

Attachment

User's Manual

COLOR DISPLAY MONITOR

V70

User's Manual

NEC

Table of Contents

FCC Information	2
Important Safeguards	2
Introduction	4
Installation	5
Monitor Connection	6
Pin Assignment	6
Operation and User Adjustment	7
On-Screen Display	8
Troubleshooting	15
Specifications	16
Default Setting	18
Technical Support	19

7. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the video monitor and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video monitor on a bed, sofa, rug, or other similar surface.

This video monitor should never be placed near or over a radiator or heat register. This video monitor should not be placed in a built-in insulation such as a bookcase unless proper ventilation is provided.

8. This video monitor should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For video monitor designed to operate from battery power, refer to the operating instructions.

9. This video monitor is equipped with a three-wire grounding type plug a plug having a third (grounding) pin. 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.

10. Do not allow anything to rest on power cord. Do not locate this video monitor where the cord will be abused by persons walking on it.

11. Follow all warnings and instructions marked on the video monitor.

12. For added protection for this video monitor during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent the monitor from damage due to lightning and power line surges.

13. Do not overload wall outlets and extension cords as this can result in fire or electric shock.

14. Never push objects of any kind into this video monitor through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the video monitor.

15. Do not attempt to service this video monitor yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified personnel.

16. Unplug this video monitor 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 video monitor.
- c. If the video monitor has been exposed to rain or water.

FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual 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 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.

Notice:

- (1) The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- (2) Shielded interference cables must be used in order to comply with the emission limits.

Important Safeguards

1. Read all of these instructions.
2. Save these instructions for later use.
3. Unplug this video monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use attachments not recommended by the video monitor manufacturer as they may cause hazards.
5. Do not use this video monitor near water for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
6. Do not place this video monitor on an unstable cart, stand, or table. The video monitor may fall, causing serious injury to child or adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the video monitor. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

Installation

Tilt Swivel & Base

1. Turn the monitor upside down.
2. Turn the base upside down. Insert its four hooks into the four slots on the bottom of the monitor. (Point the hooks on the base toward the front of the monitor)

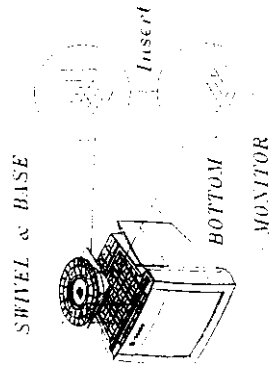


Figure 1

3. Push the tilt swivel and base in the direction of arrow (↖) as indicated in Figure 2 to lock the hooks.

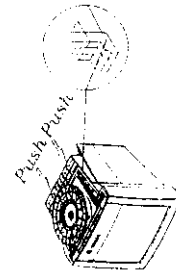


Figure 2

- d. If the video monitor does not operate normally by the following operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video monitor to normal operation.

- e. If the video monitor has been dropped or the cabinet has been damaged.

When the video monitor exhibits a distinct change in performance-- this indicates a need for service.

17. Keep the monitor away from heating apparatus or other heat-generating equipment.

18. Avoid installing the monitor with a bright background, as such installation makes your eyes weary.

19. Set the monitor slightly below your eye level as it is much easier to view.

20. The power cable connector is the primary means of detaching system from power supply. The power outlet should be installed near the system and easily reachable.

21. CAUTION:

Unplug for disconnecting power input.

Introduction

Congratulations on purchasing the color display monitor. We are confident that you will be pleased with the performance of your monitor.

Please take a few minutes to read this manual as it will help you make the most efficient use of this product.

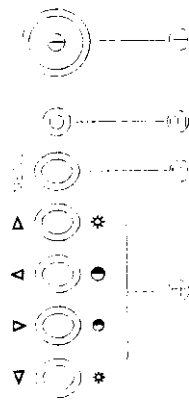
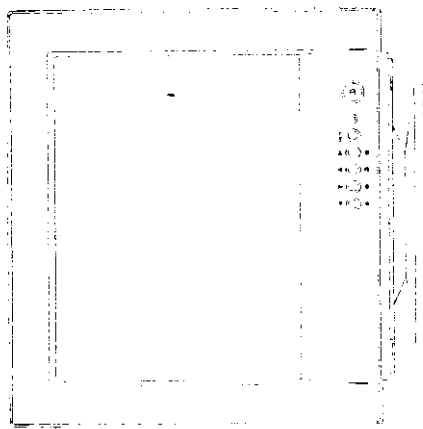
The 17" high resolution color display monitor is designed to be used with a wide range of auto-synchronization.

