NEC



USER'S MANUAL MANUEL UTILISATEUR MultiSync[®] LCD3210TM

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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

- 1. 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 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 areas.
- 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.



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 🔊
- Band x 2 🔊



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

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

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

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 (山)

Switches the power on/off. See page 18.

Ø MUTE button

Switches the audio mute ON/OFF.

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.

MINUS (-) button

Acts as (-) button to decrease the adjustment with OSM menu. Decreases the audio output level when the OSM menu is turned off.

O UP (▲) button

Activates the OSM menu when the OSM menu is turned-off. Acts as \blacktriangle 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.

⑦ DOWN (▼) button

Activates the OSM menu when the OSM menu is turned-off. Acts as \checkmark 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 functions.

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

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

Parts Name and Functions -continued

Terminal Panel





• AC IN connector Connects with the supplied power cord.

Ø RGB 1 IN (DVI-D)

To input digital RGB signals from a computer.

* This connector does not support analog input.

RGB 2 IN (mini D-Sub 15 pin)

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

8 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.

G RGB OUT (mini D-sub 15 pin)

To output the signal from the RGB 2 or 3 IN connector.

OVD/HD (BNC)

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

AV Denotes an AV unit function.

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

O AUDIO IN 1,2,3 🔊

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

8 AUDIO OUT 🔊

Output the audio signal from the selected AUDIO IN source.

O VIDEO INPUT/OUTPUT

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.

EXTERNAL SPEAKER TERMINAL

Outputs the audio signal from the selected audio source.





POWER button

Switches the power on/off.

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

2 INPUT button

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

(IVD/HD], [VIDEO] and [VIDEO<S>] 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.

AUDIO INPUT button

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

SIZE button

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

See page 19.

O 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

MUTE button (CINEMA: for movies.)

To turn on/off the mute function.

VOLUME UP button

Increase the audio output level.

OLUME DOWN button

Decrease the audio output level.

PIP (Picture In Picture) button
 M
 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	-	-	-	-	1
RGB2	-	-	-	-	1
RGB3	-	-	-	-	1
DVD/HD	-	_	_	-	1
VIDEO	1	1	1	1	-
	RGB2 RGB3 DVD/HD	RGB1	RGB1 RGB2 RGB2 RGB3 DVD/HD	RGB1 RGB2 RGB3 RGB2 RGB3 DVD/HD	RGB1 RGB2 RGB3 DVD/HD RGB1 - - - RGB2 - - - RGB3 - - - RGB3 - - - DVD/HD - - -

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

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 \blacktriangle 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 \checkmark 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.

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.

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).

IMPORTANT

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.
- 2. 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.

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.
- 2. 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 📾

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.



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





•How to use the attached speaker plug 📾



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.





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

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.



	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.

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) standard.

- 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

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.



Denotes an AV unit function.

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.

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.

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 🔊

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

```
RGB 1, 2, 3
             FULL → ZOOM → NORMAL
```

🗑 DVD/HD, VIDEO FULL → WIDE→ ZOOM-→ NORMAL



Picture Mode

RGB 1, 2, 3	HIGHBRIGHT> STANDARD> sRGB
R DVD/HD, VIDEO	

Information OSM

RGB1, 2, 3



DVD/HD 🐼



VIDEO AV



- Video Input mode
- Input Signal Color System mode
- 🗕 Picture Size mode

Main:RGB2

Sub:VIDEO<S>



Denotes an AV unit function.

