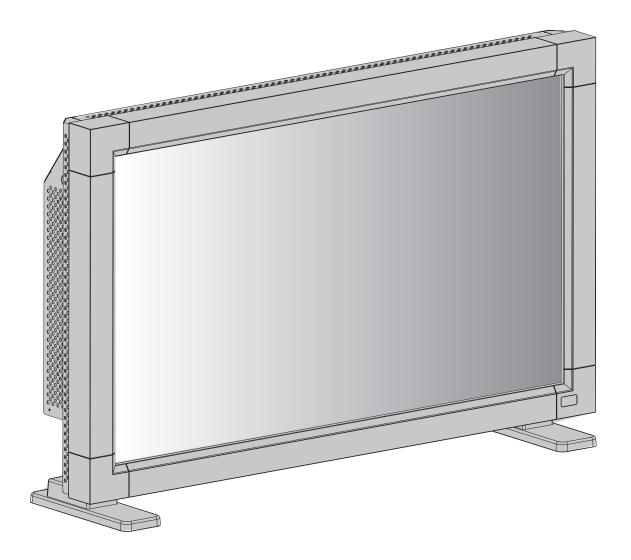
NEC



USER'S MANUAL MANUEL UTILISATEUR

MultiSync® LCD3210™

To learn about other special offers, register online at www.necdisplay.com

Index

Important Information	English-2
Safety Precautions, Maintenance, & Recommended Use	English-3
Contents	English-4
Attaching LCD Options	English-5
Parts Name and Functions	
Control Panel	English-6
Terminal Panel	English-7
Wireless Remote Control	English-8
Operating Range for the Remote Control	English-9
Handling the Remote Control	English-9
Setup Procedure	English-10
Connections	
Wiring Diagram	English-12
Connecting the LCD Monitor to a PC	English-13
Connecting to a Macintosh Computer	English-14
Connecting to a Computer with a Digital Output	English-15
Connecting to a DVD Player	English-16
Connecting to a Stereo Amplifier	English-17
Basic Operation	
Power On and Off modes	English-18
Power Indicator	English-19
When Using Power Management Function	English-19
Selecting a Video Source	English-19
Picture Size	English-19
Picture Mode	English-19
OSM Information	English-19
OSM (On-Screen-Manager) Controls	English-20
Picture	English-20
Screen	English-21
Audio	English-22
Configuration 1	English-23
Configuration 2	English-24
Advanced Option	English-26
NOTE	English-28
Using the LCD with a Personal Computer (PC)	English-29
Features	English-32
Troubleshooting	English-33
Specifications	English 24

Important Information



WARNING



TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLAR-IZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



CAUTION



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, MAKE SURE POWER CORD IS UNPLUGGED FROM WALL SOCKET. TO FULLY DISENGAGE THE POWER TO THE UNIT, PLEASE DISCONNECT THE POWER CORD FROM THE AC OUTLET. DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

Canadian Department of Communications Compliance Statement

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

C-UL: Bears the C-UL Mark and is in compliance with Canadian Safety Regulations according to CAN/CSA C22.2 No. 60950-1.

FCC Information

- Use the attached specified cables with the MultiSync® LCD3210 (L325RM) color monitor so as not to interfere with radio and television reception.
 - (1) Please use the supplied power cord or equivalent to ensure FCC compliance.
 - (2) Please use the supplied shielded video signal cable, 15-pin mini D-SUB to 15-pin mini D-SUB.
 - (3) Please attach the ferrite cores on the Audio Cable. Please see page 12 of this manual.
- 2. 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 on a circuit different from that to which the receiver is connected.
 - Consult your dealer or an experienced radio/TV technician for help.

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 U.S. Government Printing Office, Washington,

Safety Precautions, Maintenance & Recommended Use

Safety Precautions and Maintenance

FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE MultiSync® LCD3210 LCD COLOR MONITOR:

- DO NOT OPEN THE MONITOR. There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not spill any liquids into the cabinet or use your monitor near
 water.
- Do not insert objects of any kind into the cabinet slots, as they
 may touch dangerous voltage points, which can be harmful or
 fatal or may cause electric shock, fire or equipment failure.
- Do not place any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- When operating the MultiSync LCD3210 monitor with its AC 125-240V power supply, use a power supply cord that matches the power supply voltage of the AC power outlet being used. The power supply cord you use must have been approved by and comply with the safty standards of your country. (Type H05VV-F 3G 1mm² should be used in Europe)
- In the UK, use a BS-approved power cord with molded plug having a black(13A) fuse installed for use with this monitor. If a power cord is not supplied with this monitor, please contact your supplier.
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- The inside of the fluorescent tube located within the LCD monitor contains mercury. Please follow the bylaws or rules of your municipality to dispose of the tube properly.
- Do not bend, crimp or otherwise damage the power cord.
- Do not use monitor in high temperature, humid, dusty, or oily great
- If monitor or glass is broken, do not come in contact with the liquid crystal. Handle broken glass with care.
- Allow adequate ventilation around the monitor so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet which is easily accessible.
- Handle with care when transporting. Save packaging for transporting.
- Keep the vent holes on the back of the LCD clean of dirt and dust. It is recommended to wipe holes with a soft cloth a minimum of once per year.
- If using the cooling fan continuously, it's recommended to wipe vent holes a minimum of once a month.



CAUTION

Immediately unplug your monitor from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet damaged.
- If the monitor does not operate normally by following operating instructions.

Recommended Use

CAUTION

CORRECT PLACEMENT AND ADJUSTMENT OF THE MONITOR CAN REDUCE EYE, SHOULDER AND NECK FATIGUE. CHECK THE FOLLOWING WHEN YOU POSITION THE MONITOR:

- For optimum performance, allow 20 minutes for warm-up.
- Rest your eyes periodically by focusing on an object at least 5 feet away. Blink often.
- Position the monitor at a 90° angle to windows and other light sources to minimize glare and reflections.
- Clean the LCD monitor surface with a lint-free, nonabrasive cloth.
 Avoid using any cleaning solution or glass cleaner.
- Adjust the monitor's brightness, contrast and sharpness controls to enhance readability.
- Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (afterimage effects).
- Get regular eye checkups.

Ergonomics

To realize the maximum ergonomic benefits, we recommend the following:

- Use the preset Size and Position controls with standard signals.
- Use the preset Color Setting.
- Use non-interlaced signals.
- Do not use primary color blue on a dark background, as it is difficult to see and may produce eye fatigue due to insufficient contrast

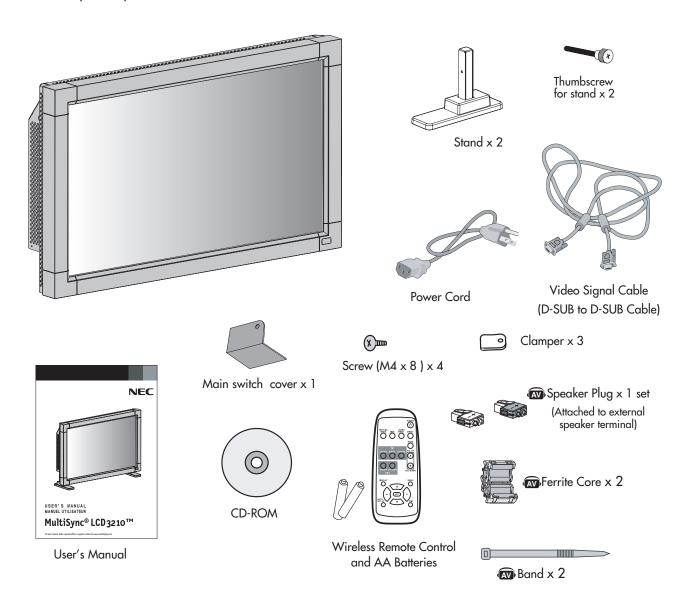
For more detailed information on setting up a healthy work environment, write the American National Standard for Human Factors Engineering of Visual Display Terminal Workstations – ANSI-HFS Standard No. 100-1988 – The Human Factors Society, Inc. P.O. Box 1369, Santa Monica, California 90406.

Contents

Your new MultiSync® LCD3210 monitor box* should contain the following:

- LCD monitor
- Power Cord (3m)
- Video Signal Cable (4m)
- User's Manual
- Wireless Remote Control and AA Batteries
- Clamper x 3
- Screw (M4 x 8) x 4

- CD-ROM
- Stand x 2
- Thumbscrew for stand (M4x27) x 2
- Main switch cover x 1
- Ferrite Core x 2
- Speaker Plug x 1 set (AV)
- Band x 2 🙉



*Install at the time of unpacking if the display will be used with the stand.

NOTE: The AV Unit is installed only on the LCD3210-BK(A).

Denotes an AV unit function.

All AV functions are enabled when the AV unit is installed.

The following optional components are available to use with the MultiSync LCD3210. To obtain the optional components and additional information, contact Customer Service at (800) 632-4662.

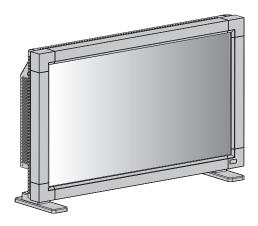
- Macintosh Cable Adapter
- External Speakers

^{*}Remember to save your original box and packing material to transport or ship the monitor.

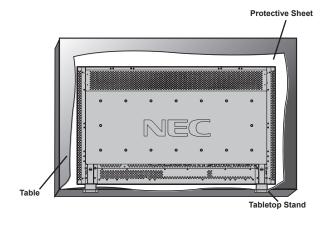
Attaching LCD Options

You can attach mounting accessories to the LCD monitor in one of the following two ways:

1. In the upright position



2. Lay the screen face down



To avoid damaging the screen face, place the protective sheet on the table underneath the LCD. The protective sheet was wrapped around the LCD in the original packaging. Make sure there is nothing on the table that can damage the monitor.

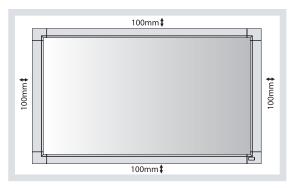
This device cannot be used or installed without the Tabletop Stand or other mounting accessory. For proper installation it is strongly recommended to use a trained, NEC authorized service person. Failure to follow NEC standard mounting procedures could result in damage to the equipment or injury to the user or installer. Product warranty does not cover damage caused by improper installation. Failure to follow these recommendations could result in voiding your warranty.

When using mounting accessories other than NEC compliant and approved, they must comply with the VESA-compatible mounting method. NEC strongly recommends using screws M6 size and 10mm in length. If using screws longer than 10mm, check the depth of the hole. (Recommended Fasten Force: 470 - 550N•cm)

NEC recommends using mounting interface that comply with UL1678 standard in North America.

