



AUTO-SCANNING WITH DIGITAL CONTROL
COLOR DISPLAY MONITOR

LXA420/LXA520

USER'S GUIDE



For future reference, record the serial number of your display monitor in the space below:

SERIAL No.

The serial number is located on the rear cover of the monitor.

Internet Home Page: <http://www.mitsubishi-display.com/>

Supplying Windows 95/98 INF File download service, new products information, etc.

CAUTION

The power cord provided with this monitor is designed for safety and must be used with a properly grounded outlet to avoid possible electrical shock.

Do not remove the monitor cabinet as this can expose you to very high voltages and other hazards.

ANMERKUNG:

Dieser Monitor erfüllt die Anforderungen der deutschen Ergonomie-Norm ZH1/618/10.80 bei Verwendung der beiden folgenden Timing:

<u>Auflösung</u>	<u>Videoeingang</u>	<u>fH(kHz)</u>	<u>fV(Hz)</u>	<u>Interlace/Non-Interlace</u>
1024x768	Analog RGB, 0.7Vs-s	60	75	Non-Interlaced

Zur Trennung vom Netz ist der Netzstecker aus der Steckdose zu ziehen, welche sich in der Nähe des Gerätes befinden muß und leicht zugänglich sein soll.

Das Gerät stellt sich automatisch auf die zutreffende Nennspannung ein.

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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:

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- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

THIS PRODUCT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS WITH SIGNAL CABLE SC-B102. USE IT TO REDUCE THE POSSIBILITY OF CAUSING INTERFERENCE TO RADIO, TELEVISION, AND OTHER ELECTRIC DEVICES.

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WARNING!

This product is not designed for use in life support devices and Mitsubishi Electric corporation makes no representations to the contrary. Life support devices are those devices which are used to measure, diagnose, or evaluate the tissue, systems or functions of the human body; or other devices employed to support or sustain life or good health.

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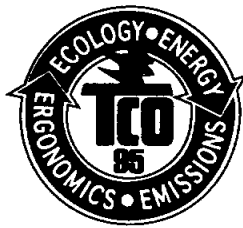
We, Mitsubishi Electric Corp., declare under our sole responsibility, that this product is in conformity with the following standards:

EN60950
EN55022 Class B
EN50082-1

following the provisions of:

73/23/EEC	Low Voltage Directive
89/336/EEC	EMC Directive

As an ENERGY STAR Partner, Mitsubishi Electric Corporation has determined that this product meets the ENERGY STAR guidelines for energy efficiency.



Congratulations! You have just purchased a TCO'95 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and to the further development of environmentally-adapted electronic products.

Why do we have environmentally-labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem as far as computers and other electronic equipment are concerned is that environmentally harmful substances are used both in the products and during their manufacture. Since it has not been possible so far for the majority of electronic equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter Nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from both the working and natural environment viewpoints. Since all types of conventional electricity generation have a negative effect on the environment (acidic and climate-influencing emissions, radioactive waste, etc.), it is vital to conserve energy. Electronic equipment in offices consumes an enormous amount of energy, since it is often routinely left running continuously.

What does labelling involve?

This product meets the requirements for the TCO'95 scheme, which provides for international environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Naturskyddsforeningen (The Swedish Society for Nature Conservation) and NUTEK (The National Board for Industrial and Technical Development in Sweden).

The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands concern among other things restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons), and chlorinated solvents. The product must be prepared for recycling and the manufacturer is obliged to have an environmental plan, which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display after a certain period of inactivity shall reduce its power consumption to a lower level, in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example in respect of the reduction of electric and magnetic fields, along with physical and visual ergonomics and good usability.

In and after the middle of this page, you will find a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development Unit
S-114 94 Stockholm
Sweden

Fax: +46 8 782 92 07

E-mail (Internet): development@tco.se

Current information regarding TCO'95 approved and labelled products may also be obtained via the Internet, using the address:

<http://www.tco-info.com/>

TCO'95 is a co-operative project between



Environmental Requirements

Brominated flame retardants are present in printed circuit boards, cabling, casings and housings, and are added to delay the spread of fire. Up to 30 % of the plastic in a computer casing can consist of flame-retardant substances. These are related to another group of environmental toxins, PCB, and are suspected of giving rise to similar harm, including reproductive damage in fish-eating birds and mammals. Flame retardants have been found in human blood and researchers fear that they can disturb foetus development.

Bio-accumulative* TCO'95 demands require that plastic components weighing more than 25 grammes must not contain flame retardants with organically bound chlorine or bromine.

Lead

can be found in picture tubes, display screens, solder and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning.

The relevant bio-accumulative* TCO'95 requirement permits the inclusion of lead, as no replacement has yet been developed.

Cadmium

is present in rechargeable batteries and in the colour-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses.

The relevant bio-accumulative* TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of cadmium. The colour-generating layers of display screens must not contain any cadmium.

Mercury

is sometimes found in batteries, relays and switches. Mercury damages the nervous system and is toxic in high doses. The relevant bio-accumulative* TCO'95 requirement states that batteries may not contain more than 25 ppm (part per million) of mercury.

demands require that no mercury is present in any of the electrical or electronic components concerned with the display unit.

CFCs (freons) are sometimes used for washing printed circuit boards and in the manufacture of expanded foam for packaging. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on Earth of ultra-violet light with consequent increased risks of skin cancer (malignant melanoma).

The relevant TCO'95 requirement: Neither CFCs nor HCFCs may be used during manufacture of the product or its packaging.

* Bio-accumulative is defined as substances which accumulate within living organisms.

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Note : This manual is designed for use with LXA420W/LXA520W color LCD monitor.

Congratulations on your purchase of the LXA420W/LXA520W high resolution color LCD monitor. Mitsubishi designed this monitor to provide you with years of reliable trouble-free operation. Once again, thank you for selecting our product and welcome to Mitsubishi!

This guide tells you how to connect, adjust and care for your LXA420W/LXA520W monitor. This guide also provides technical specifications and instructions for troubleshooting any basic problems you may experience with your monitor.