OSM (On-Screen Manager) Controls-Picture



OSM Controls-Screen



OSM Controls-Audio

V RESOLUTION *:INPUT RGB1/2/3 only	SCREEN O H POSITION O CLOCK O CLOCK PHASE O H RESOLUTION O SCREEN RESET A SCREEN RESET A SCREEN RESET A SCREEN RESET	Adjusts the vertical size by increasing or decreasing the setting. Press + button to expand the height of the image on the screen. Press - button to narrow the height of the image on the screen.
	SCREEN O H POSITION O LOCK O CLOCK O CLOCK	Selects the screen zoom mode. "ZOOM" mode can be selected pressing the "SIZE" button on the remote control. When you select the "CUSTOM" setting, you will be able to set custom horizontal and vertical size. You can also select 16:9, 14:9 and DYNAMIC.
ZOOM MODE	ZOOM MODE CUSTOM USTOM 10'HAMIC OFF IVYAMIC OFF X*SELEST MEXT EXER RETURN LEND (EXT MENU XYSEL LIST ALXY EXER RETURN LEND (EXT MENU XYSEL VOOS VOS VOS VOS VYSEL VYSEL VYSEL	 Press "SET" button to show the control menu as follows, Increase or decrease "ZOOM" slider to adjust the whole size. Adjust horizontal size with H ZOOM and vertical size with V ZOOM. Increase or decrease "H POS" and "V POS" to adjust the picture position. Image: "DYNAMIC" will expand 4:3 picture to fill the screen with non-linearity. (Some of the image is lost due to expansion.) Dynamic image is the same as FULL size image when HDTV 1080i or 720p signal is input Selecting "OFF" will display the image in a 1 by 1 pixel format. (If the input resolution is higher than a 1366 x 768 resolution, the image will be scaled down to fit the screen.)
SCREEN RESET	SCREEN O H POSITION O CLOSHINGE O CLOSHINGE O CLOSHINGE O CLOSHINGE O VRSUITION O VRSUITION O VRSUITION O VRSUITION VRSUITION VRSUITION VRSUITION VRSUITION VRSUITION VRSUITION VRSUITION VRSUITION O CLOSHINGE NO VRSUITION VRSUITION VRSUITION VRSUITION VRSUITION O CLOSHINGE NO VRSUITION VRSUI	Selecting Screen reset allows you to reset all OSM settings within SCREEN menu. Select "YES" and press "SET" button to restore the factory preset data. Press "EXIT" button to cancel. Press "EXIT" again to return the previous menu.

Mair	n-Menu			MAIN MENU O PICTURE
	AUDIO			O PICTURE O SCREEN O AUDIO O PIP O CONFIGURATION 1 O CONFIGURATION 2 O ADVANCED OPTION 4/9458 # 20 PERTURN HEAD
	Sub-M	enu		
AV	BALANCE	AUDIO CREATE CREATE DRASS O AUDIO RESET Ardel SET MEXT ENT RETURN MENU EXT MENU		Adjusts the balance of stereo sound. Press + button to move the stereo sound image to the right. Sound of the left side will be quieter. Press - button to move the stereo sound image to the left.
	TREBLE	AUDIO O BALANCE O ITREBUE O BASS O AUDIO RESET Ay-SEL BET AKXT BENT HRETURN BENU	TREBLE	Adjusts the high frequency sound. Press + button to increase TREBLE sound. Press - button to decrease TREBLE sound.
AV	BASS	AUDIO O BALANCE O TREBLE O TREBLE O TREBLE O AUDIO RESET AT-SEL SET MEXT EXT RETURN MENU-EXT MENU	BASS + 0 +ADJ EST RETURN MENU:EXT MENU	Adjusts the low frequency sound. Press + button to increase BASS sound. Press - button to decrease BASS sound.
	UDIO RESET	AUDIO O BALANCE O TREBLE O BASS O JAUDIO RESET AUDIO RESET AV-SEL GET AREAT FORT FRETURN WERN-EXIT MENU	AUDIO RESET NO YES AV:SEL EXT RETURN LESS: EXT MENU	Selecting Audio reset allows you to reset all OSM settings within Audio menu. Select "YES" and press "SET" button to restore the factory preset. Press "EXIT" button to cancel. Press "EXIT" again to return the previous menu.

