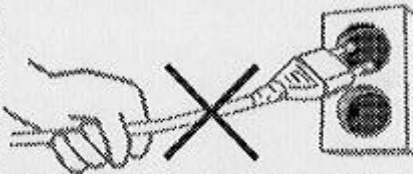
- ⚠ **Install the monitor in a stable place.**
- ▶ An unstable monitor may crash or fall. Personal injury, damage, or malfunction may result.



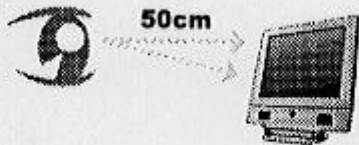
- ⚠ **When moving the monitor, turn it off and disconnect all cables and the plug.**
- ▶ Product damage, electric shock, or fire hazard may result.



- ⚠ **When disconnecting from the wall outlet, grab the plug.**
- ▶ Grabbing the cord may result in heat generation or fire hazard.



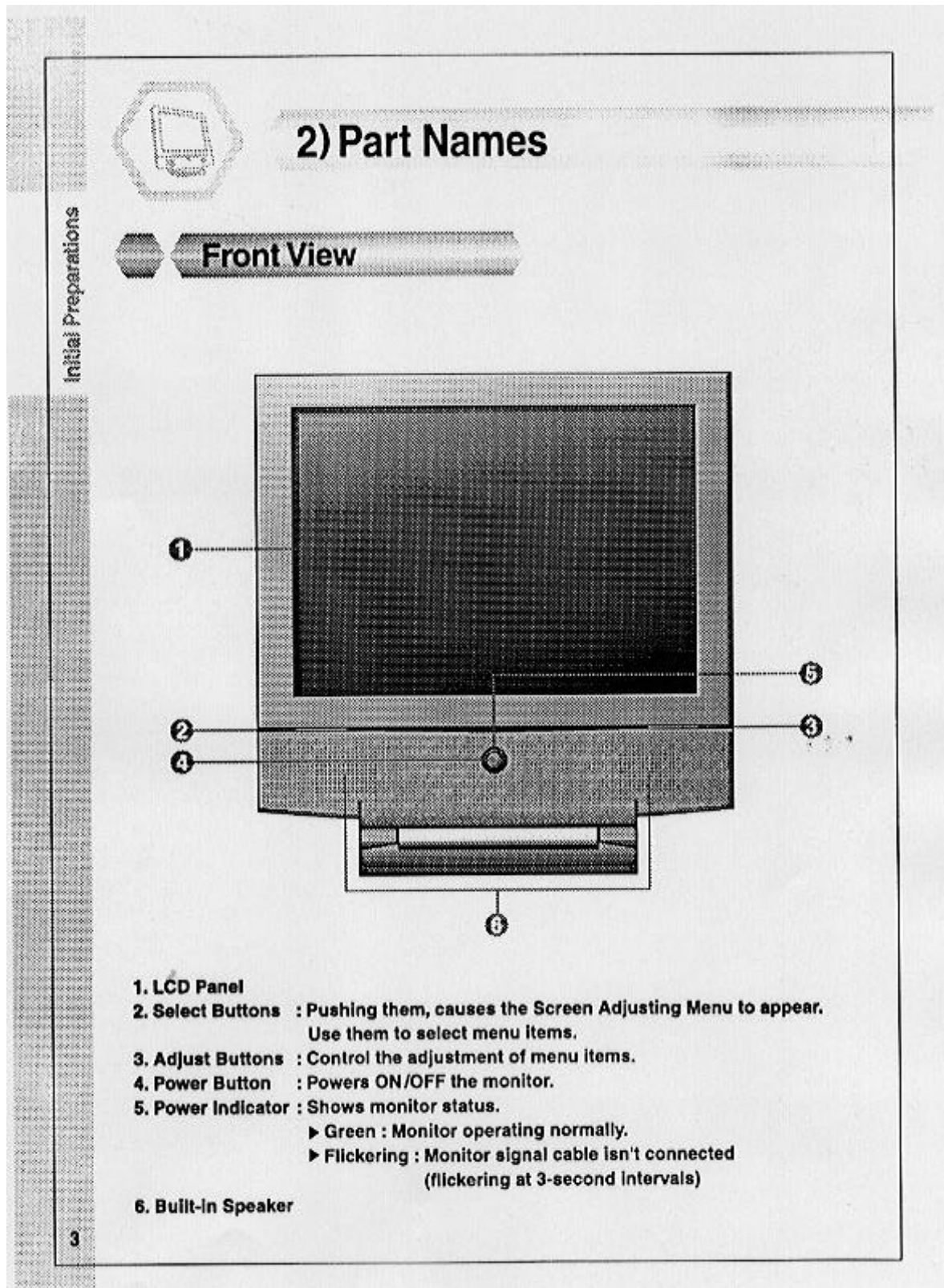
- ⚠ **Keep your eyes 50 cm away from the screen and 0~15° down in relation to the screen.**
- ▶ Viewing at too close a position and wrong posture can weaken your eyes..