1.1 Features

The LXA420W is a 36cm/14" or LXA520W is a 38cm/15" intelligent, microprocessor-based LCD monitor compatible with most analog RGB (Red, Green, Blue) display standards, including PS/V®, PS/2®, Apple® Macintosh® Centris, Quadra, and Macintosh II family signals.

It provides crisp text and vivid color graphics with VGA, SVGA, XGA (non-interlaced), and most Macintosh compatible color video cards.

- The monitor's wide auto-scanning compatibility range makes it possible to upgrade video cards or software without purchasing a new monitor.
- Digitally controlled auto-scanning is done using an internal microprocessor, for horizontal scan frequencies between 31.4kHz and 60.2kHz, and vertical scan frequencies between 56.0Hz and 85.1Hz. The microprocessor-based intelligence allows the monitor to operate in each frequency mode with the precision of a fixed frequency monitor.
- The monitor contains resident memory for pre-programmed screen display standards and is also capable of storing additional user adjustment parameters.
- The monitor is capable of producing a maximum horizontal resolution of 1024 dots and a maximum vertical resolution of 768 lines typically. This display is well suited for windowing environments.
- The monitor has a power management function accorded to VESA-DPMS-standard. To save energy, the monitor must be connected to a system compliant with the VESA DPMS-standard. (Refer to your computer and/or video card instructions for proper operation.)
- For use in a variety of applications, the monitor complies with UL 1950, CSA C22.2 No.950 and EN60950 for safety, FCC Class-B, VCCI Class II and EN55022 Class-B for EMI, MPR-II, ISO 9241-3 and ISO 9241-8 for ergonomics. The monitor also complies with TCO'95 guideline for environmentally safe use.
- Digital Chassis design for lighter, more compact enclosure and increased screen performance.
- The monitor complies with Video Electronics Standards Association (VESA™) DDC1/2B(EDID) specification. If your computer provides DDC1/2B(EDID) function, setup will be done automatically.

1.2 Internal Preset Memory Capability

To minimize adjustment needs, the factory has preset popular display standards into the monitor, as shown in Table 1. If any of these display standards are detected, the picture size and centering are automatically adjusted. All of the factory presets may be overwritten by adjusting the user controls. The monitor is capable of automatically storing up to 7 additional display standards. The new display information must differ from any of the existing display standards by at least 1kHz for the horizontal scan frequency or 6Hz for the vertical scan frequency or the sync signal polarities must be different.

Table 1. Memory Buffer Factory Presets

Resolution				Fh (kHz)	Fv (Hz)	Polarity	
						H	V
640	x	480	N.I.	35.0	66.7	-	-
832	x	624	N.I.	49.7	74.6	-	-
1024	x	768	N.I.	60.2	74.9	-	-
640	x	350	N.I.	31.4	70.0	+	-
640	x	480	N.I.	31.5	59.9	-	-
640	x	480	N.I.	37.5	75.0	-	-
640	x	480	N.I.	43.3	85.0	-	-
800	x	600	N.I.	35.1	56.0	+	+
800	x	600	N.I.	37.9	60.3	+	+
800	x	600	N.I.	48.1	72.2	+	+
800	x	600	N.I.	46.9	75.0	+	+
800	x	600	N.I.	53.7	85.0	+	+
1024	x	768	N.I.	48.4	60.0	-	-
1024	x	768	N.I.	56.5	70.1	-	-
1024	x	768	N.I.	58.1	72.1	-	-

1.3 Power Management Function

The monitor has the power management function which reduces the power consumption of the monitor when not in use. There are three reduced power level modes.

■ Stand-by mode

When the horizontal sync signal is off after about 10 seconds, the monitor is switched to a stand-by mode. When the monitor is in stand-by mode, the screen is off and the power indicator will blink for 3 seconds of On-time and 1 second Off-time.

After the horizontal sync signal is restored, picture will be displayed immediately.

■ Suspend mode

When the vertical sync signal is off, after about 10 seconds the monitor is switched to a suspend mode which reduces the monitor power consumption to less than 8W.

When the monitor is in suspend mode, the screen is off and the power indicator will blink for 3 seconds of On-time and 1 second Off-time. After the vertical sync signal is restored, picture will be displayed within a few seconds.

■ Power-off mode

When the horizontal sync signal and vertical sync signal are off, after about 10 seconds the monitor is switched to a power-off mode.

When the monitor is in power-off mode, the screen is off, and the power indicator will blink for 3 seconds of On-time and 1 second Off-time.

After both the sync signals are restored, picture will be displayed within several seconds.

1.4 DDC

The monitor includes the DDC1 and DDC2B feature. DDC (Display Data Channel) is a communication channel over which the monitor automatically informs the host system about its capabilities (e.g. each supported resolution with its corresponding timing).

DDC is routed through previously unused pins of the 15-pin VGA connector.

The system will perform "Plug and Play" feature if both, monitor and host, implement the DDC protocol.

1.5 Location Considerations

When setting up and using the monitor, keep the following in mind:

- * For optimum viewing, avoid placing the monitor against a bright background or where sunlight or other light sources may reflect on the display area of the monitor; place the monitor just below eye level.
- * Avoid covering the slots or openings of the monitor. Allow adequate ventilation around the monitor so the heat from the monitor can properly dissipate. Avoid putting the monitor into any enclosure that does not have adequate ventilation.
- * Avoid exposing the monitor to rain, excessive moisture, or dust, as this can cause a fire or shock hazard.
- * Avoid placing the monitor, or any other heavy object, on the power cord. Damage to the power cord can cause a fire or electrical shock.
- * When transporting the monitor, handle it with care.
- * Avoid giving the shock or scratch to the screen, as screen is fragile.

CAUTION

Keep your fingers away from the pivot area of the tilt base.

1.6 Cleaning Your Monitor

When cleaning the monitor, please follow these guidelines:

- * Always unplug the monitor before cleaning.
- * Wipe the screen and cabinet front and sides with a soft cloth.
- * If the screen requires more than dusting, apply alcohol solution to a soft cloth to clean the monitor screen.

CAUTION

Do not use benzene, thinner or any volatile substances to clean the unit as the finish may be permanently marked. Never leave the monitor in contact with rubber or vinyl for an extended time period.