3. Ventilation Requirements for enclosure mounting

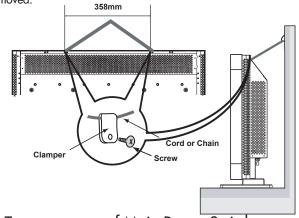
To allow heat to disperse, leave space between surrounding objects as shown in the diagram below.



4. To prevent the LCD Monitor from falling down

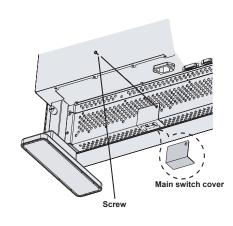
Fasten the LCD monitor to a wall using a cord or chain which is sufficient to support the weight of the LCD monitor (approx. LCD3210 17.0kg).

Before moving the LCD monitor, the cord or chain should be removed.

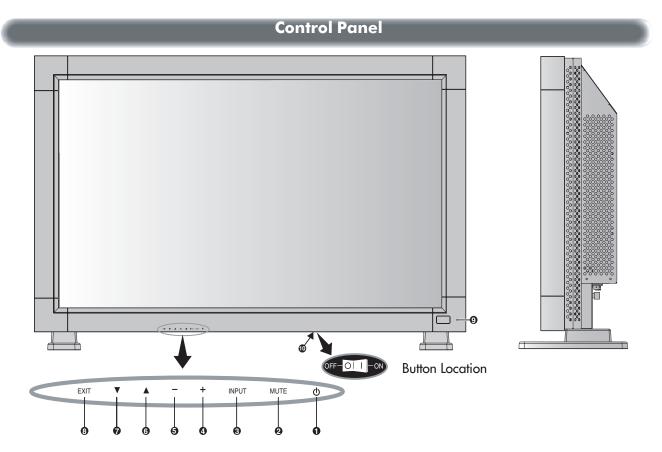


5. To prevent use of Main Power Switch

To prevent the use of the Main Power Switch, if desired, please attach the Main Power Switch cover which is included as an accessory. NOTE: With the main power switch cover in place, the main power switch can not be turned off. To turn the power off, remove the main power switch cover and turn off the switch, or remove the power cord from the AC Inlet at the back of the monitor.



Parts Name and Functions



POWER button ((1))

Switches the power on/off. See page 18.

MUTE button

Switches the audio mute ON/OFF.

INPUT button

Acts as SET button within the OSM menu.

Selects which signal connected to the display is shown. (Toggle switches between [RGB1], [RGB2], [RGB3], [DVD/HD], or [VIDEO].)

(DVD/HD) and [VIDEO] inputs are enabled when the AV-unit option is installed.

PLUS (+) button

Acts as (+) button to increase the adjustment with OSM menu.

Increases the audio output level when the OSM menu is turned off.

6 MINUS (-) button

Acts as (-) button to decrease the adjustment with OSM menu.

Decreases the audio output level when the OSM menu is turned off.

(UP (**△**) button

Activates the OSM menu when the OSM menu is turned-off. Acts as <u>a</u> button to move the highlighted area up to select the adjustment with OSM menu.

Denotes an AV unit function.

All AV functions are enabled when the AV unit is installed.

∂ DOWN (▼) button

Activates the OSM menu when the OSM menu is turned-off.

Acts as ▼ button to move the highlighted area down to select the adjustment with OSM menu.

EXIT button

Activates the OSM menu when the OSM menu is turned-off.

Acts as EXIT button to move to previous menu in the OSM menu.

Remote control sensor and Power indicator

Receives the signal from the remote control (when using the wireless remote control). See page 9.

Glows green when the LCD monitor is in active mode and glows red when the LCD is in POWER OFF mode. When the LCD is in power save mode, it will glow both green and red. When SCHED-ULE is enabled, it will blink green and glow red. See page 19. When a component failure is detected within the monitor, it will blink red.

Main Power Switch

Seesaw Switch for the main power on/off.

Control Key Lock Mode

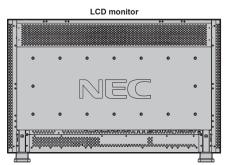
This control completely locks out access to all Control Key func-

To activate the control key lock function, press both " ∇ " and " Δ " simultaneously and hold down for three (3) seconds.

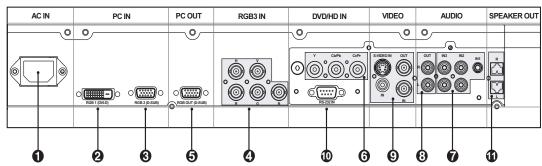
To go back to user mode, press both " \blacktriangledown " and " \blacktriangle " simultaneously and hold for three (3) seconds.

Parts Name and Functions -continued

Terminal Panel







1 AC IN connector

Connects with the supplied power cord.

Q RGB 1 IN (DVI-D)

To input digital RGB signals from a computer.

* This connector does not support analog input.

3 RGB 2 IN (mini D-Sub 15 pin)

To input analog RGB signals from a personal computer or other RGB equipment.

4 RGB 3 IN [R, G, B, H, V] (BNC)

To input the analog RGB signals from a computer or other RGB equipment. A Sync-on-Green signal can be connected to the G connector.

3 RGB OUT (mini D-sub 15 pin)

To output the signal from the RGB 2 or 3 $\ensuremath{\mathsf{IN}}$ connector.

6 DVD/HD (BNC)

Connecting equipment such as a DVD player, HDTV device, or Laser disc player.

Denotes an AV unit function.

All AV functions are enabled when the AV unit is installed.

∂ AUDIO IN 1,2,3

Input audio signal from external equipment such as a computer, VCR or DVD player.

AUDIO OUT

Output the audio signal from the selected AUDIO IN source.

9 VIDEO INPUT/OUTPUT **(AV)**

VIDEO IN connector (BNC and RCA): Input a composite video signal. BNC and RCA are not available at the same time. (Use only one input).

VIDEO OUT connector (BNC): Output the composite video signal from the VIDEO IN source.

S-VIDEO IN connector (DIN 4 pin): Input the S-video (Y/C separate signal). See page 26, S-VIDEO MODE SETTING.

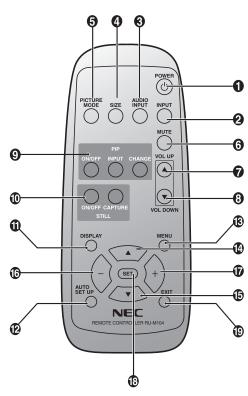
© EXTERNAL CONTROL (mini D-Sub 9 pin) RS-232C Input signal from control equipment such as a computer.

1 EXTERNAL SPEAKER TERMINAL AND

Outputs the audio signal from the selected audio source.

Parts Name and Functions -continued

Wireless Remote Control



POWER button

Switches the power on/off.

* If Power Indicator is not glowing, then no controls will work.

INPUT button

Selects from input signal, [RGB1], [RGB2], [RGB3], [DVD/HD], [VIDEO] and [VIDEO<S>].

[DVD/HD], [VIDEO] and [VIDEO<\$>] inputs can be selected when the AV optional module is installed.

[VIDEO<S>] is enabled by selecting the "SEPARATE" mode in the OSM or by having the "S VIDEO" cable connected with the "S VIDEO" signal present and selecting "PRIORITY" MODE". See page 26.

Selects from input audio signal, [AUDIO1], [AUDIO2], [AUDIO3]

SIZE button

Selects picture size, [FULL], [NORMAL], [WIDE] and [ZOOM]. See page 19.

PICTURE MODE button

Selects from picture mode, [HIGHBRIGHT], [STANDARD], [sRGB], [CINEMA]. See page 19.

HIGHBRIGHT: for moving image such as DVD STANDARD: for images (Shipping condition) sRGB: for text based images

CINEMA: for movies.

6 MUTE button a

To turn on/off the mute function.

VOLUME UP button Increase the audio output level.

3 VOLUME DOWN button 🔊

Decrease the audio output level.

9 PIP (Picture In Picture) button 🔊

ON/OFF button: PIP ON/OFF.

INPUT button: Select the 'picture in picture' input signal. CHANGE button: Replaces to the main picture and sub

picture.

Sub Picture

		RGB1	RGB2	RGB3	DVD/HD	VIDEO
	RGB1	ı	-	ı	-	✓
ure	RGB2	ı	-	ı	-	1
Main Picture	RGB3	ı	_	ı	-	✓
W	DVD/HD	1	-	_	_	1
	VIDEO	1	1	1	1	_

Note: The aspect ratio of PIP synchronizes with a setup in the Main Picture.

10 STILL button

ON/OFF button: To turn on/off the still picture mode.

CAPTURE button: Update the still picture.

DISPLAY button

To turn on/off the Information OSM. See page 19.

AUTO SETUP button

To enter the auto setup menu. See page 23.

MENU button

To turn on/off the menu mode.

UP button

Acts as **\(\Delta \)** button to move the highlighted area up to select the adjustment with OSM menu.

Small screen which adjusted "PIP" mode moves up.

DOWN button

Acts as ▼ button to move the highlighted area down to select the adjustment with OSM menu.

Small screen which adjusted "PIP" mode moves down.

MINUS button decrease

Acts as (-) button to decrease the adjustment with OSM menu.

Small screen which adjusted "PIP" mode moves left.

PLUS button increase

Acts as (+) button to increase the adjustment with OSM menu.

Small screen which adjusted "PIP" mode moves right.

SET button

Acts as SET button with OSM menu.

EXIT button

Turn to previous menu with OSM menu.

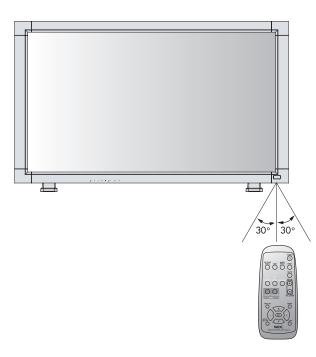
Denotes an AV unit function.

Parts Name and Functions -continued

Operating Range for the Remote Control

Point the top of the remote control toward the LCD monitor's remote sensor while pressing button.

Use the remote control within a distance of about 7 m/23 ft. from the front of the LCD monitor's remote control sensor and at a horizontal and vertical angle of within 30 degree within a distance of about 3 m/10 ft.



Caution

The remote control system may not function when direct sunlight or strong illumination strikes the remote control sensor of the LCD monitor, or when there is an object in the path.

Handling the remote control

- Do not open the remote control other than to install batteries.
- Do not allow water or other liquid to splash onto the remote control. If the remote control gets wet, wipe it dry immediately.
- * Avoid exposure to heat and steam.

Setup Procedure

1. Determine the installation location

CAUTION

Installing your LCD display must be done by a qualified technician. Contact your dealer for more information.