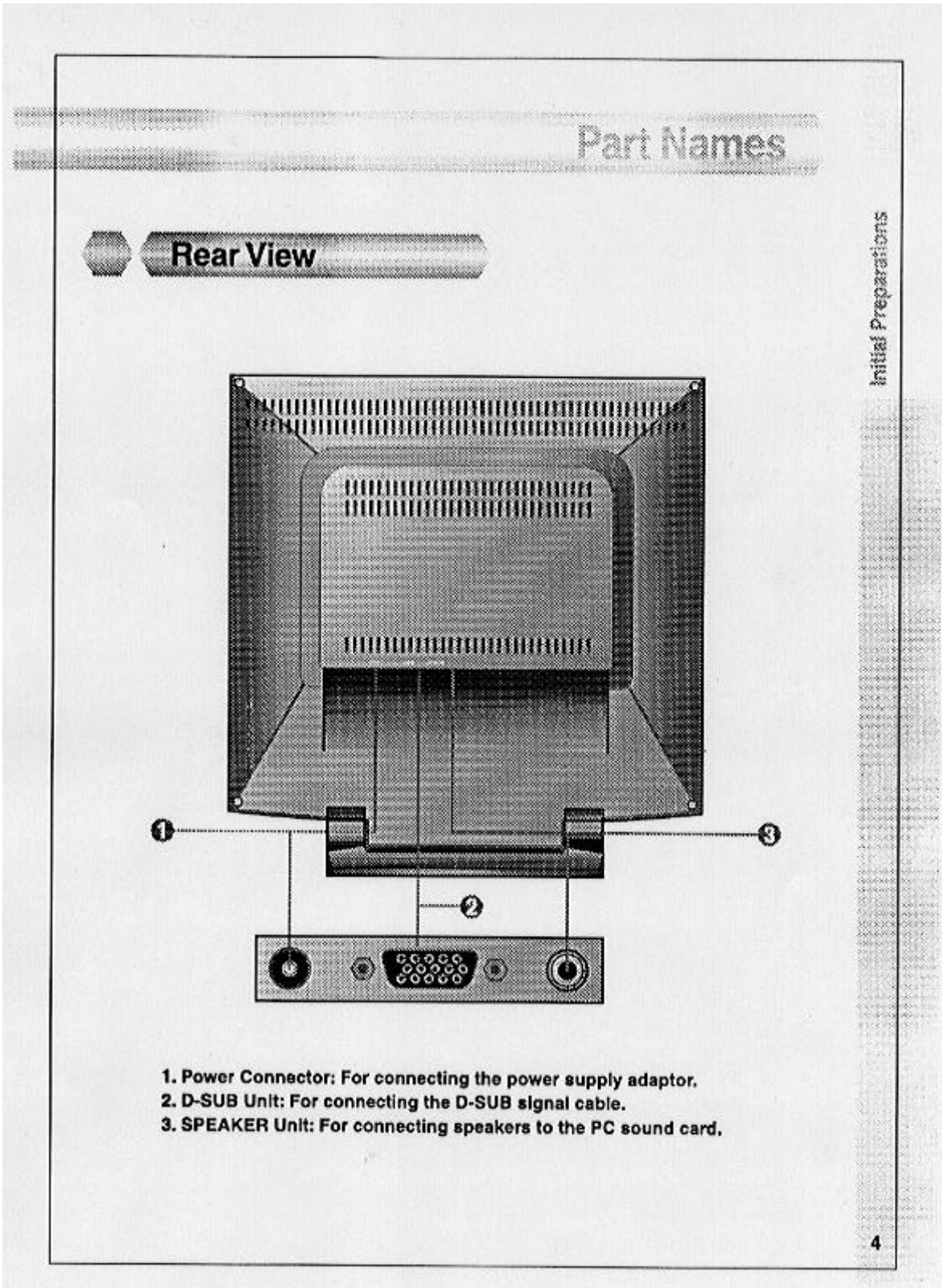


- ⚠ **Before cleaning the monitor and LCD screen, disconnect it. Wipe it with a soft, clean cloth. Do not use liquid or aerosol cleaners.**
- ▶ Chemical cleaners may fade, dissolve, or crack the monitor surface.