The microprocessor-based design can provide digital user controls for precision, auto-synchronization, auto-sizing and auto-centering for convenience and user-programmability for flexibility.



As an ENERGY STAR® Partner, NEC has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Operation and User Adjustment



Control Panel

Figure 4 shows the position of following operating units:

1. Power ON / OFF Switch
2. Power LED
3. Menu – Displays OSD menu & Scrolls through OSD menu
4. Function Control Key – Adjust level of selected items

Monitor Connection

To attach the monitor to your system, follow the steps as described below:

1. Turn off the monitor and computer.
2. Connect one end of the power cable to your monitor and the other end to the power outlet.
3. Connect the 15-pin D-Sub signal cable to the video adapter output on your personal computer.
4. Turn on the monitor and the computer. Wait about 30 seconds to adjust the picture with the adjustment controls to obtain optimum picture.

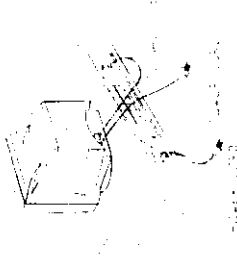


Figure 3 :Connecting the monitor

Pin Assignment

Pin1 Pin5



Pin11

Pin15

Pin	Signal	Pin	Signal
1	R	9	No Pin
2	G	10	Digital Ground
3	B	11	D-Sub Test
4	Ground	12	SDA
5	D-Sub Test	13	H-Sync
6	Video Return	14	V-Sync
7	Video Return	15	SCL
8	Video Return		

On-Screen Display Guide

I. Contrast & Brightness

- 1) Press "▲" "▼" to activate and make the contrast adjustment shown by the OSD bar. The bar moves rightward indicating contrast increase and leftward indicating contrast decrease.



Figure 5 Contrast Adjustment Bar

- 2) Press "◀" "▶" to activate and make the brightness adjustment shown by the OSD bar. The bar moves rightward indicating brightness increase and leftward indicating brightness decrease.



Figure 6 Brightness Adjustment Bar

II. OSD Function Menu

- 1) Press "Menu" key to enter the OSD menu containing 10 functions as shown in figure 7.
- 2) Select adjustment function
Please scroll the preferred function from left-right sequence by pressing "Menu" key. You may return to the previous item by keeping pressing the "Menu" key.
- 3) Adjustment Operation
Make the adjustment using the four function control keys. Please refer to the Figure 7 for advanced operation.

- A. OSD contains 10 icons representing the following function adjustments:
H-Phase/V-Center, H-Size/V-Size, Pincushion/Trapezoid, PinBalance/Corner, Paralle/Tilt, RGB-Gain, OSD Position, Language, Tool, and Exit.

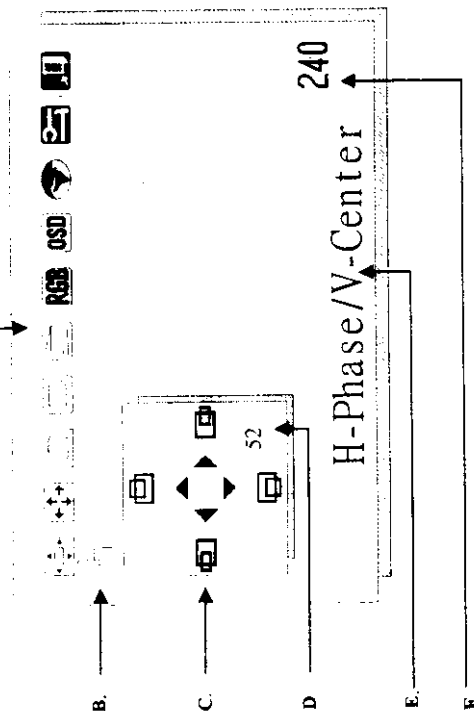
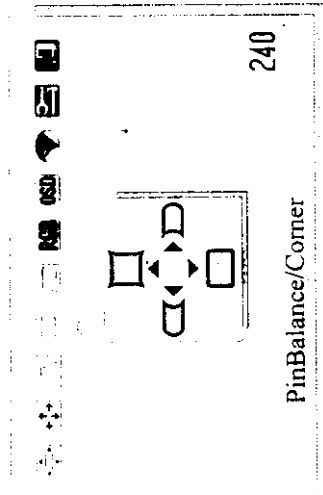