CAUTION

MOVING OR INSTALLING THE LCD MONITOR MUST BE DONE BY TWO OR MORE PEOPLE. Failure to follow this caution may result in injury if the LCD monitor falls.

CAUTION

Do not mount or operate the display upside down, face up, or face down.

CAUTION

This LCD has a temperature sensor and cooling fan. If the LCD becomes too hot, the cooling fan will turn on automatically. If the LCD becomes overheated while the cooling fan is running, the "Caution" menu will appear. If the "Caution" menu appears, discontinue use and allow the unit to cool. Using the cooling fan will reduce the likelihood of "Image Persistence".

If the LCD is used in an enclosed area or if the LCD panel is covered with a protective screen, please check the inside temperature of the monitor by using the "HEAT STATUS" control in the OSM (see page 27). If the temperature is higher than the normal operating temperature, please turn the cooling fan to ON within the SCREEN SAVER menu within the OSM (see page 24).

IMPORTANIT

Lay the protective sheet, which was wrapped around the LCD monitor when it was packaged, beneath the LCD monitor so as not to scratch the panel.

2. Install the remote control batteries

The remote control is powered by 1.5V AA batteries. To install or replace batteries:

- 1. Press and slide to open the cover.
- Align the batteries according to the (+) and (-) indications inside the case.
- 3. Replace the cover.







CAUTION

Incorrect usage of batteries can result in leaks or bursting. NEC recommends the following battery use:

- Place "AA" size batteries matching the + and signs on each battery to the + and - signs of the battery compartment.
- Do not mix battery brands.
- Do not combine new and old batteries. This can shorten battery life or cause liquid leakage of batteries.
- Remove dead batteries immediately to prevent battery acid from leaking into the battery compartment. Don't touch exposed battery acid, it can damage to your skin.

NOTE: If you do not intend to use the Remote Control for a long period of time, remove the batteries.

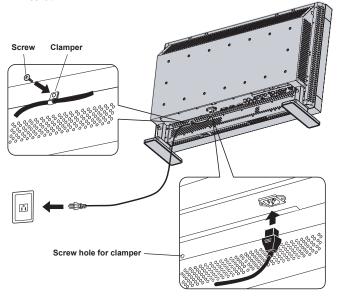
3. Connect external equipment (See pages 12-17)

- To protect the external equipment, turn off the main power before making connections.
- Refer to your equipment user manual for further information.

4. Connect the supplied power cord

- The equipment should be installed close to an easily accessible power outlet.
- Please attach power cord to the LCD monitor by attaching the screw and clamper.
- Fully insert the prongs into the power outlet socket. Loose connection may cause image degradation.

NOTE: If you use this monitor at AC 220 - 240V, please refer to "Safety Precautions, Maintenance & Recommended Use" section of this manual for proper selection of AC power cord.



5. Switch on the power of all the attached external equipment

When connected with a computer, switch on the power of the computer first.

6. Operate the attached external equipment Display the signal from the desired input source.

7. Adjust the sound 📾

Make volume adjustments as required.

8. Adjust the screen (See pages 20-28)

Make adjustments of the screen display position when necessary.

9. Adjust the image (See pages 20-28)

Make adjustments such as brightness or contrast when required.

Denotes an AV unit function.

Setup Procedure -continued

10. Recommended Adjustments

To reduce the risk of the "image persistence", please adjust the following items based on the application being used.

"SCREEN SAVER" (See page 24), see page "SIDE BORDER COLOR" (See page 24), "DATE & TIME" (See page 27), "SCHEDULE" (See page 27)

11. When the monitor is installed in the portrait position

- Remove the stands (feet).
- Left edge should be the upper edge from front view.

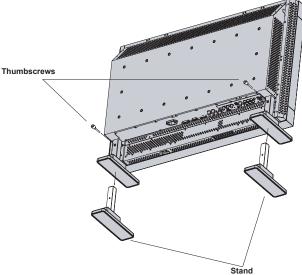
12. Installing and removing stand

How to install stand

- 1. Please turn monitor off.
- Place stand onto monitor with the long ends of the feet in front of the monitor.
- 3. After inserting stand in guide block, fasten thumbscrews on both sides of the monitor.

How to remove the stand

- 1. Spread the protective sheet on a flat surface, such as a desk.
- 2. Place monitor on the protective sheet.
- 3. Remove thumbscrews with a screwdriver or with your fingers and place them in a safe place for reuse.



NOTE: Place stand onto monitor so that the long end of the feet are in the front CAUTION: Handle with care when mounting LCD monitor stand and avoid pinching your fingers.

13. When using external speakers a

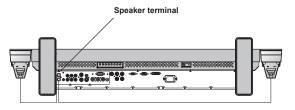
We recommend using the optional speakers designed for the MultiSync LCD3210.

The external speaker terminals of the MultiSync LCD3210 may be connected with the speaker plug of a mainframe sound speaker. It this case, please exchange the lead connector of a mainframe sound speaker for an attached speaker plug.

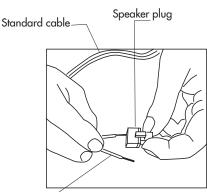
Denotes an AV unit function.

All AV functions are enabled when the AV unit is installed.

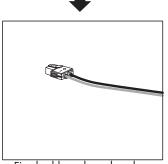




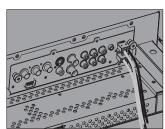
• How to use the attached speaker plug a



Insert the negative (-) side of a standard speaker cable into the negative (-) side of the speaker plug. The negative side of a standard speaker cable has a stripe running the length of the cable. Insert remaining wire into the positive (+) side of the speaker plug. Hold down on the small lever on the speaker plug to insert cable.



Fixed cable and speaker plug.

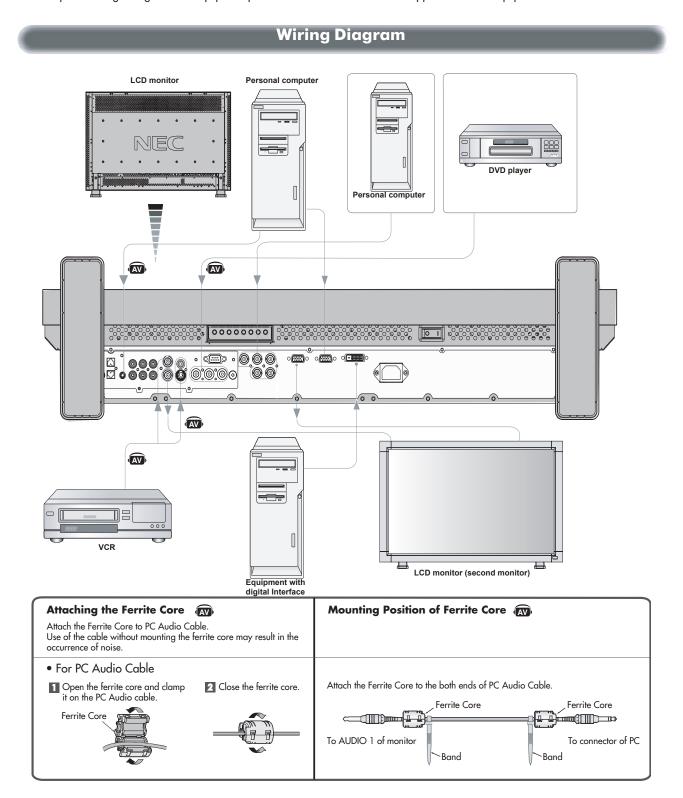


Insert the fixed cable and speaker plug to the speaker terminal.

Connections

Before connecting external equipment to LCD:

- * First turn off the power to all of the equipment associated with the LCD as well as that of the equipment to be connected.
- * For questions regarding external equipment please refer to the user's manual supplied with that equipment.



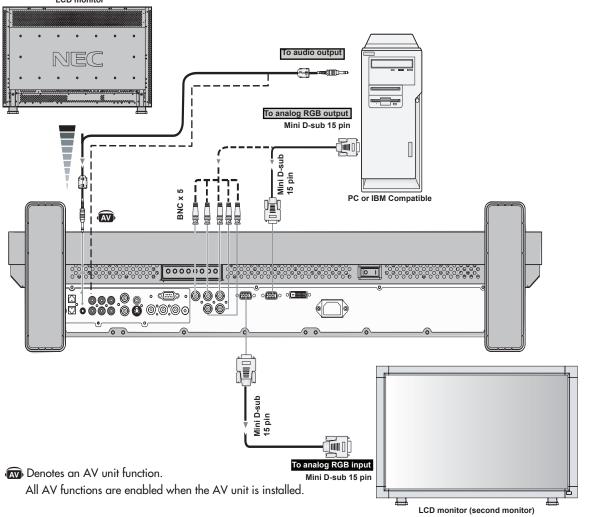
Connections -continued

	Scanning frequency		
Resolution	Horizontal	Vertical	Remarks
640 x 480	31.5Hz	60Hz	
800 x 600	37.9Hz	60Hz	
1024 x 768	48.4Hz	60Hz	
1280 x 768	48Hz	60Hz	
1360 x 768	48Hz	60Hz	Recommended resolution
1280 x 1024	64Hz	60Hz	Compressed image
1600 x 1200	75Hz	60Hz	Compressed image

Connecting the LCD Monitor to a PC

Connecting your computer to your LCD monitor will enable you to display your computer's screen image. Some video cards may not display an image correctly.

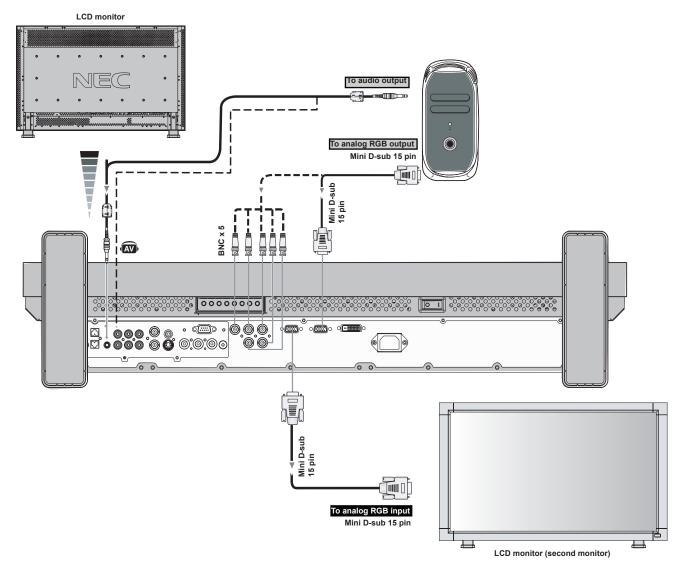
- To connect the RGB 2 IN connector (mini D-sub 15 pin) on the LCD monitor, use the provided RGB signal cable (mini D-sub 15 pin to mini D-sub 15 pin).
- To connect the RGB 3 connector (BNC) on the LCD monitor, use a signal cable (mini D-sub 15 pin to BNC x 5). Select RGB 3 from the INPUT button.
- When connecting one or more LCD monitor, use the RGB OUT connector (mini D-sub 15 pin).
- The AUDIO IN 1, 2 and 3 can be used for audio input. For connection, select AUDIO 1, 2 or 3 from the AUDIO INPUT button.