Initial Preparations





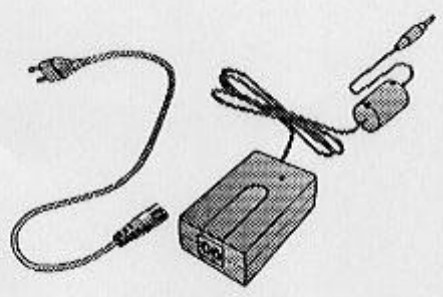
- 1. Power Connector: For connecting the power supply adaptor.
- 2. D-SUB Unit: For connecting the D-SUB signal cable.
- 3. SPEAKER Unit: For connecting speakers to the PC sound card.

Initial Preparations

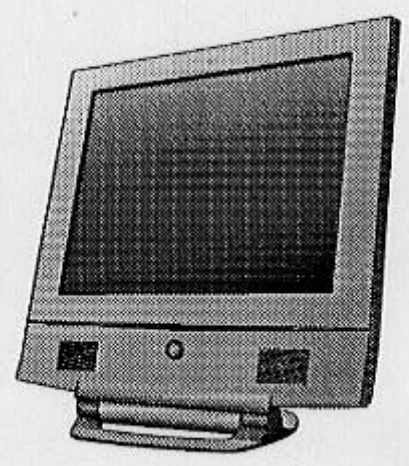


3) Basic Accessories

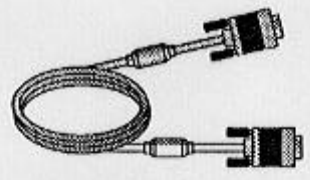
● Please make sure the following items are included with your monitor.
If any items are missing, contact your dealer.



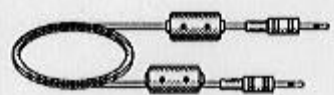
Adaptor



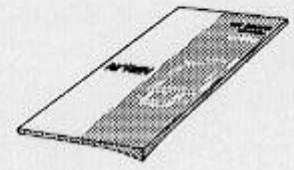
LCD Monitor



D-SUB Signal Cable



Audio Cable

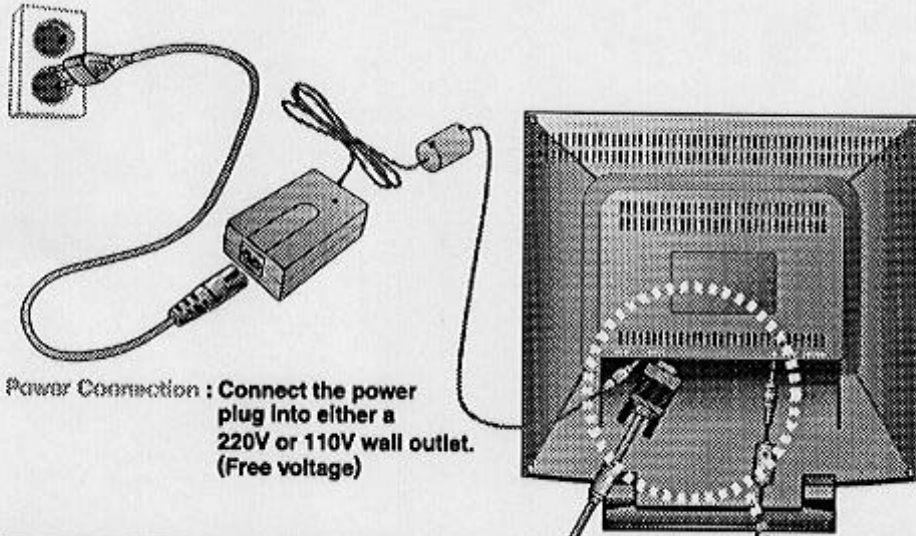


User Guide

Connecting to the PC



● **Attention : Power OFF both the monitor and the PC before making any connections to the PC.**



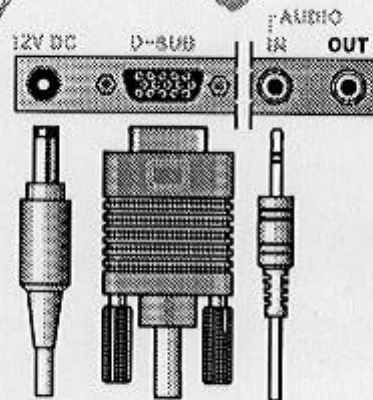
Power Connection : Connect the power plug into either a 220V or 110V wall outlet. (Free voltage)



PC Connection : Connect the monitor D-SUB connector and the PC using the D-SUB Signal Cable.