Figure 7 Function Menu

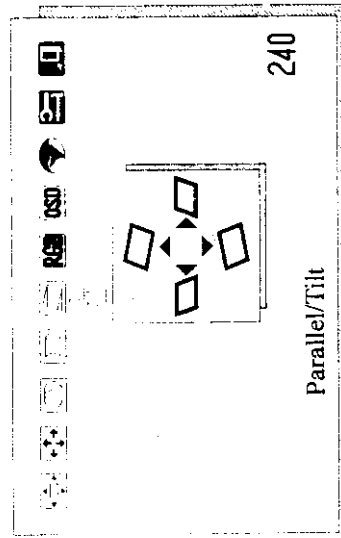
- B. Hand-shaped pointer indicates the current function selected.
- C. There are four adjustments for each function selected.
The icon being selected will turn into a different color.
- D. The setting value will appear during adjustment.
- E. Displaying the message of current function selected.
- F. The number in the right corner indicates how long the OSD will last for displaying.

④ Pin - Balance & Corner function window



Press "↑" and "↓" to adjust pin balance .
Press "←" and "→" to adjust corner distortion.

⑤ Parallelogram & Tilt function window

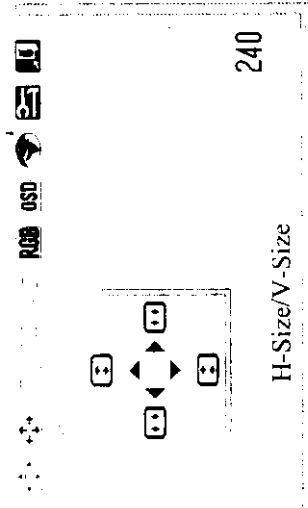


Press "↑" and "↓" to adjust parallelogram .
Press "←" and "→" to adjust tilt.

① H-Phase & V-Center function window

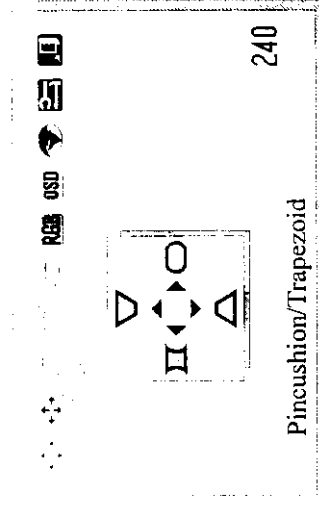
Press "←" or "→" key to reposition the picture leftward or rightward.
Press "↑" or "↓" key to reposition the picture upward or downward.
(Please refer to the figure 7)

② H-size & V-size function window



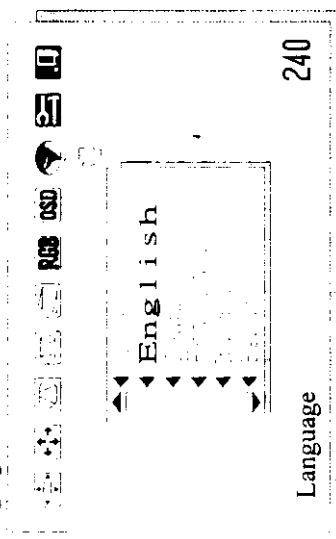
Press "←" key to reduce the H-size and press "→" key to enlarge the H-size.
Press "↑" to enlarge the V-size and press "↓" key to reduce the V-size.

③ Pincushion & Trapezoid function window



Press key "←" and "→" on the control panel to alter pincushion and barrel according to your personal needs.
Press key "↑" and "↓" on the control panel to alter trapezoid according to your personal needs.