Connecting to a Macintosh Computer

Connecting your Macintosh® computer to your LCD monitor will enable you to display your computer's screen image. Some video cards or drivers may not display images correctly.

- To connect the RGB 2 IN connector (mini D-sub 15 pin) on the LCD monitor, use the provided RGB signal cable (mini D-sub 15 pin to mini D-sub 15 pin).
 - For older Macintosh® computers, use Macintosh cable adapter to connect to your Macintosh's video port.
- To connect the RGB 3 IN connector (BNC) on the LCD monitor, use the signal cable available separately (mini D-sub 15 pin to BNC x 5).
- Refer to your Macintosh's owner's manual for more information about your computer's video output requirements and any special identification or configuring that may be required.
- The AUDIO IN 1, 2 and 3 can be used for audio input. For connection, select AUDIO 1, 2 or 3 from the AUDIO INPUT button.



Denotes an AV unit function.

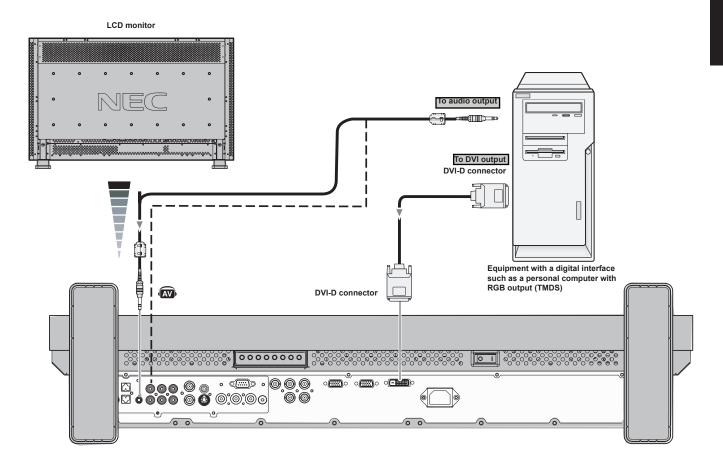
Connections -continued

Connecting to a Computer with a Digital Output

Connections can be made with equipment that is equipped with a digital interface compliant with the DVI (Digital Visual Interface) stan-

- The RGB 1 IN connector also accepts a DVI-D cable.
- Input TMDS signals conforming to DVI standards.
- To maintain display quality, use a cable recommended by DVI standards.
- The AUDIO IN 1, 2 and 3 can be used for audio input. For connection, select AUDIO 1, 2 or 3 from the AUDIO INPUT button.



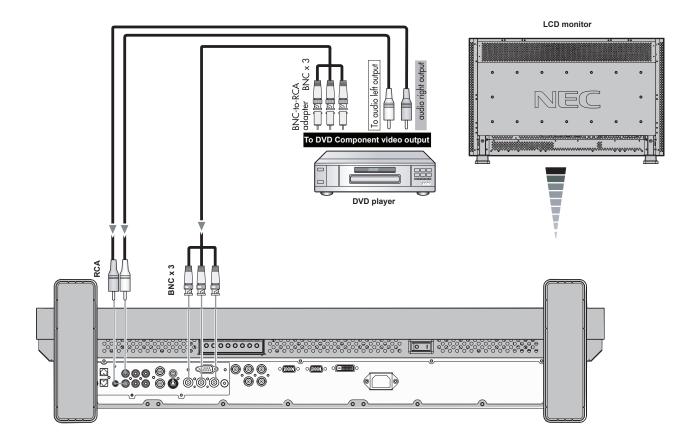


Denotes an AV unit function.

Connecting to a DVD Player AV

Connecting your DVD player to your LCD monitor will enable you to display your DVD video. Refer to your DVD player's owner's manual for additional information.

To connect the DVD/HD IN connector (BNC) on the LCD monitor, use a separately available BNC connector cable. You will need a
BNC-to-RCA adapter to connect a DVD player with an RCA pin jack to the BNC connector cable (not provided).
 The AUDIO IN 2 and 3 (both RCA) can be used for audio input. For connection, select [AUDIO 2] or [AUDIO 3] from the AUDIO
INPUT button.





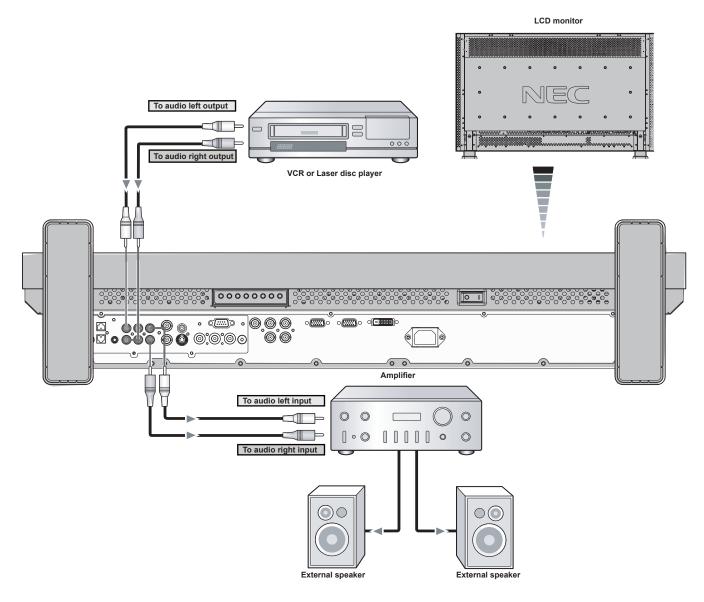
Connections -continued

Connecting to a Stereo Amplifier



You can connect your stereo amplifier to your LCD monitor. Refer to your amplifier's owner's manual for additional information.

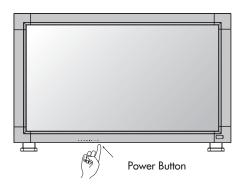
- Turn on the LCD monitor and the amplifier only after all connections have been made.
- Use an RCA cable to connect the AUDIO OUT connector (RCA) on the LCD monitor and the audio input on the amplifier.
- Do not reverse the audio left and right jacks.
- The AUDIO IN used for audio input.
- The AUDIO OUT jack outputs sound from the Audio input device (VCR) selected by the LCD monitor to the
 external output device (stereo amplifier).



Denotes an AV unit function.

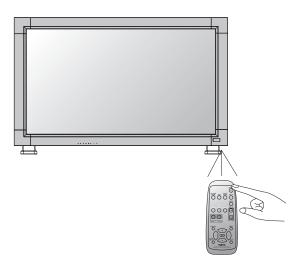
Basic Operation -Power ON and OFF Modes

The LCD monitor power indicator will turn green while powered on and will turn red while powered off. The monitor can be powered on or off using the following three options:



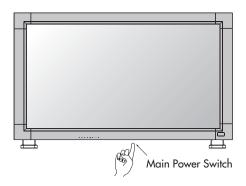
1. Pressing the power button.

NOTE: Before pressing the power button, be sure to turn on the Main Power Switch on the LCD monitor.



2. Using the remote control

NOTE: Before operating the remote control, be sure to turn on the Main Power Switch on the LCD monitor.



3. Pressing the Main Power Switch.

NOTE: When the Main Power Switch is used to power off the LCD, the remote control and the power button will not activate the LCD and both green and red Power indicators turn off. Be sure to turn the Main Power Switch to "ON" before using options 1 or 2.

Basic Operation -continued

Power Indicator

Power Indicator

	Status
Power ON	Green
Power OFF	Red
Power Standby	Red On
when "SCHEDULE" is enabled	Green Blinking
Power Standby	Red , Green
Diagnosis (Detecting failure)	Red Blinking
	*See trouble shooting of page 33

When Using Power Management Function

The LCD monitor follows the VESA approved DPM Power Management function.

The power management function is an energy saving function that automatically reduces the power consumption of the display when the keyboard or the mouse has not been used for a fixed period of time.

The power management feature on your new display has been set to the "ON" mode. This allows your display to enter a Power Saving Mode when no signal is detected. This could potentially increase the life and decrease the power consumption of the display.

Selecting a Video Source (AV)



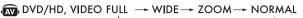
To view a video source:

Use the input button to set [VIDEO].

Use the COLOR SYSTEM menu to set, [AUTO], [NTSC], [PAL], [SECAM], [PAL60], [4.43NTSC] in according to your video format.

Picture Size

 $FULL \rightarrow ZOOM \rightarrow NORMAL$ RGB 1, 2, 3



Signal Type	NORMAL SIZE	RECOMMENDED SIZE
4:3		NORMAL
		ZOOM (DYNAMIC)
Squeeze		FULL
Letterbox		WIDE

Picture Mode

RGB 1, 2, 3 HIGHBRIGHT → STANDARD

DVD/HD, VIDEO HIGHBRIGHT → STANDARD

Information OSM

RGB1, 2, 3

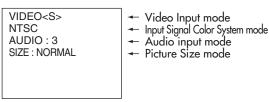
RGB2 Video Input mode 1024 x 768 Input signal Information 48kHz 60Hz AUDIO: 1 Audio input mode (AV) SIZE: FULL Picture Size mode

DVD/HD 🐼

DVD/HD Video Input mode AUDIO: 3 Audio input mode SIZE: WIDE Picture Size mode

VIDEO

AV



PIP (AV)

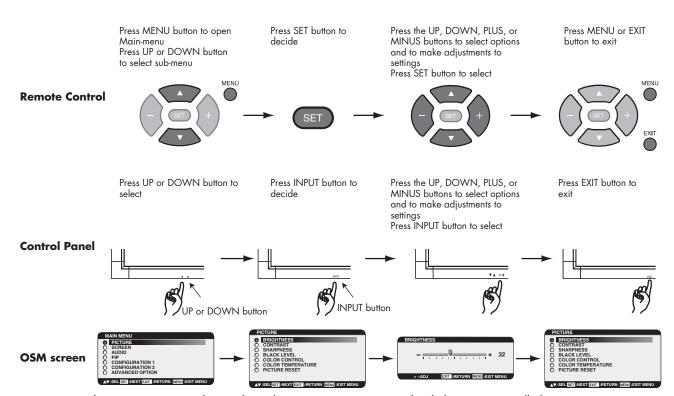
Main:RGB2

Sub:VIDEO<S>

RGB2 1024 x 768 Main picture Information 48kHz 60Hz AUDIO: 1 VIDEO<S> Sub picture Information NTSC ← Main picture Information SIZE: FULL

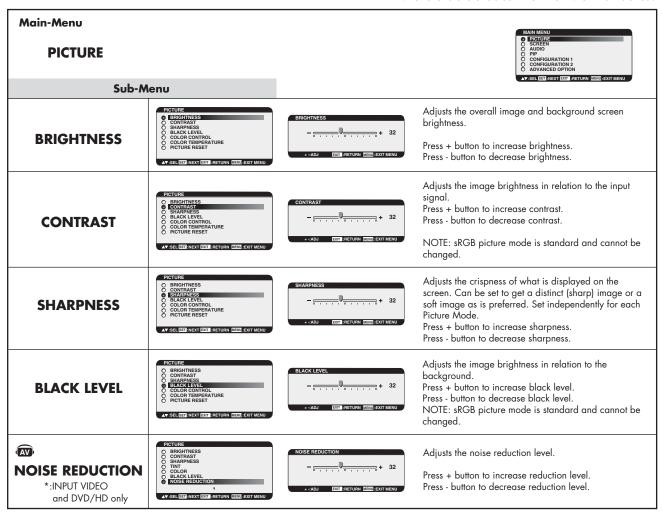
No Denotes an AV unit function.