Speaker Connection : Connect the speaker connection of the monitor and the PC sound card using the Audio Cable.



Connection



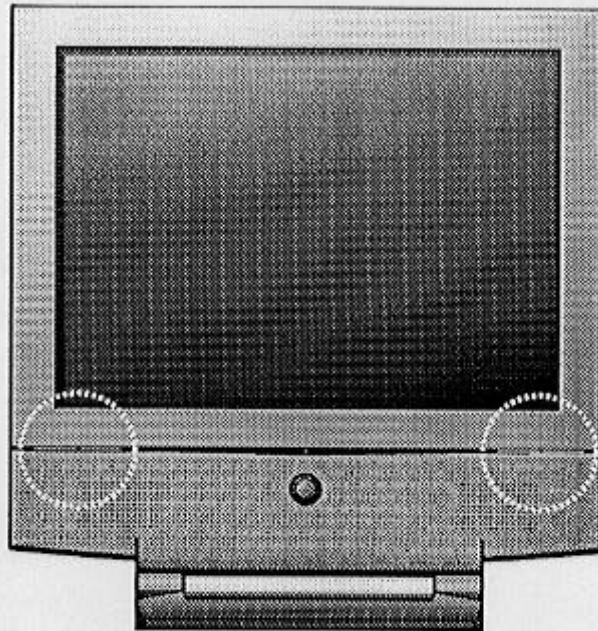
Specifications

NF-1500MA - 15.1" TFT LCD Monitor

Product Description

Display Type	15.1" Color Active Matrix TFT
Resolution	1024 * 768 (XGA)
Display Colors	16,777,216 colors
Pixel Type	RGB stripe arrangement
Pixel Pitch	0.3mm(H) x 0.3mm(V)
Viewable Screen Size	15.1"
Viewing Angle	120 / 90°
Video Input	Analog R.G.B., 0.7Vp-p
Contrast Ratio	250 : 1
Brightness	200 cd/m²
AC/DC Adapter	Adapter 100-240V, 60 / 50Hz, DC 12V / 3.3A
Plug & Play Level	VESA DDC 1/2B Compatible
Built - in Speakers	1W x 2 Stereo Type
I/O Connector	DC Power In, VGA 15-pin D-sub, Audio In & Out
Power Requirements	DC 12V, 3.3A
Power Management	VESA DPMS Standard
Power Consumption	30W Saving Mode : 5W
Weight(KG)	4.35Kg (Net)
Dimensions(WxLxH)	370mmx190mmx400mm
Agency Approval	MIC(EMI), FCC, CE, VCCI
Options	T.V. Tuner Adding

Description of Monitor Functions



Basic Description - Front View

The function adjustment buttons of the NF-1500MA are divided into two on the left and two on the right.

Additional adjustments are not required because they have been factory adjusted. If the user wants to change the default setup, follow the setting description below.

The two buttons on the left allow you to display the screen menu and to select items.

The two buttons on the right allow you to select individual items and adjust their levels.



Description of Function Buttons and Indicators

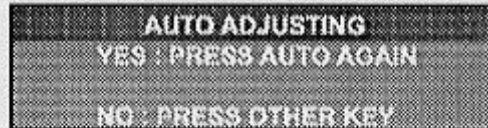
The front panel of NF-1500MA model has the following function buttons and indicators

● **MENU Button**

Press this button to bring up and to make disappear screen adjustment menu on the screen.

● **SELECT Button**

You can use these buttons to change Item Value of Sub-directory while Main menu is on the screen.

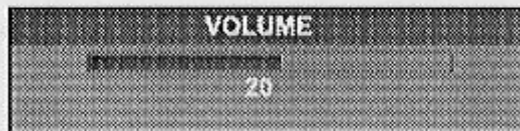


As the Hot Key Function, press 'Select' button to bring up the menu as shown in the following Figure.