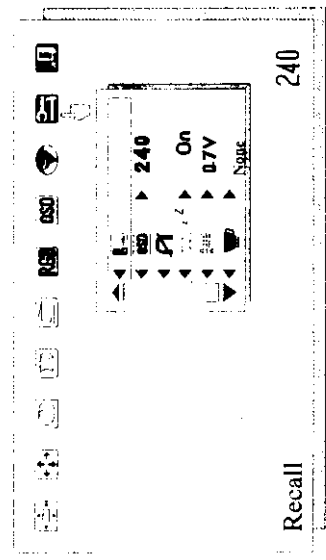
① Language function window



Press "▼" and "▲" to select your desired language, and then the OSD menu will be presented in the language selected.

Note
No message will be displayed if you select "None".

② Tools function window



Recall factory setting if monitor H-V frequency is in preset mode including Phase, Size, and Pincushion/Key-stone.

Adjust OSD countdown timer whose duration ranges from 5 to 240 seconds.

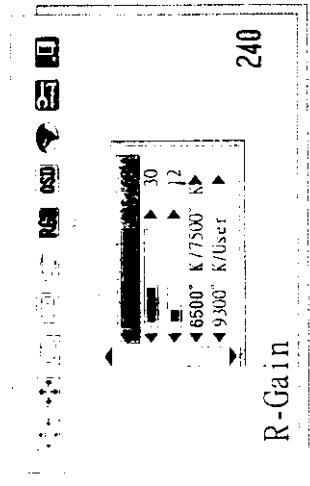
Activate the degauss function of CRT.

Enable or disable power saving.

Select the video input level.

Adjust tea time whose duration ranges from 0 to 255 minutes

③ RGB Color Temperature function window



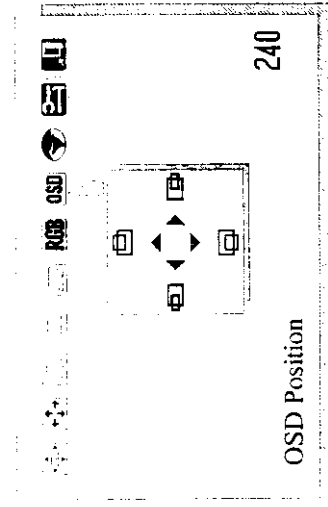
RGB Value Setting

The current setting of the color temperature is presented in purple. Press "▲" key to move the black bar up or down to your desired item. There are three factory settings available for selection: 6500° K, 7500° K, and 9300° K. For personal preference, you may directly adjust the RGB values separately either in the User's mode or in 6500° K, 7500° K, and 9300° K mode. The values will be stored in the User's mode after leaving the user's function window.

Note

If you previously set 6500° K, 7500° K, or 9300° K to be stored in the User's mode, then the OSD will display these three default settings instead of the User's mode as moving the black bar to select the User's mode.

④ OSD position function window



You may reposition OSD according to personal needs.

Press "▲" "▼" or "▶" "◀" to move OSD.