1.7 Unpacking

After you unpack the box you should have all of the items indicated in Figure 1. Save the box and packing materials in case you ship or transport the monitor. Complete and mail in warranty cards.

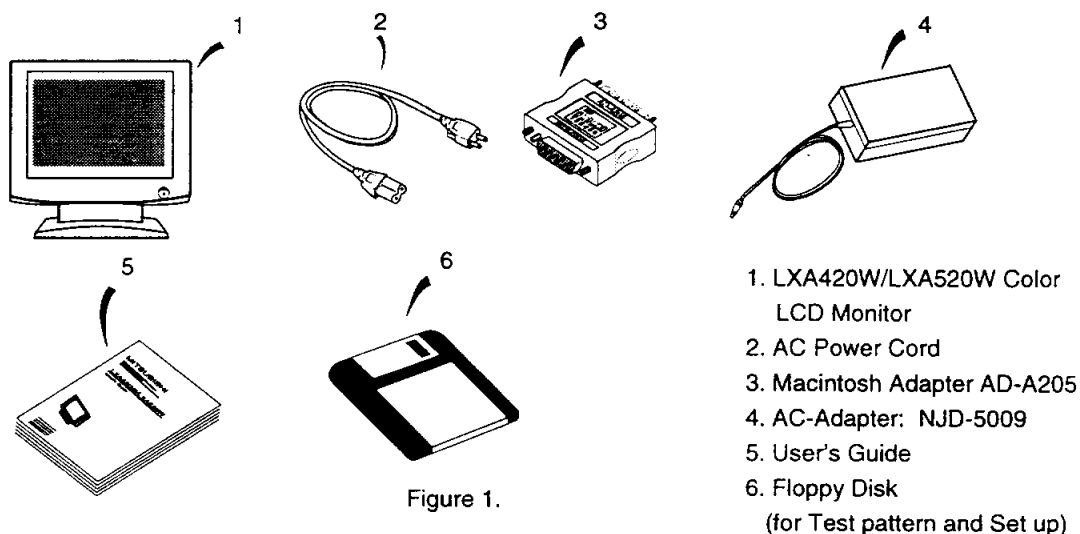


Figure 1.

1.8 Tilt Base

The monitor comes with a tilt base. This enables you to position the monitor to the best angle for maximum viewing comfort.

Screen Position Adjustment

Adjust the tilt of the monitor by placing your hands at opposite sides of the case, as shown in Figure 2. You can adjust the monitor 35 degrees up or 5 degrees down, as shown below.

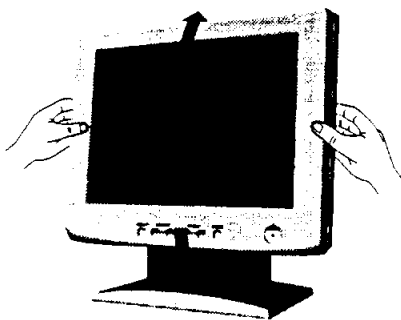
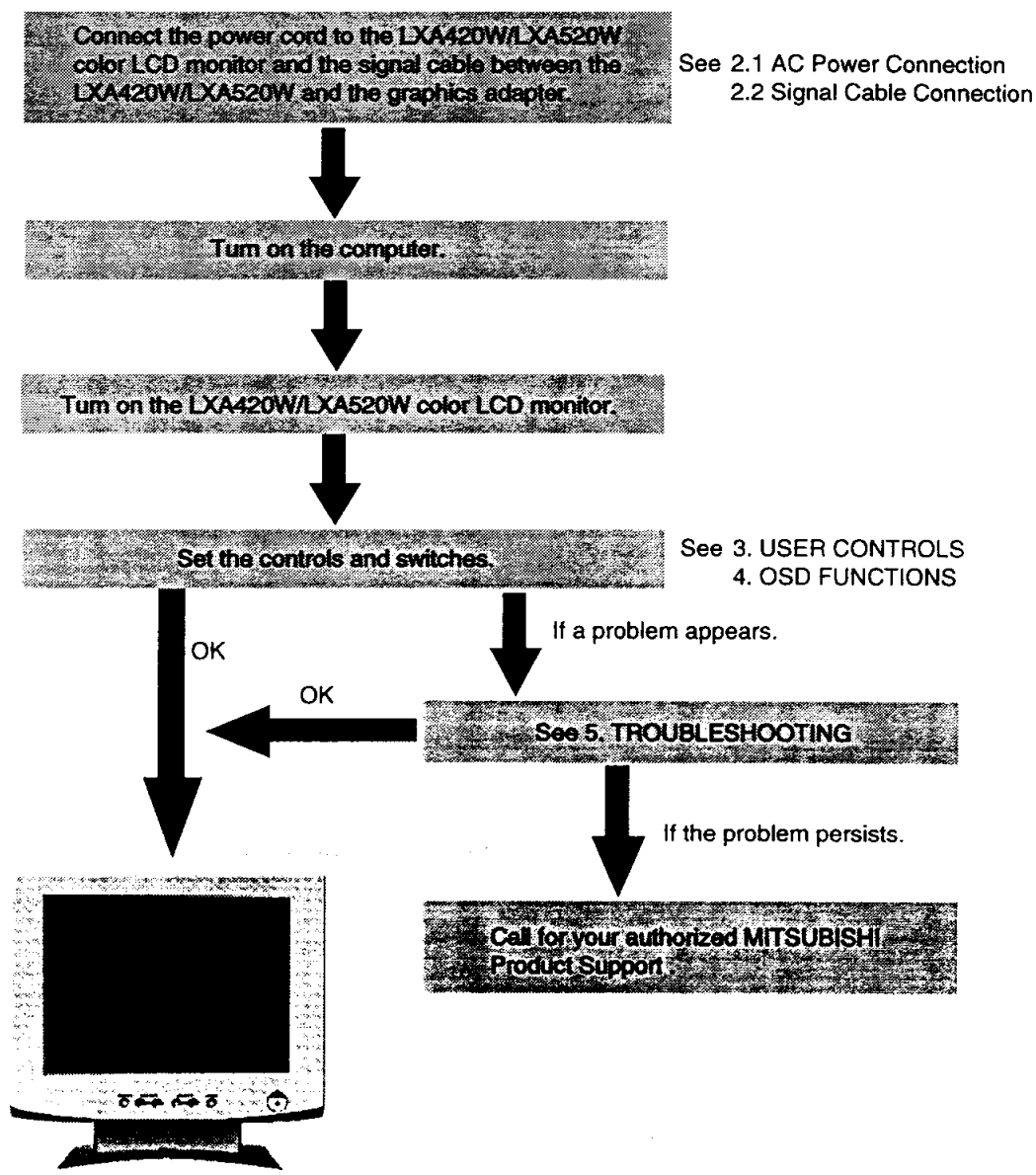


Figure 2.