Main-Menu PICTURE IN PICTURE Sub-Menu			MAIN MENU C PECTURE AUDIO PPP CONFERINATION 1 C CONFERINATION 2 O ADVANCED OPTION AVISEE LEE INTEXT EXT. FRETURN LEDUE OFT MENU
PIP SIZE	PIP ● PIP SIZE ○ PIP ALDO ○ PIP ALDO ○ PIP ALDO ○ PIP ALDO ■ PIP AV-SEL SHE SHEXT EXT FRETURN MEDD EDIT MENU	PIP SIZE LARGE MIDDLE SIMALL AT:SEL EXTERTION (2000) EXT MENU	Selects the size of picture inserted in the 'Picture-in- Picture' (PIP) mode. 'Large', 'Middle' and 'Small' are available.
® PIP AUDIO	DID PIPSUZE PIPSUDIO O PIP RESET AVRIEL GET BLEXT EXT RETURN MODE SOT MENU	PIP AUDIO MAIN AUDIO / PIP AUDIO +-SEL COTT IRETURN (COS) EXTIMENU	Selects the sound source for the PIP mode. When selecting 'MAIN AUDIO', you will get the sound from the main picture and when selecting 'PIP AUDIO', you will get the sound for the picture-in-picture instead.
PIP RESET	PIP O PIP SIZE O PIP ALD(O FIP ALSST FREE SET SHEXT EXER PRETURN VERME EXIT MENU	PIP RESET NO YES ¥Y:SEL COMERCIURN (COND EXIT MENU	Selecting PIP Reset allows you to reset all OSM settings within the PIP menu. Select "YES" and press "SET" button to restore the factory preset data. Press "EXIT" button to cancel. Press "EXIT" again to return the previous menu.
Main-Menu CONFIGURATION 1 Sub-Men	U		MAIN MENU P PCTURE SOREEN AUDO P P CONSIGNATION 5 CONSIGNATION 5 CONSIN
AUTO SETUP *:INPUT RGB2/3 only	CONFIGURATION 1 AUTO SETUP AUTO BRIGHTNESS O AUTO BRIGHTNESS O CONFIGURATE O LANGUAGE VER SIDE BOADER COLOR AV:SEL BIT INEXT EXEL INETURN MODERT MENU	AUTO SETUP PRESS EEE TO AUTO SETUP EEE setup EEE cancel EEE eat Menu	Press "SET" button to automatically adjust screen size, horizontal position, vertical position, clock, clock phase, white level and black level. Press "EXIT" button to cancel AUTO SETUP. Press "EXIT" again to return to the previous menu.
AUTO ADJUST *:INPUT RGB2/3 only	CONFIGURATION 1 AUTO DETUP AUTO ADULT AUTO ADULT O AUTO BRIGHTNESS O POWER SAVE LANGUAGE SCREEN SAVE O SADE BONDER COLOR SUBJECT STERET RETURN MEDIE ENT MENU	AUTO ADJUST ON / OFF +-SEL EXT RETURN WIND EXT MENU	Selects the auto adjust ON/OFF. When ON is selected the horizontal position, vertical position and clock-phase will adjust automatically.
AUTO BRIGHTNESS *:INPUT RGB1/2/3 only	CONSTRUENTION 1 O AUTO SETUR O AUTO SAUGET O AUTO SIRGITIVES O CONSTRUENTIVES O CONSTRUENTIVES O SOBE BOADER O SOBE BOADER SEL SET SIEXT EXT RETURN MODESTT MENU	AUTO BRIGHTINESS	Turns the Auto Brightness ON/OFF. When "ON" is selected, the Brightness will adjust automatically according to input signal.
POWER SAVE	CONFIGURATION 1 O AUTO SETUP O AUTO ADJUST O AUTO ADJUST O EXPLOSE EXPLOSE O EXPLOSE O EXPLOSE O EXPLOSE O SCREEN SAVER O SIDE BORDER COLOR O SIDE BORDER COLOR VESEL SET BIEXT EXIT RETURN MERGEDIT MENU	POWER SAVE RGB ON / OFF VDEO ON / OFF AV:SEL +-ADJ EXTERETURN (EXTERNIN)	Selects RGB "ON", the monitor will go to power management mode when RGB1,2,3 sync signal is lost. Select VIDEO "ON", the monitor will go to power management mode after about 10 minutes delay from when DVD/HD and VIDEO input signal is lost.
LANGUAGE	CONFIGURATION 1 O AUTO SETUP O AUTO BRIGHTNESS O AUTO BRIGHTNESS POWER SAVE UANGUAGE O SCREEN SAVER O SCREEN SAVER O SDEE BONDER COLOR ▲*RELENT INEXT EXT FRETURN WOOD EXT MENU	LANGUAGE ENGLISH DEDTGAIS ESPANOL ITALIANO SVENSKA II-AIS AY-SEL EXTERETURN 1000 EXT MENU	OSM control menus are available in seven languages.