Troubleshooting

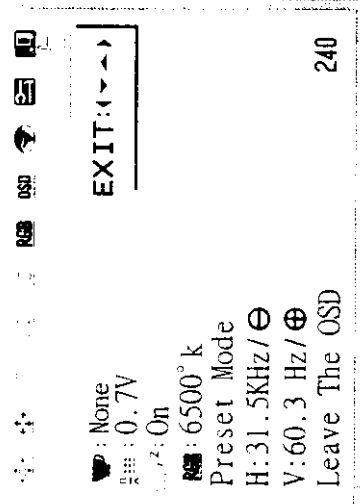
Troubleshooting Chart

Problem	Check These Items
? No picture	☞ The display card should be completely seated in its slot. ☞ Power switch and computer power should be in ON position. ☞ The signal cable should be completely connected to the display card / computer. ☞ Check the connector for bent or pushed-in pins.
? Image is scrolling or unstable	☞ Signal cable should be completely attached to the computer. ☞ Check the pin assignments and signal timings of the monitor and your display card with respect to recommended timings and pin assignments.
? LED on the monitor is not lit. (no green, orange or yellow color can be seen)	☞ Power switch should be in the ON position and the power cord should be connected. ☞ Make certain the computer is not in Power-Save mode. (touch the keyboard or mouse)
? Picture is fuzzy.	☞ Adjust the brightness, then the contrast control. ☞ Access the Degauss control through OSD and activate the Degauss control. Caution : A minimum interval of 20 minutes should elapse before the Degauss control is used for the second time when not switching between modes.
? Edges of the displayed images are not square.	☞ Use the OSD Geometry controls to straighten the edges. ☞ If possible, position the monitor to face east.
? Displayed image is not centered, too small, or too large.	☞ Access the Degauss control through OSD and activate the Degauss control.
? Color looks blotchy.	☞ Access the Degauss control through OSD and activate the Degauss control.

Note

1. The icon, a cup of coffee, will appear to remind you to take a break.
2. The duration for displaying tea time is about 20 seconds. You may also set the duration for displaying tea time according to personal needs. To terminate displaying tea time, please press any one of the keys or set the duration to None.

③ Exit OSD menu function window.



The information of current settings such as tea time, video input level, power saving, color temperature, current horizontal / vertical frequency and polarity will be displayed.

Note

If the signal cable is not connected to the PC, then the screen will display the Color Bar Pattern.

Power Supply

Line voltage: 110 VAC
Frequency: 50±3 Hz, 60±3Hz

X-Radiation

Meets DHHS requirements

Power Management

Meets EPA/NUTEK requirements

DDC

Satisfies DDC1 and DDC2B specifications

Ambient Temperature

0°C ~ 35°C (operating), -10°C ~ 60°C (storage)

Humidity

10% - 80%

Safety

UL, C-UL, TUV, GS, ERGONOMICS, MPRII,

LED Indicators

Green (ON state), Orange (Stand-by and Suspend),

Orange-Flash (OFF state)

Weight

NW 17.5Kg (approx.) GW 19.5Kg (approx.)

Dimensions

428mm (H) x 405mm (W) x 433mm (D) .

Specifications

Picture Tube 1

17" diagonal, 90° deflection,

Viewable area: 15.7"

Dot pitch: 0.28mm

Video: Analog (0.7Vp-p/1.0 Vp-p, 75 ohm positive)

Selected by OSD Control

Sync : Separate sync, positive or negative TTL

Input Signal Polarity

Input	Signal	VGA			Others
		350	400	480	
H-sync		positive	negative	negative	positive
V-sync		negative	positive	negative	positive
Video		positive			positive/negative

Input Connector

15-pin D-connector

Scanning frequency

Horizontal:30KHz-72KHz

Vertical: 50Hz-120Hz

Active Display Area

Horizontal: 306 mm (adjustable)

Vertical: 230 mm (adjustable)

Resolution

1280x1024

800x600

80MHz (maximum)

Video Bandwidth

Unlimited

Display Color

Data area: 0.4 mm (at 20FL)

Misconvergence

Center: 0.3 mm (at 20 FL)

Adjust the CRT to face east and turn on the monitor for at least 30 minutes before testing (at 20 FL).

Technical Support

If you need detailed information concerning model name of this monitor,
please visit our web site at the following address:

[Http:// necpc.nec.com.tw](http://necpc.nec.com.tw)

This user's manual for JC-1738 contains graphics and information which is subject to
change without notice.

Default Setting

Default Setting	Standard	Resolution Horizontal / Vertical	Frequency Horizontal / Vertical	Scanning
MODE 01	IBM / VGA	640x350	31.47 / 70.08	Non-Interlaced
MODE 02	IBM / VGA	640x400	31.47 / 70.08	Non-Interlaced
MODE 03	IBM / VGA	640x480	31.47 / 59.94	Non-Interlaced
MODE 04	VESA	800x600	37.50 / 75.00	Non-Interlaced
MODE 05	VESA	640x480	43.20 / 85.00	Non-Interlaced
MODE 06	VESA	1024x768	48.36 / 60.00	Non-Interlaced
MODE 07	VESA	1024x768	56.48 / 70.07	Non-Interlaced
MODE 08	VESA	1280x1024	63.75 / 59.75	Non-Interlaced
MODE 09	VESA	1024x768	68.68 / 85.00	Non-Interlaced