1.9 Quick Operation Chart

To summarize the steps in connecting your computer and adapter with LXA420W/LXA520W color LCD monitor and setting the necessary controls and switches, refer to the chart below.



CONNECTING THE MONITOR

On the back of the monitor are two plug-in connections: one for the DC power connector and DB9-15P connector for video.

2.1 AC Power Connection

Remove the cable cover. (See Figure 3.) DC jack is connected into the DC power connector on the back of the monitor. One end of the AC power cord is connected into the AC Adapter, and another end of the AC power cord is plugged into a AC outlet. (See figure 4.) The monitor's auto-sensing AC Adapter can automatically detect 100-120V AC or 220-240V AC and 50 or 60Hz.

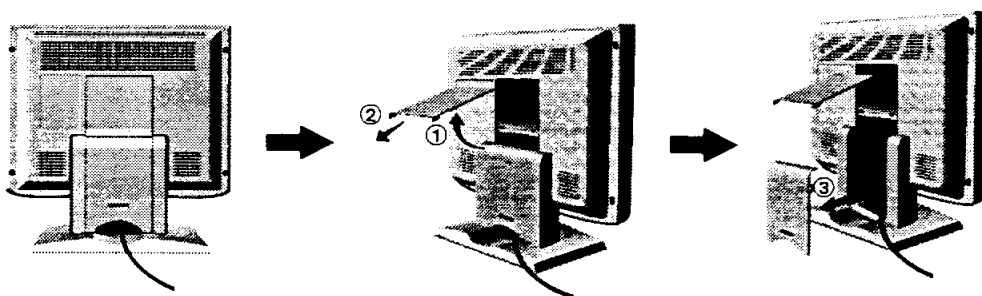


Figure 3.

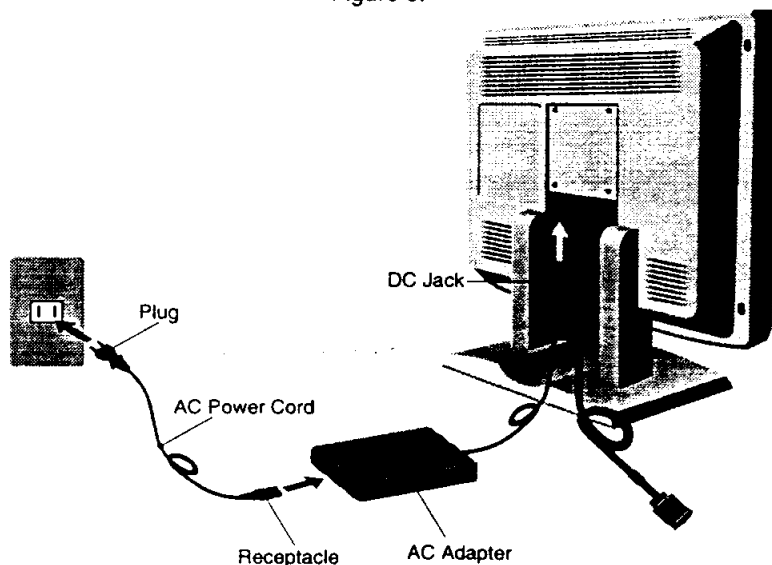


Figure 4.

CAUTION

The socket-outlet shall be installed near the equipment and shall be easily accessible. During servicing, disconnect the plug from the socket-outlet.

Do not use this AC Adapter to other equipments, as this can cause a fire.

Même si le moniteur est mis hors tension il reste toujours alimenté. La prise secteur devrait ainsi être facilement accessible en cas d'urgence.

2.2 Signal Cable Connection

The attached video signal cable provides a DB9-15P connector for the VGA compatible analog RGB outputs on your computer. The RGB signal may be derived from an IBM® PS/2, or compatible Apple Macintosh built-in video. Most third party color cards can also be interfaced using the free Mitsubishi Apple adaptor available from your dealer.

2.2.1 Connecting to Any IBM VGA Compatible System

Figure 5 shows the SC-B102 cable connection to the Video Graphics Array (VGA) port in an IBM Personal System/2® Model 50, 60, 70 and 80, or any VGA compatible system.

1. Power off, the monitor and the computer.
2. Connect the one end of the SC-B102 cable to the 15-pin connector on the VGA controller card.
3. Power on the computer, then the monitor.
4. After using the system, power off the monitor, then the computer.

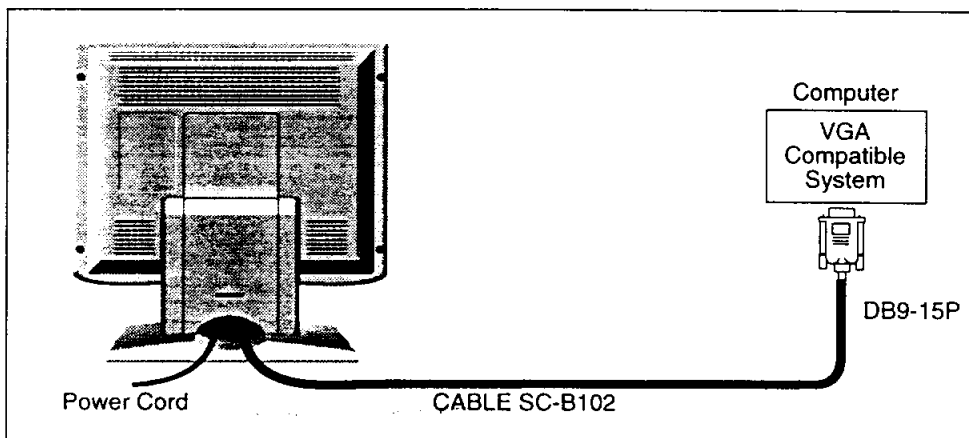


Figure 5.