OSM TURN OFF	CONFIGURATION 2 CONFIGURATION 2 CISIT URIN OFF INFORMATION OSM OSM POSITION OSM POSITION ON PUT DETECT MONITOR INFORMATION AF/SEL SET HEXT EXET FRETURN DEMU/EXT MENU	OSM TURN OFF 10 SEC. + «ADJ EXTERETURN TOND : EXT MENU	The OSM control menu will stay on as long as it is in use. In the OSM Turn Off submenu, you can select how long the monitor waits after the last touch of a button to shut off the OSM control menu. The preset choices are 10 -240 seconds.
INFORMATION OSM	CONFIGURATION 2 C LONG CABLE MANUAL O GSM TURN OFF INFORMATION OS/M O GFT FILER O GMUP DETECT O MONITOR INFORMATION AT REEL SET HEXT FOOT FRETURN DIAU-EXT MENU	INFORMATION OSM ON 10 SEC. OFF AV SEL + -:ADJ [XIT]:RETURN	Selects whether the information OSM is displayed or not. The information OSM will be displayed when the input signal or source changes. the information OSM will also give a warning when there is no-signal or the signal is out-of range. A time between 3 to 10 seconds is available.
OFF TIMER	CONFIGURATION 2 CONFIGURATION 2 CONFIGURATION OSM OFF TWEE OSM POSTION ONPUT DETECT MODULTOR INFORMATION AT SEL SET ANEXT COT FRETURN DIANJEXT MENU	OFF TIMER ON 1 HOUR OFF AV:SEL +-:ADJ [XXII]:RETURN	To select OFF TIMER mode ON/OFF. In the OFF TIMER menu, you can preset the monitor to automatically power down. A time between 1 to 24 hours is available. When the OFF TIMER is set, the SCHEDULE (see page 27) settings will be disabled. OFF TIMER is not reset when monitor is shut off.
OSM POSITION	CONFIGURATION 2 O LONG CABLE MANUAL O SUST TURN OFF O INFORMATION OSM O OFF TIMER O CSU POSITION O INPUT DETECT O MONUTO RIFCONTANTON AT SEL SET INEXT FOR EREVIEW MEMOREXIT MENO	OSM POSITION H POSITION V POSITION V POSITION 	Adjusts the position of the OSM menu.
INPUT DETECT	CONFIGURATION 2 C LONG CABLE MANUAL O GSN TURN OFF O INFORMATION OSM O OST TURN O OST TURN O OST TURN O MONITOR INFORMATION AV-SEL IST HEXT EXT RETURN TENN TENN	INPUT DETECT LASI DETECT LASI DETECT VIDEO DETECT NONE AY-SEL COT PRETURN CENC-EXIT MENU	Selects the method of input detection when more than two input devices are connected. FIRST DETECT: When the current video input signal is not present, then the monitor searches for a video signal from the other video input port. If the video signal is present in the other port, then the monitor switches the video source input port to the new found video source automatically. The monitor will not look for other video signals while the current video source is present. This function is available at input RGB 1/2/3. LAST DETECT: When the monitor is displaying a signal from the current source and a new secondary source is supplied to the monitor, the monitor will automatically switch to the new video source. When current video input signal is not present, the monitor searches for a video signal from the other video input port. If the video signal is present in the other port, then the monitor switches the video source input port to the new found
			video source automatically. This function is available at input RGB 1/2/3. VIDEO DETECT: DVD/HD or VIDEO inputs will have priority over RGB1/2/3. When DVD/HD or VIDEO input signal is present the monitor will change and keep to the DVD/DH or VIDEO input. NOTE: The Monitor will not search the other video input port.
MONITOR INFORMATION	CONFIGURATION 2 O LONG CABLE MANUAL O GSM TURN OFF O INFORMATION OSM O FF THER O GSM POSITION O INFUT DETECT MICHITICA INFORMATION AT-SEL SET INEXT EXIT EXETURIN DEMUEST MENU	MONITOR INFORMATION MODEL NAME: LCD3210 SERIAL: 12315XXX Externation: Medig:externation	Indicates the model and serial number of your monitor.