OSM (On-Screen Manager) Controls-Picture

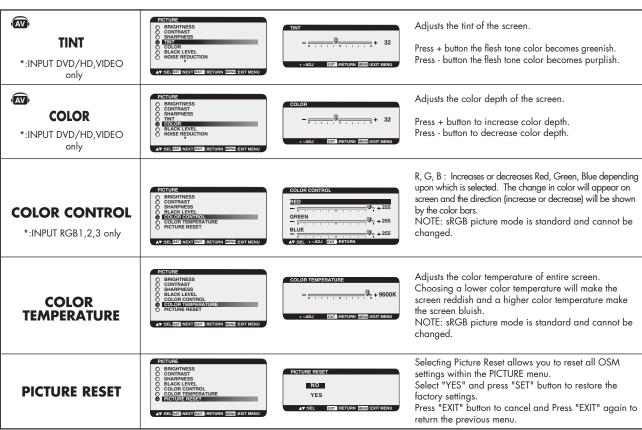


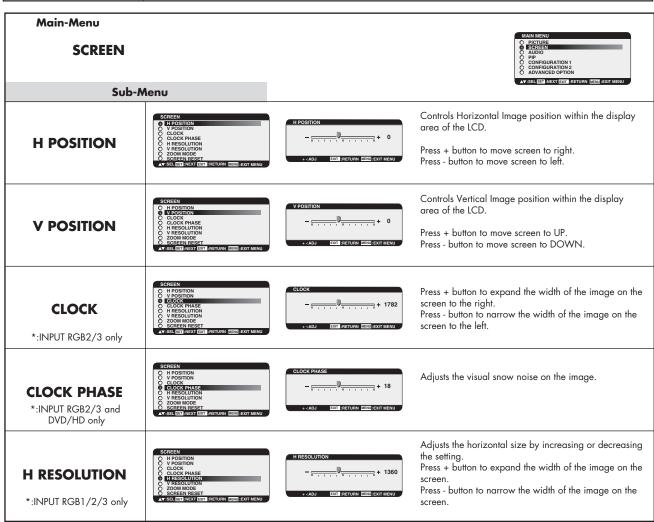
NOTE: Items in this OSM menu may change depending on connection type and with the AV unit installed.

AV Denotes an AV unit function.

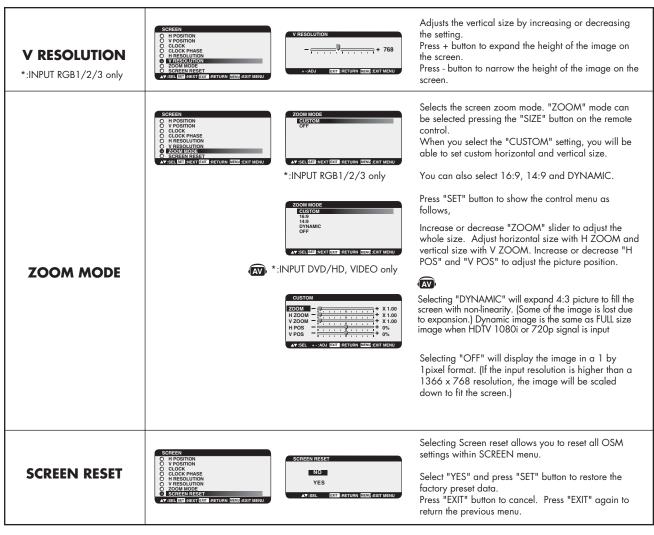


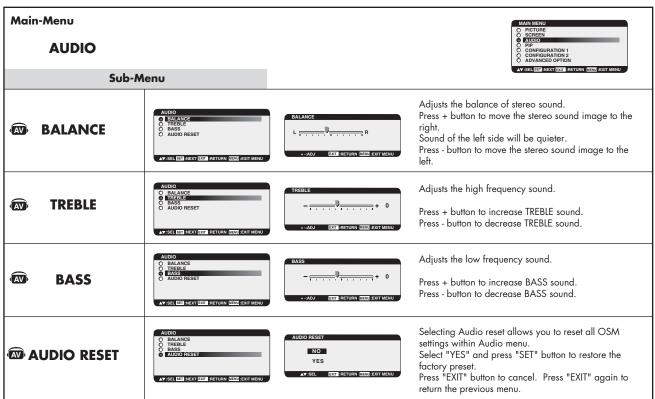
OSM Controls-Screen



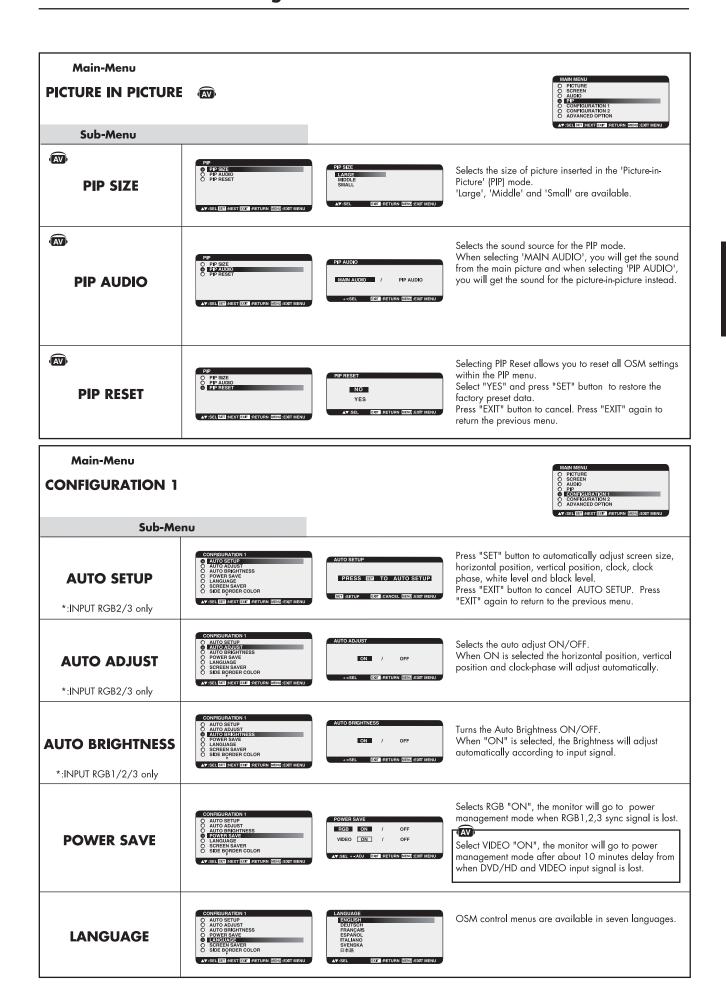


OSM Controls-Audio

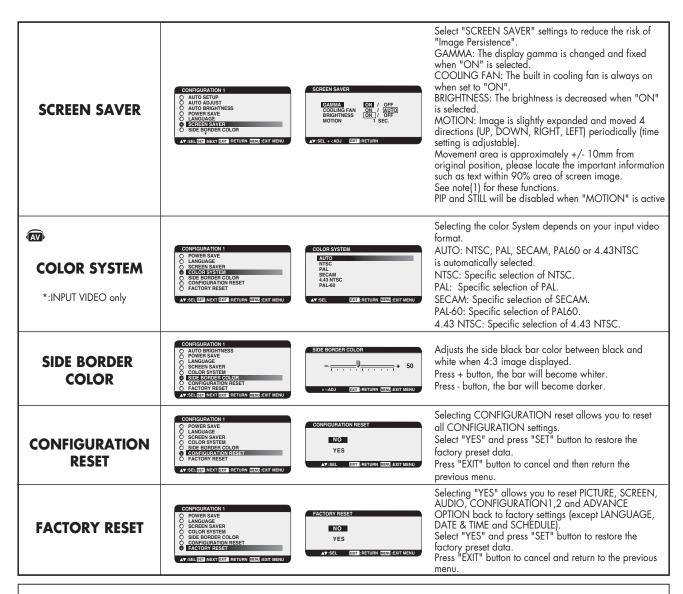




OSM Controls-Configuration 1



OSM Controls-Configuration2





CONFIGURATION 2



LONG CABLE MANUAL

*:INPUT RGB2/3 only





Compensates for image degradation caused by using a long cable.

VIDEO EQ

Optimize the shape (Tailing) of RED, GREEN and BLUE signal.