2.2.2 Connecting to An Apple Macintosh Centris, Quadra, and Apple Macintosh II Family

Figure 6 shows the SC-B102 cable and AD-A205 Adapter to the video port in an Apple Macintosh.

1. Power off, both the monitor and the computer.
2. Set the DIP switches of Macintosh Adapter according to the setting chart.
(See 7.1 Macintosh Adapter AD-A205 settings)
3. Connect the 15-pin (DB-15P) end of the AD-A205 Adapter to the straight 15-pin connector on the Macintosh video port on the CPU or on the video board.
4. Connect the sub-miniature 15-pin (DB9-15P) end of AD-A205 Adapter to the SC-B102 cable.
5. Power on the Macintosh, then the monitor.
6. After using the system, power off the monitor, then the Macintosh.

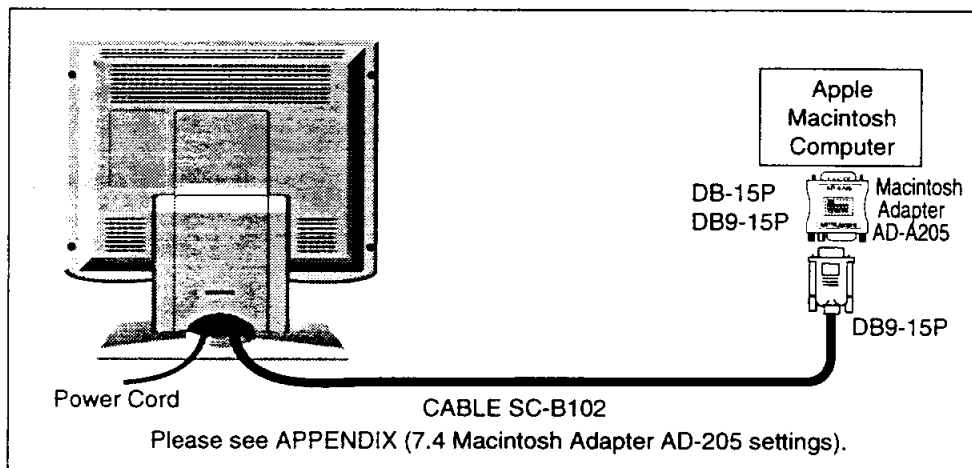


Figure 6.

2.3 How to utilize the LXA420W/LXA520W by "Setting of Display" of Windows95.

- (1) Start the Windows95.
- (2) Click on the Start menu and settings to open the Control panel.
- (3) Double click on "Display".
- (4) Click on the Settings tab of the Display Properties window.
- (5) Click on the Settings tab (or Change Display Type...) of the Display Properties window.
- (6) Click on the "Change....." at the right of the Monitor type window.
- (7) Click on "Have Disk..." below the model section in the select Device window.(screen shot)
- (8) Click on "OK" of the Install from disk window.
- (9) Click on "Show compatible devices" from the select device window.
Confirm your model of "Mitsubishi LXA420W" or "Mitsubishi LXA520W". Click on "OK".
- (10) Click on "Renew", "Close" (or "OK") in the Change Display Type(or "Change.....") window.
- (11) Click on "OK" in the Display Properties window.

3

USER CONTROLS

3.1 Control Names

See Figure 7 and 8 for the location of the following user controls and indicators. Each control is identified by number and is described individually.

FRONT

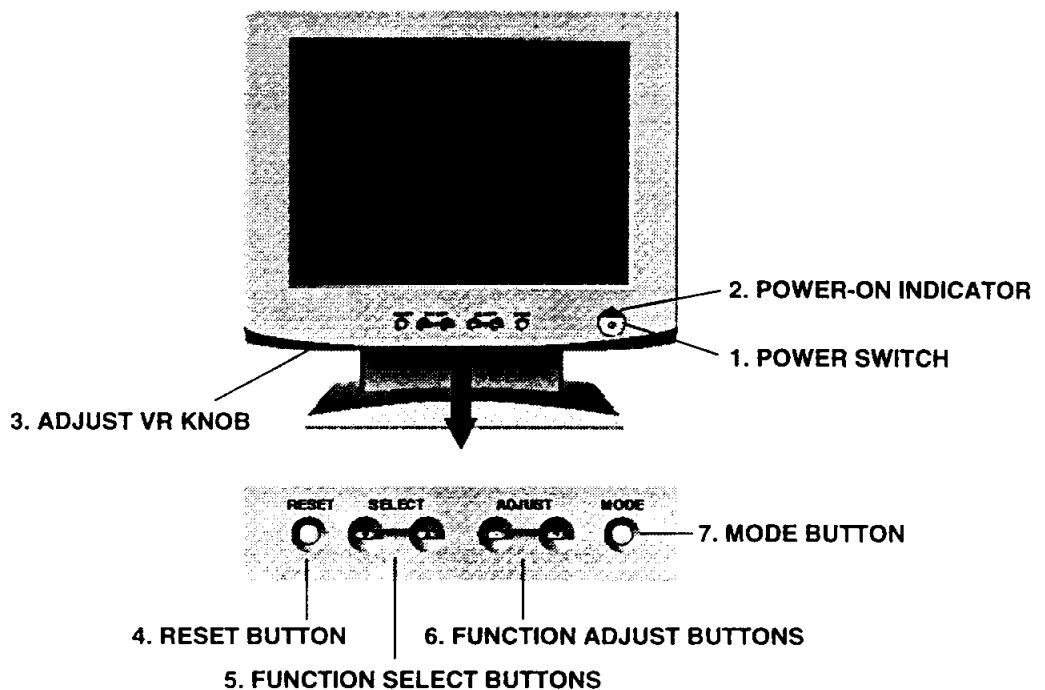


Figure 7.