Main-Menu ADVANCED OPTION			MAIN MENU O PICTURE O AUDIO O PIP CONFIGURATION 1 O CONFIGURATION 2 O ADVANCED OPTION 4.2584 EEE NEXT ARTURNI TURE BUT MENU
Sub-Men	U		
S-VIDEO MODE	ADVANCED OPTION STUDIO MODE BLACK LEVEL EXPANSION C GAMMA SECTION C GAMMA SECTION C FLUM MODE SCAN CONVENSION O FLUM MODE TLE MAY TRUK AT SEL ELEMENT EXP RETURN MEDIA EXT MENU	S-VIDEO MODE PRIORITY / SEPARATE +-SEL EXT.RETURN (2020) EXT MENU	Selects the S-Video input port function. PRIORITY: If cable is connected to the S-Video input, it will have priority over the composite input port. SEPARATE: S-Video port and Composite port can be selected as independent input ports.
			Sets of the resolution of input signal to one of the following: 1024x768, 1280x768 and 1360x768.
	ADVANCED OPTION O S-VIDEO MODE INPUT RESOLUTION	INPUT RESOLUTION AUTO 1024 X 768	AUTO: Determines the resolution automatically.
INPUT RESOLUTION	GAMMA SELECTION SCAN CONVERSION TILE MATRIX HEAT STATAS G IR CONTROL	1280 X 768 1360 X 768	1024x768 : Sets the resolution to 1024x768
*:INPUT RGB2/3 only	▲▼:SEL BET :NEXT EXIT :RETURN MENU:EXIT MENU	A▼:SEL EXIT RETURN MENU	1280x768 : Determines the resolution to 1280x768
			1360x768 : Determines the resolution to 1360x768
BLACK LEVEL EXPANSION *:INPUT VIDEO and DVD/HD only	ADVANCED OPTION S-VIDEO MODE PERAFK EVEL SOLONSION SCAN MODE SCAN MODE SCAN MODE I IL MODE I IL CONTROL SCAN EXCENTION SCAN CONVERSION I IL MODE I IL CONTROL SCAN CONVERSION I IL CONTROL SCAN CONVERSION I IL CONTROL I IL CON	BLACK LEVEL EXPANSION HIGH MIDDLE OFF	Selects a level of black expansion. To prevent going under the black cut-off level, please adjust the "Black Level" in moderation on the OSM menu.
GAMMA SELECTION	ADVANCED OPTION S-WDEO MODE BLACK KEVE EXPANSION GLACK KEVE EXPANSION GLACK KEVE EXPANSION FLAM MODE SCAN MODE IN CONVENSION FLAM MODE IN CONVENSION AVSEL SET EXPLOREM MODERENT MENU	GAMMA SELECTION 2. 2 2. 4 S. GAMMA NATIVE ▲▼:SEL EXT PRETURN (MENDLEXIT MENU	Selects a display gamma. 1: 2.2 2: 2.4 3: S gamma 4: Native NOTE: sRGB picture mode is standard and cannot be changed.
SCAN MODE *:INPUT DVD/HD, VIDEO only	ADVANCED OPTION S-VIDEO MODE DELACK LEVEL EXPANSION GAMA SELECTION SCAN CONVERSION FILM MODE I IR CONTROL SELECT BREVIEW	SCAN MODE OVERSCAN / UNDERSCAN +-:SEL EXT,RETURN COX (-EXT MENU	Changes the display area of the image. OVER SCAN: Set to display area about 95% UNDER SCAN: Set to display area about 100%
SCAN CONVERSION	ADVANCED OSITON O SVUECO MODE O BLACK LEVEL EXPANSION O GAMMA SELECTION O GAMMA SELECTION O FROMOGESTON O FROMOGESTON O FROMOGESTON O FROM TROM	SCAN CONVERSION PROGRESSIVE / INTERLACE *-:SEL EXT.RETURN (2020)-EXT MENU	Selects IP (Interlace to Progressive) converter function. PROGRESSIVE: Enable the IP function, to convert interlace signal to progressive. [NOTE] This mode is the normal setting. INTERLACE: Disable the IP function. [NOTE] This mode is better suited for motion pictures, but increase the risk of image retention.
FILM MODE *:INPUT DVD/HD, VIDEO only	ADVANCED OPTION S-VIDEO MODE G S-VIDEO MODE G GAMINA SELECTION G SCAN MODE SCAN MODE G FILL MODE FILL MODE V - SEL EGT INEY EXT FRETURN MEDDI EXT MENU	FILM MODE AUTO / OFF +-: SEL EXTERTURN (1232) EXIT MENU	Selects Film mode function. AUTO: Enables the Film mode function. This mode is better suited for movies which are converted to 24 Frames/sec source to DVD Video. We recommend to select "PROGRESSIVE" in "SCAN CONVERSION" OFF: Disable the Film mode function. This mode is bette suited for Broadcasting or VCR source.