Use this menu to reset the screen to the optimal state automatically

● **ADJUST (Y, Δ) Button**

You can use this button to move selection bar while adjustment menu is on the screen. You can also use these buttons to change the value while adjustment menu is on the screen. As the Hot Key Function, press 'Adjust' button to bring up the menu as shown in the following Figure







● **Descriptions for Indicators**

The light green indicator will turn on around the 'POWER' button when the power is ON. The light green indicator will flicker in a certain interval when VGA-CABLE is disconnected or when SUSPENDED-MODE is on

About Adjustment Items and Menus

1. Adjustment Items on Top of 'OSD' screen

-  (DISPLAY ADJUST) : This adjustment items are related to view of the screen that you can adjust brightness, contrast, time, and position.
-  (MISC ADJUST) : This stands for Miscellaneous-Adjust. You can make fine adjustment for each colors such as red, green, and blue (RGB) as well as color temperature and white balance.
-  (OSD ADJUST) : This stands for ON-SCREEN DISPLAY ADJUST. You can use this menu group to adjust items on the screen such as position of menu screen, transparency, and language.
-  (EXIT OSD) : Use this item to exit from menu screen after you complete adjustment.

2. Menu Screen for Each Adjustment Items

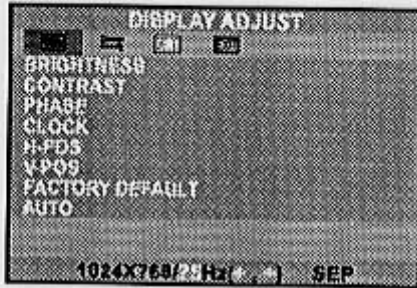


Figure 1. Menu Screen for DISPLAY ADJUST

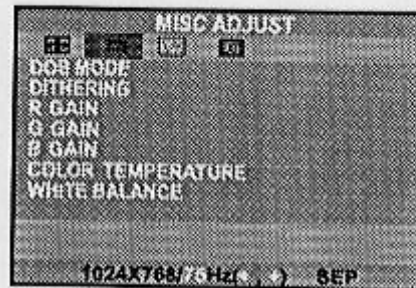


Figure 2. Menu Screen for MISC ADJUST

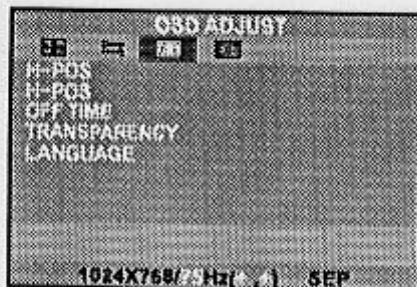


Figure 3. Menu Screen for OSD ADJUST

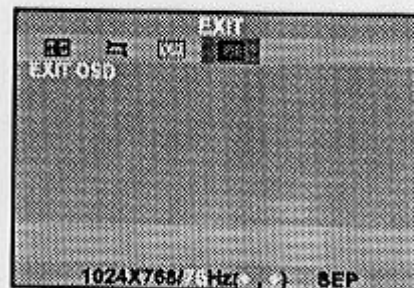


Figure 4. Menu Screen for EXIT

About Adjustment Items and Menus

1) DISPLAY ADJUST

- **BRIGHTNESS** : Use this menu to adjust brightness of the screen.
You can set the value between 1 ~ 100.
- **CONTRAST** : Use this menu to adjust contrast of the screen.
You can set the value between 0 ~ 100.
- **PHASE** : Use this menu to make fine adjustment that you may not recognize with your naked eyes. You can set the value between 0 ~ 31.
- **CLOCK** : Use this menu to adjust horizontal size of the whole screen.
You can set the value between 1212 ~ 1412.
- **H-POSITION** : Use this menu to move the whole screen to the left or right.
- **V-POSITION** : Use this menu to move the whole screen up or down.
- **FACTORY DEFAULT** : Use this menu to revert any changes of the screen to the factory default settings.
- **AUTO** : Use this menu to reset to screen to the optimal state automatically.