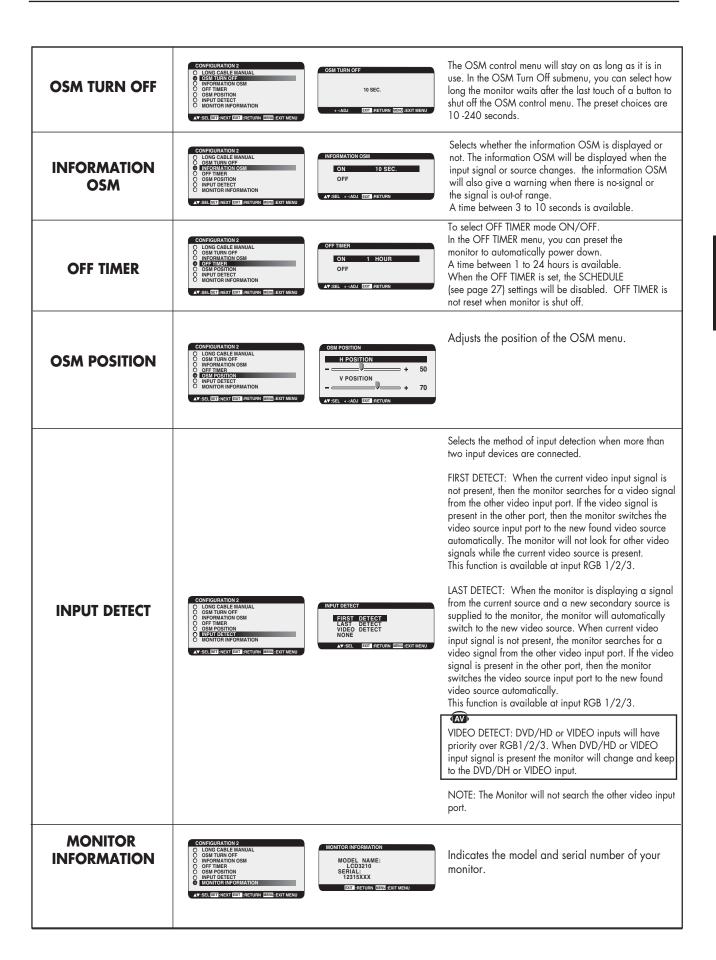
Level: 0 - 7

SYNC TERMINATE

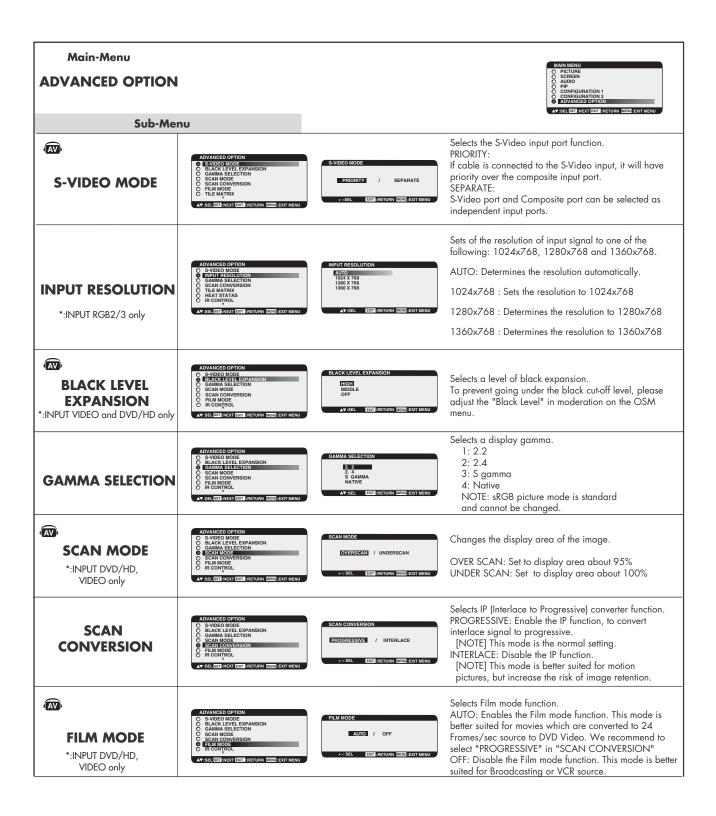
Selects the terminate resistance for matching the cable impedance.

HI: 2.2K ohm/LO:75ohm

OSM Controls-Configuration2



OSM Controls-Advanced option



OSM Controls-Advanced option

Selects the infra-red wireless remote controllers mode. The item in this menu will become effective by pressing "SET" button on the selected item. NORMAL: The monitor will be controlled normally by wireless remote controller. LOCK: Disable the monitor control by infra-red wireless remote controller. Keep pressing "DISPLAY" button for 5 or more seconds, this setting will return to "NORMAL". **IR CONTROL** See "NOTE 2" on page 28 AV:SEL SET:NEXT EXIT :RETURN MENU:EXIT MEN The "TILE MATRIX" feature allows one image to be displayed on multiple screens. This feature can be used with up to 16 monitors. (4 horizontal x 4 vertical) Using the Tile Matrix function requires the PC output signal to be sent through a distribution amplifier to each individual monitor. H MONITORS: Selects the number of horizontal displays. H MONITORS IR CONTROL TILE MATRIX HEAT STATUS POWER ON DELAY DATE & TIME SCHEDULE ADVANCED OPTION RESET V MONITORS: Selects the number of vertical displays. **TILE MATRIX** YES / NO YES / NO POSITION: Selects a position to expand the screen. TILE COMP: Works in tandem with "TILE MATRIX" to AV:SEL SET:NEXT EXIT :RETURN MENU:EXIT compensate for the width of the tiled bezels in order to accurately display the image. ENABLE: Select "YES", to expand the signal to the selected settings. PIP and DYNAMIC zoom mode will be disabled when the "TILE MATRIX" is activated. Displays status of COOLING FAN, BRIGHTNESS and TEMPÉRATURE. COOLING FAN activates when the inside temperature O IR CONTROL O TILE MATRIX HEAT STATUS O POWER ON DELAY exceeds highest recommended operating temperature **HEAT STATUS** TEMPERA SENSOR 1 O DATE & TIME O SCHEDULE O ADVANCED OPTION RESET 0.0 C° / 32.0 F° BRIGHTNESS decreases when inside temperature exceeds highest recommended operating temperature AV:SEL SET :NEXT EXIT :RETURN MENU :EXIT N with cooling fan running. In this case a warning is displayed on the screen. Adjusts the delay time from "standby" to "power on" POWER ON DELAY IR CONTROL TILE MATRIX HEAT STATUS POWER ON D IR CONTROL TILE MATRIX HEAT STATUS POWER ON DELAY DATE & TIME SCHEDULE ADVANCED OPTION RESET **POWER ON DELAY** "POWER ON DELAY" can be set between 0 and 50 sec. AV:SEL SET :NEXT EXIT :RETURN MENU:EXIT N Sets the current date and time for internal clock. You should set this function, when you use "SCHEDULE". IR CONTROL TILE MATRIX HEAT STATU 01 00 00 YES / NO **DATE & TIME** URRENT DATE TIME JAN. 01. 2004 00 : 00 : 00 V:SEL+-:ADJ SET :SET EXIT :RETURN (Programs the monitor's working schedule. Sets the hour and day of the week when the monitor powers on or off. Also sets the input port. ON OFF INPUT 08:30 17:15 RGN1 **SCHEDULE** Select "EXIT" to set schedule. O EVERY DAY O MON O TUE O WED OTHU OFRI O SAT O SUN O EVERY WEEK (see "NOTE 2" on page 28 for further information) Selecting ADVANCED OPTION RESET allows you to reset all OSM settings from the ADVANCED OPTION settings, except for DATE & TIME, and SCHEDULE. **ADVANCED** Select "YES" and press "SET" button to restore the VES SCHEDULE ADVANCED OPTION RESET **OPTION RESET** factory preset data. Press "EXIT" button to cancel and then return the

OSM Controls-NOTE

NOTE 1: IMAGE PERSISTENCE

Please be aware that LCD Technology may experience a phenomenon known as Image Persistence. Image Persistence occurs when a residual or "ghost" image of a previous image remains visible on the screen. Unlike CRT monitors, LCD monitors' image persistence is not permanent, but constant images being displayed for a long period of time should be avoided.

To alleviate image persistence, turn off the monitor for as long as the previous image was displayed. For example, if an image was on the monitor for one hour and a residual image remains, the monitor should be turned off for one hour to erase the image.

As with all personal display devices, NEC DISPLAY SOLUTIONS recommends displaying moving images and using a moving screen saver at regular intervals whenever the screen is idle or turning off the monitor when not in use.

Please set "SCREEN SAVER", "DATE & TIME" and "SCHEDULE" functions to further reduce the risk of Image persistence.

NOTE 2: HOW TO SETUP SCHEDULE

Using the "SCHEDULE" function allows you to set up to seven different scheduled time intervals when the LCD Monitor will be activated. You can select the time the monitor turns on and turns off, the day of week the monitor is activated, and which input source the monitor will use for each scheduled activation period. A check mark in the box next to the number of the schedule indicates that the selected schedule is in effect.

To select which schedule to set, use the up/down arrows to move the number (1 to 7) of the schedule. Use the (+) and (-) buttons to move the cursor horizontally within the particular schedule. Use the (\blacktriangle) and (\blacktriangledown) buttons to increase or decrease time, and select input port. The "SET" button is used to make a selection.

If you create a schedule but do not want to use a power on time, select "--" in the "ON" time slot.

If you do not want to use a power off time select "--" in the OFF time slot.

If there is no input selected ("--" showing in the input spot) the input from the previous schedule will be used.

The selection of EVERY DAY within a schedule takes priority over other schedules that are set up to operate weekly.

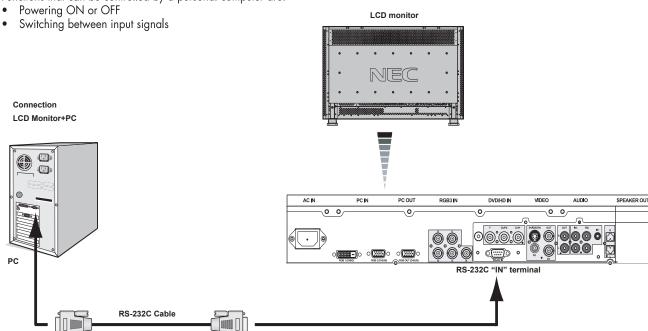
When schedules are overlapping, scheduled Power ON time has priority over scheduled Power OFF time.

If there are two schedules programmed for the same time, then the highest numbered schedule has priority.

When the "OFF TIMER" (see page 25) is set, the "SCHEDULE" function is disabled.

Using the LCD with a Personal Computer (PC)

This LCD monitor can be controlled by connecting to a personal computer with an RS-232C terminal. Functions that can be controlled by a personal computer are:



Note: If your PC (IBM or IBM compatible) is equipped only with a 25-pin serial port connector, a 25-pin serial port adapter is required. Contact your dealer for details.

1) Interface

PROTOCOL	RS-232C
BAUD RATE	9600 [bps]
DATA LENGTH	8 [bits]
PARITY BIT	NONE
STOP BIT	1 [bits]
FLOW CONTROL	NONE

This LCD monitor uses RXD, TXD and GND lines for RS-232C control.

For RS-232C cable, the reverse type cable should be used.

2) Control command diagram

The command is structured by the address code, function code, data code and end code. The length of the command is different for each function.

	Address code	Function code	Data code	End code
HEX	30h 30h	Function	Data	ODh
ASCII	'0' '0'	Function	Data	4

[Address code] 30h 30h (In ASCII code, '0' '0') fixed.