REAR

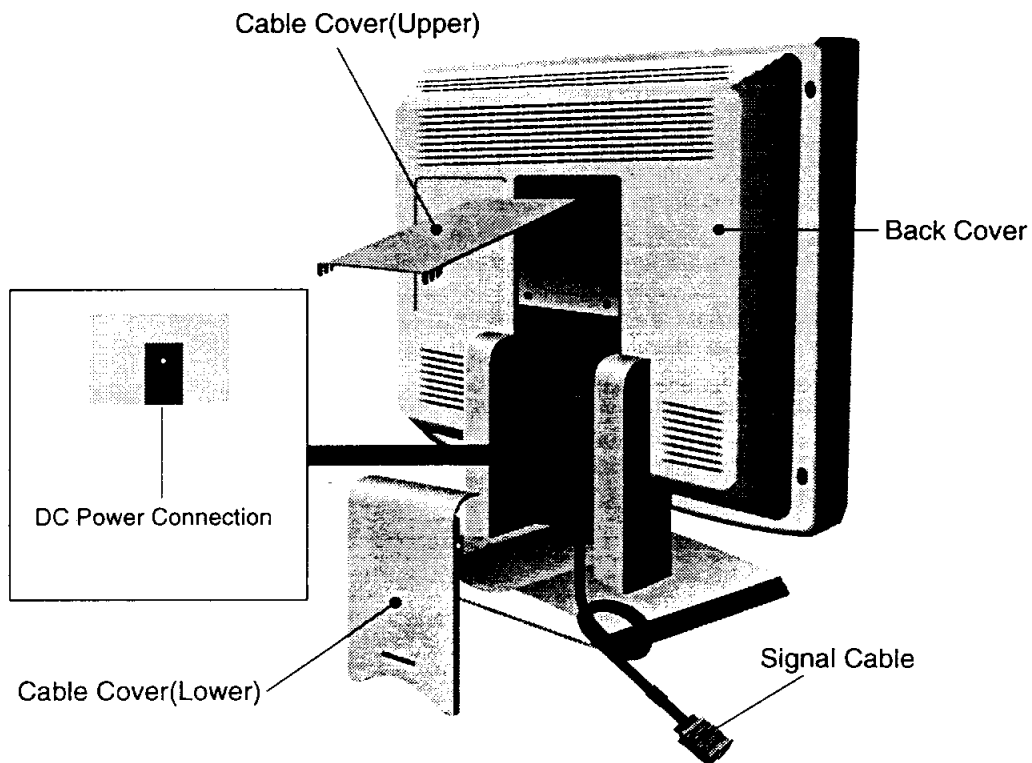


Figure 8.

3.2 Function

1. **POWER SWITCH:** A push-on push-off switch for DC power.
2. **POWER-ON INDICATOR:** This indicator illuminates when DC power is on.
3. **ADJUST VR KNOB:** Turn the control clockwise to increase brightness or adjust the screen by OSD function.
4. **RESET BUTTON:** A push type button that is used to restore the factory preset timing.
5. **FUNCTION SELECT BUTTONS:** Push the select buttons to choose one of the functions that is superimposed on the display screen.
6. **FUNCTION ADJUST BUTTONS:** Push the adjust buttons to adjust the image on the screen that is selected via the function select buttons.
7. **MODE BUTTON:** Expand the small screen to whole screen. (less than 1024 x 768 resolution) Push again to restore the screen size.

- (1) **BRIGHTNESS:** Adjusts to desired Brightness level.
- (2) **CONTRAST:** Adjusts to the desired contrast level.
- (3) **BLACK LEVEL:** Adjusts to the desired Black level.
- (4) **V-POSITION (Vertical Position):** Controls the vertical position of the image on the screen.
- (5) **H-POSITION (Horizontal Position):** Controls the horizontal position of the image on the screen.
- (6) **CLOCK:** Controls the Clock frequency.
- (7) **CLOCK-PHASE:** Controls the phase of Clock frequency.
- (8) **COLOR:** Select the pre-set Color or Custom color.
- (9) **COLOR BALANCE-RED:** Controls to desired color balance Red.
COLOR BALANCE-GREEN: Controls to desired color balance Green.
COLOR BALANCE-BLUE: Controls to desired color balance Blue.
- (10) **POWER-SAVE (ON/OFF):** Selects the Power Save ON/OFF mode.
- (11) **ADJUST-VR:** Too adjusts the screen by control knob or not.
- (12) **OSD POSI :** Selects the OSD screen position.
- (13) **OSD TIME:** Adjusts the OSD screen appearing time.
- (14) **RESOLUTION:** Selects the resolution manually.
- (15) **HELP:** Shows the help information.
- (16) **INFORMATION:** Shows the input signal frequency and signal No.

4.1 NORMAL Mode Operation

Press any select button and control indicators will be superimposed on the display screen. Refer to Figure 7 for the location of the monitor function (▲ ▼ ⊕ ⊖) controls. Press the select buttons to choose one of the following controls.

When the indicator of a function symbol comes on the screen and changes to blue, that control is active and can be adjusted by the adjust buttons. The monitor automatically memorizes all adjustments.

If you don't touch the control switches for 15 seconds, the OSD screen will disappear.

Front Control Panel



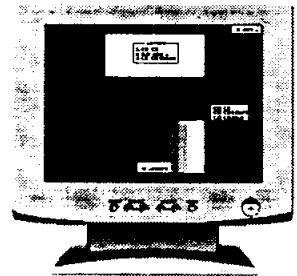
- ▲ Button: select up
- ▼ Button: select down

How to adjust the screen with Floppy Disc for test pattern and set up. (for Windows® and Macintosh® user)

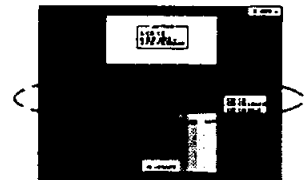
Display the test pattern and adjust the "CLOCK", "CLOCK-PHASE", "V-POSITION" and "H-POSITION" functions as follows;

- (1) Turn on the computer.
- (2) Install the Floppy Disc for test pattern and set up into your computer.
- (3) Windows user; Execute the "testptn.exe" with "Explore" or "File Manager".
Macintosh user; Execute the "test-mac" from the Desk Top icon.