2) MISC ADJUST

- **DOS MODE** : Use this menu to select either TEXT or GRAPHIC when you use DOS mode.
- **DITHERING** : Use this menu to adjust the color of the screen more natural.
You can select either ON or OFF.
- **R GAIN** : The user can adjust the Red Settings. Their changeable range is 0 to 100.
- **G GAIN** : The user can adjust the Green Settings. Their changeable range is 0 to 100.
- **B GAIN** : The user can adjust the Blue Settings. Their changeable range is 0 to 100.
- **COLOR TEMPERATURE** : Use this menu to adjust color temperature.
The change may not be recognizable with your naked eyes.
You can select one of 9500, 8000, 6500 or 5000.
- **WHITE BALANCE** : Select this menu to use automatic color balance function.

3) OSD ADJUST

- **H-POS** : Use this menu to move OSD menu at the center to the left or right.
- **V-POS** : Use this menu to move OSD menu at the center up or down.
- **OFF TIME** : OFF TIME is the time for the menu to disappear when there is no menu selection after predefined time. You can adjust by 1 second between 0 ~100 seconds.
- **TRANSPARENCY** : Use this menu to make OSD menu transparent.
You can set the value between 0~6. The bigger the value, the more transparent is the OSD menu.
- **LANGUEGE** : Use this menu to select one of six languages, such as English, Japanese, French, German, Korean, and Spanish.

- 4) **EXIT-EXIT OSD** : Use this menu to exit from OSD menu screen.

Troubleshooting



In case of trouble, check these items before calling the service center.

Trouble	Suggested Action	Remedy
Screen is blank and power indicator is off.	<ul style="list-style-type: none"> ▶ Check power cable connection. ▶ Check power button. 	<ul style="list-style-type: none"> ▶ Secure the connection. ▶ Push the power button.
Screen is blank but power indicator is in green mode.	<ul style="list-style-type: none"> ▶ Check the monitor signal cable (D-SUB) connection. 	<ul style="list-style-type: none"> ▶ Secure the connection of monitor signal cable (D-SUB)
Display position and size is incorrect.	<ul style="list-style-type: none"> ▶ Check for correct adjustment of display position and size. 	<ul style="list-style-type: none"> ▶ Start Auto adjustment in main menu.
Screen color isn't uniform and stable.	<ul style="list-style-type: none"> ▶ Check video card resolution. 	<ul style="list-style-type: none"> ▶ Change the video card settings or resolution. ▶ Adjust color in SUB menu.
Display is too bright or too dark.	<ul style="list-style-type: none"> ▶ Check monitor brightness. 	<ul style="list-style-type: none"> ▶ Adjust the brightness and contrast in SUB menu.
Any noise appearing in images or characters are not clearly portrayed.	<ul style="list-style-type: none"> ▶ Check PHASE icon 	<ul style="list-style-type: none"> ▶ Decrease the noise using the PHASE icon in main menu.

Other

Warranty Materials

BTC Korea warrants to customers that this product is free from defects in workmanship and materials according to Compensatory Regulations for Consumers. This warranty is required for product service.

Product Name			Model	
Date of Purchase (yy/mm/dd)			Serial No.	
Consumer	Address			
	Name.		Phone No.	
Dealer Purchased from		Dealer Phone No.		Dealer Name

Warranty benefit is only in accordance with this material. The user should immediately write down the date of purchase as the warranty period starts from the date of purchase. In cases where we cannot check the exact date, the date of purchase is calculated as 6 months from the manufacturing date.

This material is for domestic use only.

The user should keep this material because it may not be published again.