[Function code] A code of each fixed control move.

[Data code] A code of each fixed control data (number) and not always indicated.

[End code] ODh (In ASCII code, ' $\hfill \square$ ') fixed.

Using the LCD with a Personal Computer -continued

3) Control sequence

- (1) The command from a personal computer to the LCD monitor will take 400ms.
- (2) The LCD monitor will send a return command 400ms* after it has received an encode. If the command isn't received correctly, the LCD monitor will not send the return command.
- (3) The personal computer checks the command and confirms if the command which has been sent has been executed or not.
- (4) This LCD monitor sends various codes other than the return code. When sending a control sequence via RS-232C, other codes from personal computers will be ignored.
 - *: The sending time of the return command may be delayed depending on the monitor's current activity (changing of the input signal, etc.).

[Example] Turn the power ON (' ' is for ASCII code)

Sending commands from the PC etc.	Status code from LCD monitor	Meaning
30 30 21 0D '0' '0' '!' '-		Command for POWER ON
	30 30 21 0D	Command received
	'0' '0' '!' '却 '	(Command echo back)

4) Operation commands

The operation commands execute the basic operation setting of this LCD monitor.

It may not operate when changing the signal:

Operation	ASCII	HEX
POWER ON	!	21h
POWER OFF	11	22h
INPUT RGB 1	_r1	5Fh 72h 31h
INPUT RGB 2	_r2	5Fh 72h 32h
INPUT RGB 3	_r3	5Fh 72h 33h
INPUT VIDEO	_v1	<i>5</i> Fh <i>7</i> 6h 31h
INPUT DVD/HD	_v2	5Fh 76h 32h
INPUT S-VIDEO*	_v3	5Fh 76h 33h

- POWER OFF command should not be used less than 1 minute after the power is turned on.
- POWER ON command should not be used less than 1 minute after the power is turned off.
- S-VIDEO IS SEPARATE only.

5) Read command

Host computer sends the command without Data-code to monitor.

After receiving this command, the monitor returns the command with Data-code of current status to host computer.

<ex> When Host computer checks the Power status of monitor, the status of monitor is powered-on.

Command from computer	Command from Monitor	Detail of command
30 30 76 50 0D		Ask about the power
'0''0''v''P'[enter]	30 30 76 50 31 0D	status of monitor.
	'0''0''v''1'[enter]	Monitor is powered-on.

Denotes an AV unit function.

Using the LCD with a Personal Computer -continued

Structure of the Read-command

			A	SCII	HEX		
			Function	Data (Receive)	Function	Data (Receive)	
POWER	ON		vP	1	76 50	31	
	OFF(star	nd by)	vP	0	76 50	30	
	RGB-1(D	VI-D)	vl	rl	76 49	72 31	
	RGB-2(D	-sub)	vl	r2	76 49	72 32	
Input	RGB-3(B	NC)	vl	r3	76 49	72 33	
	Video	AV	vl	v1	76 49	76 31	
	DVD/HD (AV)		vl	v2	76 49	76 32	
	S-VIDEO AV		vl	v3	76 49	76 33	
Picture mode	Highbrig	ght	vM	pl	76 4D	70 31	
	Standard resolution		vM	p2	76 4D	70 32	
	Around AV board Around Power	0.5°C	. 1	1 1.050	74 (2 70 21	2B 20 32 35	
		resolution	tcx1	(ex.) +25.0	74 63 78 31	2E 30	
Temperature of Internal monitor		1 °C resolution	tc1	(ex.)+25	74 63 31	2B 20 32 35	
		0.5°C resolution	tcx2	(ex.)+30.5	74 63 78 32	2B 20 33 30 2E 35	
	PCB	1°C	tc2	(ex.)+31	74 63 32	2B 20 33 31	

 $\textbf{NOTE:} \ \ \text{For complete information please see file "External_Control_LCD3210.pdf" on the CD-ROM.}$

AV Denotes an AV unit function.

Features

32" diagonal screen size adds a new dimension to information display technology.

1366 x 768 resolution allows for crisp text and precise images.

XtraView+TM technology allows for wide-angle viewing.

DDC/CI capabilities allow control commands to be sent directly to the monitor through a standard PC or over an existing network by a system administrator.

User-friendly, efficient design features the currently proposed VESA-standard mounting and an overall lightweight construction for easy transport and installation.

Optional detachable speakers deliver an enhanced multimedia experience with amazing sound quality.

Low power consumption and reduced heat emission lead to a lower total cost of ownership.

On Screen Manager (OSM®) puts you in complete control of display setting adjustments.

NEC's quality and reliability provide peace of mind with a 1-year warranty (including backlight) and 24/7 customer service and technical support.

Reduced Footprint: Provides the ideal solution for environments requiring superior image quality but with size and weight reductions. The monitor's small footprint and low weight allow it to be moved or transported easily from one location to another.

AccuColor® Control System with sRGB allows you to change between the color settings on your display to match your personal preference.

Plug and Play: The Microsoft® solution with the Windows®95/98/ME/2000/XP operating system facilitates setup and installation by allowing the monitor to send its capabilities (such as screen size and resolutions supported) directly to your computer, automatically optimizing display performance.

Intelligent Power Manager (IPM®) System provides innovative power-saving methods, saving two-thirds of your monitor energy costs.

Multiple Frequency Technology automatically adjusts monitor to the display card's scanning frequency, thus displaying the resolution required.

FullScan® Capability allows you to use the entire screen area in most resolutions, significantly expanding image size.

VESA® Standard Mounting Interface allows users to connect their LCD monitor to any VESA standard third party mounting arm or bracket. Allows for the monitor to be mounted on a wall or an arm using any third party compliant device. NEC recommends using mounting interface that comply with UL1678 standard in North America.

DVI-D: The digital-only subset of DVI created by the Digital Display Working Group (DDWG) for digital connections between computers and displays. As a digital-only connector, analog support is not provided off a DVI-D connector. As a DVI-based digital only connection, only a simple adapter is necessary for compatibility between DVI-D and other DVI-based digital connectors such as DFP and P&D.

TILE MATRIX, TILE COMP: Demonstrates multiple screens with an accurate image and compensates for the bezel width.

ZOOM: Expands the image individually for horizontal and vertical direction.

Self-diagnosis: If an internal error should occur, a failure state will be indicated.

Troubleshooting

No picture

- The signal cable should be properly connected to the display card/computer.
- The display card should be properly seated in its slot.
- Front Power Switch and computer power switch should be in the ON position.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)
- Check the monitor and your display card with respect to compatibility and recommended settings.
- Check the signal cable connector for bent or pushed-in pins.

Power Button does not respond

• Unplug the power cord of the monitor from the AC outlet to turn off and reset the monitor.

Image persistence

• Please be aware that LCD Technology may experience a phenomena known as Image Persistence. Image Persistence occurs when a residual or "ghost" image of a previous image remains visible on the screen. Unlike CRT monitors, LCD monitors' image persistence is not permanent, but constant images being displayed for a long period of time should be avoided. To alleviate image persistence, turn off the monitor for as long as the previous image was displayed. For example, if an image was on the monitor for one hour and a residual image remains, the monitor should be turned off for one hour to erase the image.

NOTE: As with all personal display devices, necdisplay recommends using a moving screen saver at regular intervals whenever the screen is idle or turning off the monitor when not in use.

Image is unstable, unfocused or swimming is apparent

- Signal cable should be properly attached to the LCD monitor, computer, or other input device.
- Use the OSM screen controls to focus and adjust display by increasing or decreasing the clock phase total. When the display mode
 is changed, the OSM Image Adjust settings may need to be readjusted.
- · Check the monitor and your display card with respect to compatibility and recommended signal timings.
- If your text is garbled, change the video mode to non-interlace and use 60Hz refresh rate.

Image of component signal is greenish

• Check to see if the DVD/HD input connector is selected.

LED on monitor is not lit (no green or red color can be seen)

- Main Power Switch should be in the ON position and power cord should be connected.
- Make certain the computer is not in a power-saving mode (touch the keyboard or mouse).

Red LED on monitor is blinking

• A certain failure might have occurred, please contact your nearest authorized necdisplay service facility.

Display image is not sized properly

- Use the OSM screen controls to increase or decrease the clock total.
- Check to make sure that a supported mode has been selected on the display card or system being used. (Please consult display card or system manual to change graphics mode.)

Selected resolution is not displayed properly

 Use OSM information to enter Information menu and confirm that the appropriate resolution has been selected. If not, select appropriate resolution.

No Sound

- Check to see if speaker cable is properly connected.
- Check to see if mute is activated.
- Check to see if volume is set at minimum.

Remote Control is not available

- Test the Remote Control's batteries for strength/life.
- Check if the batteries are inserted correctly.
- Check if the Remote Control is pointed at the monitor's remote sensor.

The remote control system may not function when direct sunlight or strong illumination strikes the remote control sensor of the LCD monitor, or when there is an object in the path.

"SCHEDULE" / "OFF TIMER" functions not working properly

- The "SCHEDULE" function will be disabled when the "OFF TIMER" is set.
- If the "OFF TIMER" function is enabled and the power to the LCD monitor is turned off or if the power supply is interrupted unexpectedly, then the OFF TIMER will be reset.