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.

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:

- Powering ON or OFF LCD monitor • Switching between input signals Connection I CD Monitor+PC SPEAKER OUT AC N PC IN PC OUT RGB3 IN DVD/HD IN VIDEO AUDIO 0 0 0 0 0 0 S. 0000 ÓÓ ଚ Ġ 00.0 000 • @.....) ത്തിറ ിത്തി 0 PC RS-232C "IN" terminal RS-232C Cable
- 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]	0Dh (In ASCII code, ' 🖵 ') fixed.

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 OD	Command received
	'0' '0' '!' ' 🖵 '	(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	İ	21h
POWER OFF	"	22h
INPUT RGB 1	_r]	5Fh 72h 31h
INPUT RGB 2	_r2	5Fh 72h 32h
INPUT RGB 3	_r3	5Fh 72h 33h
INPUT VIDEO	_v1	5Fh 76h 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''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.

Structure of	of the	Read-command
--------------	--------	--------------

			ASCII		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
liipoi	Video	AV	vl	v1	76 49	76 31
	DVD/HD		vl	v2	76 49	76 32
	S-VIDEO	AV	vl	v3	76 49	76 33
Picture mode	Highbright		vM	pl	76 4D	70 31
	Standard resolution		vM	p2	76 4D	70 32
	Around	0.5°C	. 1	(av.) + 25.0	74 (0 70 01	2B 20 32 35
		resolution	tcx1	(ex.) +25.0	74 63 78 31	2E 30
Temperature of Internal	AV board	1 °C resolution	tc 1	(ex.)+25	74 63 31	2B 20 32 35
monitor	Around Power	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

NOTE: For complete information please see file "External_Control_LCD3210.pdf" on the CD-ROM.

Denotes an AV unit function.

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

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

XtraView+[™] 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.

English

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.