Then the Test pattern is displayed on the whole screen by the resolution of your use state. (Press the button of mouse or any key of keyboard to end)



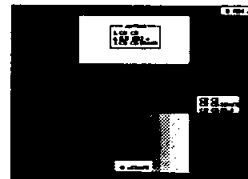
- (4) Press the select button to select the "CLOCK" function.
- (5) Press the adjust button to be shown clearly the vertical stripes image located on the center of the screen.
If the clock frequency is not match, you can see the interference figure of this stripe image.



- (6) Press the select button to select the "V-POSITION" function.
- (7) Press the adjust button to adjust the vertical position of test pattern.



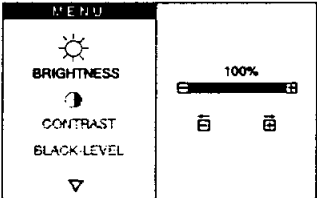
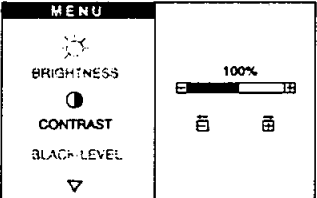
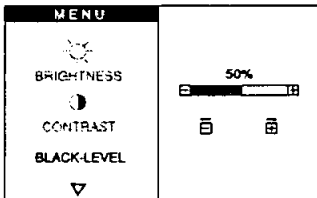
- (8) Press the select button to select the "H-POSITION" function.
- (9) Press the adjust button to adjust the horizontal position of test pattern.
Note the white line all around the test pattern image.

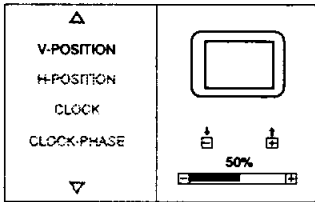
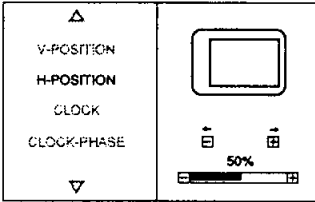
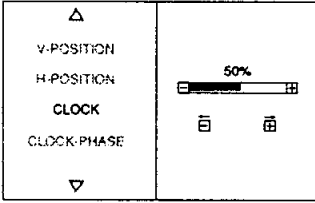
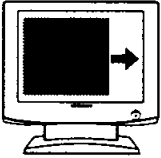
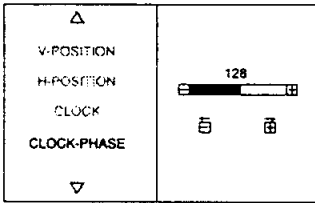
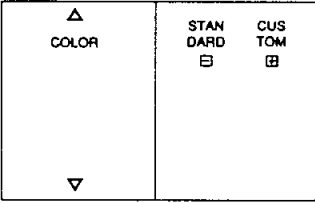


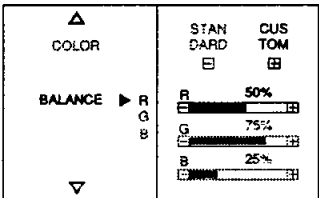
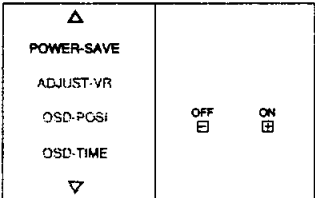
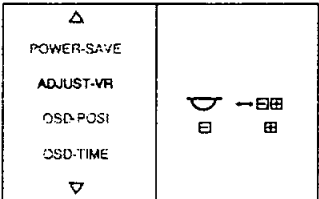
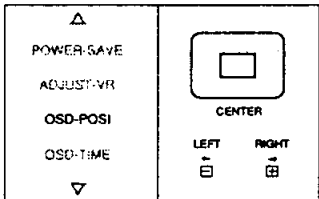
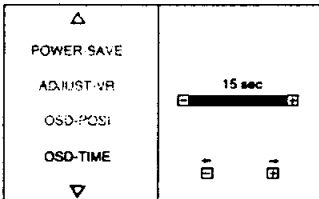
- (10) Press the select button to select the "CLOCK-PHASE" function.
- (11) Press the select button to be shown clearly (without snow noise) the vertical stripes image located on the center of the screen.
There are many typical position in this "CLOCK-PHASE" function. Adjust the minimum value of clock phase level on the OSD screen.
If the white line on both side of the test pattern image does not appear on the screen, adjust the horizontal position of the test pattern.

The pattern may not be displayed on the whole screen by the version of Windows NT.
In this case, confirm the revision of screen position with the screen by use state.

- (12) Press the button of mouse or any key of keyboard to end the test pattern.

FUNCTION AND OSD	Press the Minus Adjust Button: 	Press the Plus Adjust Button: 
(1) BRIGHTNESS 	 To decrease the brightness. Press plus and minus buttons together, to restore to factory preset level.	 To increase the brightness.
(2) CONTRAST 	 To decrease the contrast. Press plus and minus buttons together, to restore to factory preset level.	 To increase the contrast.
(3) BLACK LEVEL 	 To be deep of black color. Press plus and minus buttons together, to restore to factory preset level.	 To be light of black color.

FUNCTION AND OSD	Press the Minus Adjust Button:   	Press the Plus Adjust Button:   
(4) V-POSITION (Vertical Position) 	 To move the image down.	 To move the image up.
(5) H-POSITION (Horizontal Position) 	 To move the image to the left.	 To move the image to the right.
(6) CLOCK 	 To narrow the width of the image on the screen to the left.	 To expand the width of the image on the screen to the right.
(7) CLOCK-PHASE 	To change the snow noise of the image.	
(8) COLOR 	To change the pre-set color.	You can change the color you need.