References

NEC Monitor Customer Service & Support

Customer Service and Technical Support: (800) 632-4662

Fax: (800) 695-3044

Parts and Accessories/

Macintosh Cable Adapter: (888) 634-4662

Warranty Information www.necdisplay.com

Online Technical Support www.necdisplay.com

Sales and Product Information

Sales Information Line: (888) 632-6487

Canadian Customers: (866) 771-0266, Ext#: 4037

Government Sales: (800) 284-6320

Government Sales email: gov@necdisplay.com

Electronic Channels

World Wide Web: http://www.necdisplay.com
Product Registration: http://www.necdisplay.com

European Operations: http://www.nec-display-solutions.com

Drivers and Downloads: http://www.necdisplay.com

Specifications

Product Specifications(LCD3210)

			Analog Input Digital Input			
LCD Module			(32" / 80 cm diagonal)			
	Pix	el Pi	itch	0.511mm		
Resolution			ion	1366 x 768 dots		
Color				Over 16 million colors (depending on video card used)		
Brightness				500cd/m2 (Typ.)		
Contrast ratio				600 : 1		
	Vie	win	g Angle	Up 88°/ Down 88°/ Left 88°/ Right 88° (typ) @ CR	>10	
Desig	n Vie	ew E	Distance	875mm		
Frequency	Hor	rizor	ntal	15.625/15.734kHz , 31.5kHz - 91.1kHz	31.5kHz - 91.1kHz	
	Ver	tica	1	50Hz, 60Hz to 85Hz		
Pixel Clock	·			25.0MHz - 162.0MHz		
Viewable Size				392.3 x 697.7mm		
Input Signal	PC I	Inpu	Jt			
		Vid		Analog RGB 0.7V p-p	TMDS	
				Input Impedance 75 Ohm	THE STATE OF THE S	
				Composite sync on Green Video		
				: 0.3Vp-p Nega (video 0.7Vp-p Positive)		
		Syr	10	Separate: TTL level (Positive/Negative), Input		
				Impedance 2.2k Ohm(RGB3:2.2k ohm/75 ohm selectable)		
		Inp	ut terminal	BNC (R,G,B,H,V) 15pin Mini D-sub	DVI-D (Digital)	
	VID	EO I	Input	Composite 1.0V p-p Input Impedance 75 Ohm BNC	VIAV /	
				Y/C Y:0.7V p-p C:0.283V p-p Input Impedance 75 (Component 1.0/0.7V p-p Input Impedance 75 Ohm		
	ALU		Innut	RCA PIN-JACK L/R 2INPUT, STEREO Mini Jack 1INP		
	_		Input	_		
		2320		9 Pin Mini D-sub		
Output	PC		Video	Analog RGB Video: 0.7V p-p with 75 ohm terminated		
signal		ļ	Sync	Seperate HV sync: TTL level (Posi/Nega) with 2.2k ohm terminated		
			Connector	Mini D0sub 15pin		
	VID	EO		BNC 1 Output, Composite 1.0V p-p with 75 ohm ter	nminated	
	AUI	DIO		RCA PIN-JACK L/R: 1 Output, 0.15Vrms with 1k ohn	n terminated	
	SPE	AKE	R OUTPUT	External Speaker Jack 7W + 7W		
Power Supply				1.4 - 0.6A @ 100-240VAC, 50/60Hz		
Operational	Ten	nper	rature	5 - 40 deg C		
Environment	Hur	midi	ity	20 - 80% (without condensation)		
Storage	Ten	nper	rature	-20 - 60 deg C		
Environment	Hur	midi	ity	10 - 90% (without condensation) / 90% - 3.5% x (ter	mp - 40 deg C) regarding over 40 deg C	
Dimension	Net	,		789.0 (W) x 479.0 (H) x 140.0 (D) mm (without Stand), 789.0 (W) x 510.3 (H) x 200 (D) mm (with Stand)		
	Gro	oss		944 (W) x 652(H) x 312 (D) mm		
Weight	Net			34.2 lbs / 15.5kg (without Stand) 36.4 lbs / 16.5kg (with Stand)		
	Gro			46.3 lbs / 21.0kg		
VESA compatible o				3 x 200mm x 200mm (8 Holes)		
mounting interface				2 x 200mm x 200mm (6 Holes)		
Complied Regulate		ınd		UL 60950-1/CSA C22.2 No.60950-1/ TUV-GS/EN60950-1		
Guidelines				FCC-B/DOC-B/EN55022-A/EN55024/EN61000-3-2/EN61000-3-3/CE		
Power Manageme	nt			VESA DPM	,	
Plug & Play						
	rtad			VESA DDC2B, DDC/CI 640 x 480 at 60Hz to 85Hz		
Resolutions Supported				800 x 600 at 50Hz, 60Hz to 85Hz		
				1024 x 768 at 50Hz, 60Hz to 85Hz		
				1280 x 768 at 50Hz, 60Hz to 85Hz		
				1360 x 768 at 50Hz, 60Hz* to 85Hz 1280 x 1024 at 60Hz to 85Hz		
				1600 x 1200 at 60HzMaximum Resolution		
				*Recomended Resolution		
				NTSC / PAL / SECAM / 4.43NTSC / PAL60		
				Compoment: 480i, 480p, 720p, 1080i,		
Accessories			User's manual, Power Cord, Video Signal Cable, Re			
				Screw x 4, CD-ROM, Stand x 2, Thumbscrew for star Ferrite Core x 2, Band x 2, Speaker plug x 1set		
				Trans Core x 2, build x 2, Speaker plug x 1ser		

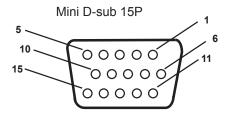
NOTE: Technical specifications are subject to change without notice.

AV Denotes an AV unit function.

Pin Assignment

1) Analog RGB Input (MiniDsub): R G B 2

1	Video Signal Red		
2	Video Signal Green		
3	Video Signal Blue		
4	GND		
5	DDC-GND		
6	Red-GND		
7	Green-GND		
8	Blue-GND		
9	+5V (DDC)		
10	SYNC-GND		
11	GND		
12	DDC-SDA		
13	H-SYNC		
14	V-SYNC		
15	DDC-SCL		



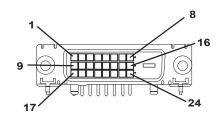
2) EnrtéeS-VIDEO :VIDEO

Pin No	Name		
1	GND		
2	GND		
3	J (Luminance)		
4	C (Chroma)		



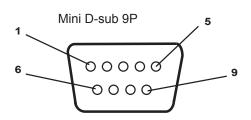
3) Digital RGB Input (DVI-D): R G B 1

1	TX2-	9	TX1-	17	TX0-
2	TX2+	10	TX1+	18	TXO+
3	Shield (TX2/TX4)	11	Shield (TX1/TX3)	19	Shield (TX0/TX5)
4	NC	12	NC	20	NC
5	NC	13	NC	21	NC
6	DDC-Serial Clock	14	+5 power*)	22	Shield (TXC)
7	DDC-Serial data	15	Ground (+5V)	23	TXC+
8	NC	16	Hot Plug Detect	24	TXC-



4) RS-232 input

Pin No	Name
1	NC
2	RXD
3	TXD
4	NC
5	GND
6	NC
7	RTS
8	CTS
9	NC



Limited Warranty

NEC Display Solutions of America, Inc. (hereinafter "NEC DISPLAY SOLUTIONS") warrants this Product to be free from defects in material and workmanship and, subject to the conditions set forth below, agrees to repair or replace (at NEC DISPLAY SOLUTIONS' sole option) any part of the enclosed unit which proves defective for a period of one (1) year from the date of first consumer purchase. Spare parts are warranted for ninety (90) days. Replacement parts or unit may be new or refurbished and will meet specifications of the original parts or unit.

This warranty gives you specific legal rights and you may also have other rights, which vary from state to state. This warranty is limited to the original purchaser of the Product and is not transferable. This warranty covers only NEC DISPLAY SOLUTIONS-supplied components. Service required as a result of third party components is not covered under this warranty. In order to be covered under this warranty, the Product must have been purchased in the U.S.A. or Canada by the original purchaser. This warranty only covers Product distribution in the U.S.A. or Canada by NEC DISPLAY SOLUTIONS. No warranty service is provided outside of the U.S.A. or Canada. Proof of Purchase will be required by NEC DISPLAY SOLUTIONS to substantiate date of purchase. Such proof of purchase must be an original bill of sale or receipt containing name and address of seller, purchaser, and the serial model number of the product.

It shall be your obligation and expense to have the Product shipped, freight prepaid, or delivered to the authorized reseller from whom it was purchased or other facility authorized by NEC DISPLAY SOLUTIONS to render the services provided hereunder in the original package. All Products returned to NEC DISPLAY SOLUTIONS for service MUST have prior approval, which may be obtained by calling 1-800-632-4662. The Product shall not have been previously altered, repaired, or serviced by anyone other than a service facility authorized by NEC DISPLAY SOLUTIONS to render such service, the serial number of the product shall not have been altered or removed. In order to be covered by this warranty the Product shall not have been subjected to displaying of fixed images for long periods of time resulting in image persistence (afterimage effects), accident, misuse or abuse or operated contrary to the instructions contained in the User's Manual. Any such conditions will void this warranty.

NEC DISPLAY SOLUTIONS SHALL NOT BE LIABLE FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR OTHER TYPES OF DAMAGES RESULTING FROM THE USE OF ANY NEC DISPLAY SOLUTIONS PRODUCT OTHER THAN THE LIABILITY STATED ABOVE. THESE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES OR THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE EXCLUSIONS OR LIMITATIONS MAY NOT APPLY TO YOU.

This Product is warranted in accordance with the terms of this limited warranty. Consumers are cautioned that Product performance is affected by system configuration, software, the application, customer data, and operator control of the system, among other factors. While NEC DISPLAY SOLUTIONS Products are considered to be compatible with many systems, specific functional implementation by the customers of the Product may vary. Therefore, suitability of a Product for a specific purpose or application must be determined by consumer and is not warranted by NEC DISPLAY SOLUTIONS.

For the name of your nearest authorized NEC Display Solutions of America, Inc. service facility, contact NEC Display Solutions of America, Inc. at 1-800-632-4662.

Declaration of the Manufacturer

We hereby certify that the color monitor MultiSync® LCD3210 (L325RM) is in compliance with

Council Directive 73/23/EEC:

- EN 60950-1

Council Directive 89/336/EEC:

- EN 55022
- EN 61000-3-2
- EN 61000-3-3
- EN 55024

and marked with



NEC Display Solutions, Ltd. 4-13-23, Shibaura, Minato-Ku Tokyo 108-0023, Japan

NEC MultiSync® LCD3210

PROPRIETARY NOTICE AND LIABILITY DISCLAIMER

The information disclosed in this document, including all designs and related materials, is the valuable property of NEC Display Solutions of America, Inc. and/or its licensors, as appropriate, reserve all patent, copyright and other proprietary rights to this document, including all design, manufacturing, reproduction, use and sales rights thereto, except to the extent said rights are expressly granted to others.

The NEC Display Solutions of America, Inc. product(s) discussed in this document are warranted in accordance with the terms of the Limited Warranty Statement accompanying each product. However, actual performance of each such product is dependent upon factors such as system configuration, customer data and operator control. Since implementation by customers of each product may vary, the suitability of specific product configurations and applications must be determined by the customer and is not warranted by NEC Display Solutions of America, Inc..

To allow for design and specification improvements, the information in this document is subject to change at any time without notice. Reproduction of this document or portions thereof without prior approval of NEC Display Solutions of America, Inc. is prohibited.

DECLARATION OF CONFORMITY

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

U.S. Responsible Party: NEC Display Solutions of America, Inc.

Address: 500 Park Blvd, Suite 1100

Itasca, Illinois 60143

Tel. No.: (630) 467-3000

Type of Product: Computer Monitor Equipment Classification: Class B Peripheral Model: MultiSync LCD3210(L325RM)



We hereby declare that the equipment specified above conforms to the technical standards as specified in the FCC Rules.

Windows is a registered trademark of Microsoft Corporation. NEC is a registered trademark of NEC Corporation. All other brands and product names are trademarks or registered trademarks of their respective owners.