NEC Monitor Customer Service & Support Customer Service and Technical Support: Fax:	(800) 632-4662 (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: Canadian Customers: Government Sales: Government Sales email:	(888) 632-6487 (866) 771-0266, Ext#: 4037 (800) 284-6320 gov@necdisplay.com
Electronic Channels World Wide Web: Product Registration: European Operations:	http://www.necdisplay.com http://www.necdisplay.com http://www.nec-display-solutions.com

Drivers and Downloads:

http://www.necdisplay.com

Specifications

Product Specifications(LCD3210)

			Analog Input Digital Input			
LCD Module Pixel Pitch			(32" / 80 cm diagonal)			
		Pitch	0.511mm			
Resolution Color			1366 x 768 dots			
			Over 16 million colors (depending on video card use	ed)		
	Brigh	tness	500cd/m2 (Typ.)			
	Contr	ast ratio	600 : 1			
	Viewi	ing Angle	Up 88°/ Down 88°/ Left 88°/ Right 88° (typ) @ CR	>10		
Desig	n View	v Distance	875mm			
Frequency	Horiz	ontal	15.625/15.734kHz , 31.5kHz - 91.1kHz	31.5kHz - 91.1kHz		
	Vertic	al	50Hz, 60Hz to 85Hz			
Pixel Clock			25.0MHz - 162.0MHz			
Viewable Size			392.3 x 697.7mm			
Input Signal	PC In	put				
	v	ídeo	Analog RGB 0.7V p-p	TMDS		
			Input Impedance 75 Ohm			
			Composite sync on Green Video			
			: 0.3Vp-p Nega (video 0.7Vp-p Positive)			
		200 C				
		ync	Separate: TTL level (Positive/Negative), Input			
			Impedance 2.2k Ohm(RGB3:2.2k ohm/75 ohm selectable)			
		nput terminal	· · · ·	DVI-D (Digital)		
	VIDEC	O Input	Composite 1.0V p-p Input Impedance 75 Ohm BNC	(AV)		
			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			
	AUDI	O Input	RCA PIN-JACK L/R 2INPUT, STEREO Mini Jack 11NP			
	R523		9 Pin Mini D-sub			
Output	PC	Video				
-			Analog RGB Video: 0.7V p-p with 75 ohm terminated Seperate HV sync: TTL level (Posi/Nega) with 2.2k ohm terminated			
signal		Sync	· · · - ·	nm terminatea		
		Connector	Mini D0sub 15pin			
	VIDEC	>	BNC 1 Output, Composite 1.0V p-p with 75 ohm ter			
	AUDI	0	RCA PIN-JACK L/R: 1 Output, 0.15Vrms with 1k ohn	n terminated		
	SPEAI	KER OUTPUT	External Speaker Jack 7W + 7W			
Power Supply			1.4 - 0.6A @ 100-240VAC, 50/60Hz			
Operational	Temp	erature	5 - 40 deg C			
Environment	Humi	dity	20 - 80% (without condensation)			
Storage	Temp	erature	-20 - 60 deg C			
Environment	Humi	dity	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) × 510.3 (H) × 200 (D) mm (with Stand)		
	Gross	5	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)			
	Gross	5	46.3 lbs / 21.0kg			
VESA compatible o	arm		3 x 200mm x 200mm (8 Holes)			
mounting interface			2 x 200mm x 200mm (6 Holes)			
Complied Regulate		d	UL 60950-1/CSA C22.2 No.60950-1/ TUV-GS/EN60950-1			
Guidelines			FCCB/DOC-B/EN55022-A/EN55024/EN61000-3-2/EN61000-3-3/CE			
Power Manageme	nt		VESA DPM			
Plug & Play			VESA DPM VESA DDC2B, DDC/CI			
Resolutions Supported			VESA DDC2B, DDC/Cl 640 x 480 gt 60Hz to 85Hz			
			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, Remote Control, AA Battery x 2, Clamper x 3, Screw x 4, CD-ROM, Stand x 2, Thumbscrew for stand x 2, Main switch cover x 1, Ferrite Core x 2, Band x 2, Speaker plug x 1set			

NOTE: Technical specifications are subject to change without notice.

Denotes an AV unit function.

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 :V I D E O

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



						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





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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 (after-image effects), accident, misuse or abuse or operated contrary to the instructions contained in the User's Manual. Any such conditions will void this warranty.

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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

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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
Tel. No.:	Itasca, Illinois 60143 (630) 467-3000

Type of Product:Computer MonitorEquipment Classification:Class B PeripheralModel:MultiSync LCD3210(L325RM)



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

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