Service

● **FREE SERVICE**

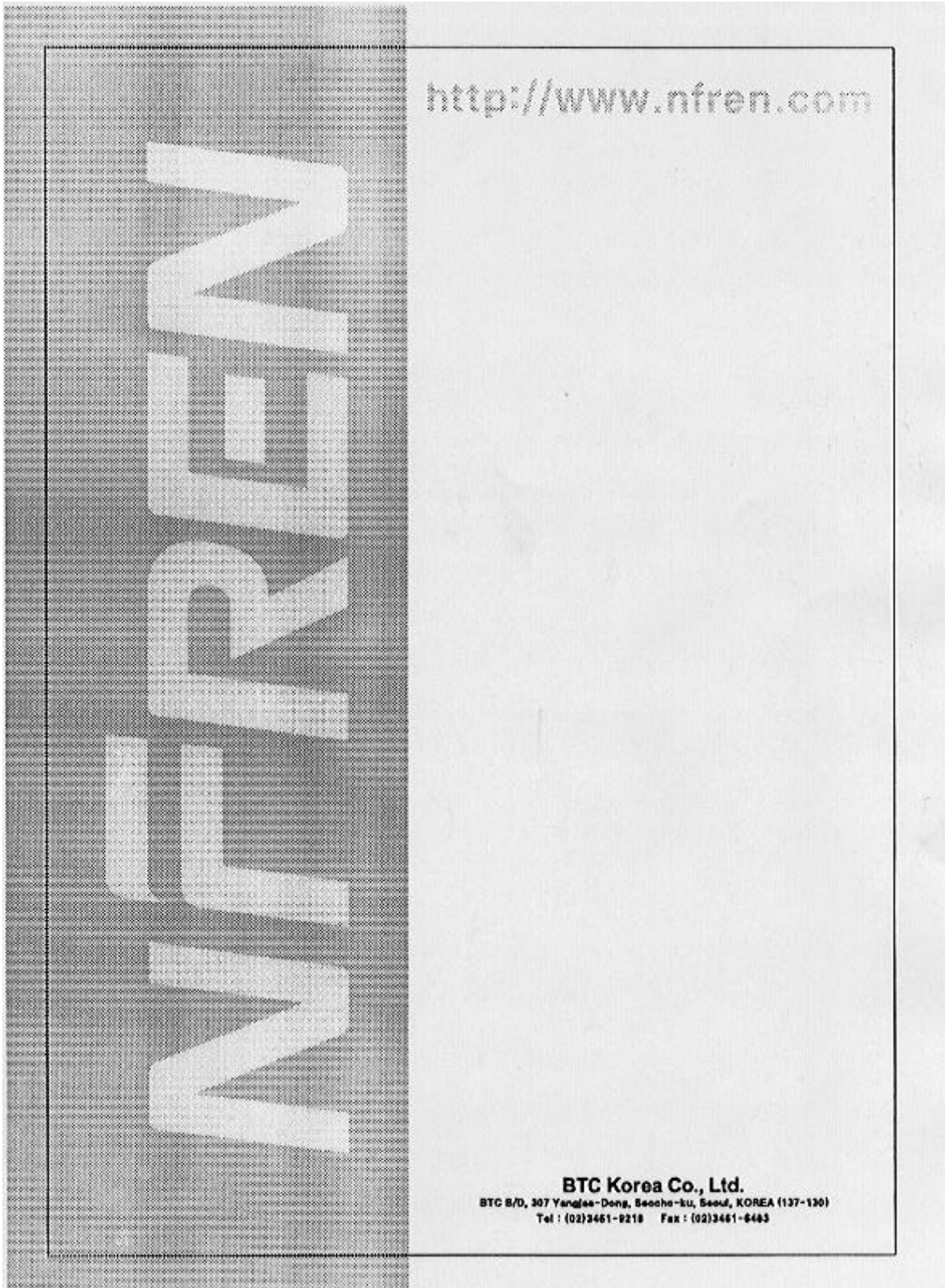
The user can get servicing from qualified service personnel within the warranty period.
 * Warranty period is six months in cases where the user uses the product for business or unusual circumstances or the product is industrial product.(including key component)

Warranty Type of Service		Warranty Details	
		Within the warranty period	After the warranty period
In usual circumstances where troubles appear within 10 days after product purchase.		Product Replacement	
Repair	Product does not operate due to the same trouble up to three times	Free Repair	Repair Charges
	Product does not operate due to the same trouble up to four times	Product Replacement	Repair Charges
No Repair	Product can't be repaired even though there are repair parts	Product Replacement	Product replacement after deducting Depreciation Cost
	Product can't be repaired because there aren't any repair parts	Product Replacement	Product replacement after adding 10% of Depreciation Cost

● **SERVICE CHARGES**

For the following, the user should pay for services within the warranty period :

- ▶ **When the product does not operate because of consumer fault.**
 - Product does not operate because the user attempted service by someone other than qualified service personnel.
- ▶ **In case of trouble caused by modification by anyone other than qualified service personnel such as :**
 - Using the wrong voltage or a damaged power cord or plug.
 - Monitor has been dropped.
 - Improper adjustment of monitor options
 - Liquid has been spilled on or into the monitor housing.
 - Unauthorized product modification
- ▶ **For simple problems**
 - Where the service personnel can repair the product without opening the covers.
 - Where the outside cables or option cards are reset.
 - Where software is reinstalled.
 - Where network or another company's product usage is explained.
- ▶ **Others**
 - Where troubles are caused by accident, fire, lightning, other hazards, or acts of God.
 - Where expendable supplies (like lamps) are used up.



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