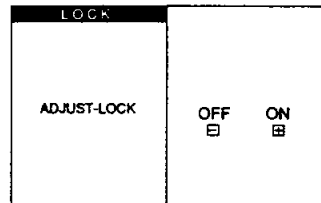
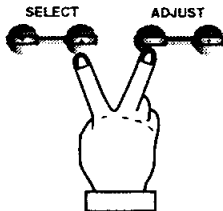
FUNCTION AND OSD	Press the Minus Adjust Button:   	Press the Plus Adjust Button:   
(9) COLOR BALANCE 	To be light color selected. When "STANDARD" of "COLOR" function is selected, this screen is not displayed. Press plus and minus buttons together, to restore to factory preset level.	To be deep color selected.
(10) POWER SAVE 	To select the constant power-on mode. Press plus and minus buttons together, to restore to factory preset level.	To select the power save mode.
(11) ADJUST-VR 	When the OSD screen is disappearing from the screen, Adjust VR works as Brightness Control Knob. To adjust the screen by control knob. Press plus and minus buttons together, to restore to factory preset level.	To adjust the screen by minus or plus adjust button. (When the OSD screen is appearing on the screen, Adjust VR can not work.)
(12) OSD-POS 	To move the OSD screen to the left. Press plus and minus buttons together, to restore to factory preset level.	To move the OSD screen to the right.
(13) OSD TIME 	To set the OSD screen appearing time too short. Press plus and minus buttons together, to restore to factory preset level.	To set the OSD screen appearing time too long.

FUNCTION AND OSD	Press the Minus Adjust Button:   	Press the Plus Adjust Button:   
(14) RESOLUTION ▲ RESOLUTION HELP INFORMATION ▼ 1024 x 768 832 x 624 800 x 600 720 x 400 640 x 480 640 x 400 640 x 350 ⏏ ⏏	To select the resolution. (When input the user timing signal)	
(15) HELP ▲ RESOLUTION HELP INFORMATION ▼ PUSH BOTH BUTTONS ▼ ▲ OSD QUIT ⏏ ⏏ RESET POSITION	To show the HELP information. *How to quit the OSD screen quickly. *How to restore the factory pre-set.	
(16) INFORMATION ▲ HELP INFORMATION ▼ 1024 x 768 FH ▶ 60.0KHz FV ▶ 75.0Hz USER ▶ 2	To show the resolution, horizontal frequency, vertical frequency and factory or User timing No. information.	

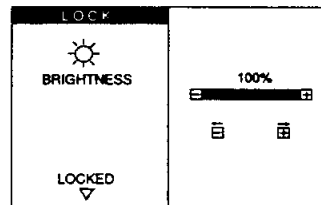
4.2 ADJUST LOCK Mode Operation

(31) ADJUST LOCK

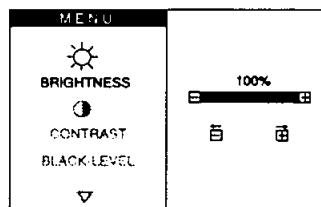
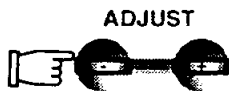
1. Press the right of select button and minus of adjust button together, the "ADJUST LOCK" screen appears.



2. Press the plus button to lock on the OSD, and if you press any select or adjust button, "LOCKED" character is indicated on first screen of Normal mode. You can operate OSD menu only BRIGHTNESS Control.



3. Press the minus button to lock off the OSD, and if you press any select or adjust button, "LOCKED" character is disappeared from on first screen. You can operate OSD, again.



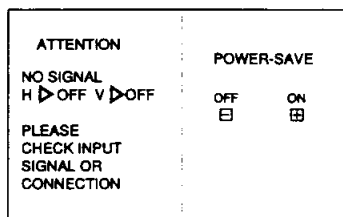
4.3 POWER SAVE

NOTE

When the monitor has no sync signal or incorrect connection and the signal frequency is out of range, the following CAUTION comes on the screen. Check input signal, signal cable connection and signal frequency.

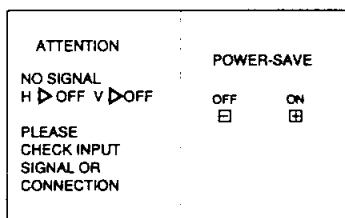
1. POWER SAVE IS OFF

When POWER SAVE is OFF and there is no sync signal, the following screen is displayed.

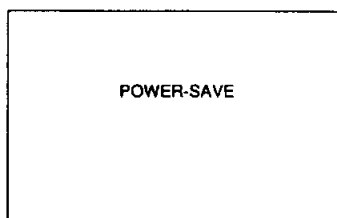


2. POWER SAVE IS ON

(1) When POWER SAVE is ON and there is no sync signal, the following screen is displayed for 5 seconds.

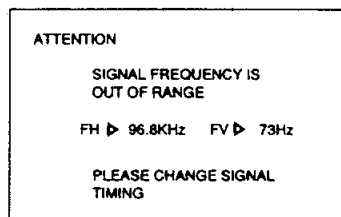


(2) Before 2 seconds POWER SAVE function works, the following screen is displayed.



3. POWER SAVE IS ON OR OFF

When signal frequency is out of range, the following screen(ex. 96.8kHz/73Hz timing input) is displayed.



Before calling your Authorized Product Support, please check that the items below are properly connected or set.

In case of using a non-standard signal, please check the pin assignments and the signal timing of your computer with the specification outlined in SPECIFICATION 6 and APPENDIX 7.

PROBLEM		ITEMS TO CHECK	LOCATION
No picture	LED On	• Contrast and brightness controls.	• Front (Adjust to the maximum brightness or push the reset button)
	LED Off	• Power switch. • AC power cord disconnected.	• Front • Rear
	LED Blinking	• Signal cable disconnected. • Computer power switch.	• Rear • Computer
Abnormal picture	Un-stable picture	• Input signal frequency range is disagreement.	• Check the specification of graphics adapter and monitor
	Display is missing, center shifts, or too small or too large of a display size	• Adjust RESOLUTION, CLOCK, CLOCK-PHASE, H-POSITION and V-POSITION with non-standard signals • Monitor may not be able to get full-screen image depend on signal. In this case, please select other resolution, or other vertical refresh timing. • Make sure you wait a few seconds after adjusting the size of the image before changing or disconnecting the signal or powering OFF the monitor.	• Front (OSD) • Front (OSD)
	Can not read the Packed Floppy Disc (for Macintosh user)	• PC Exchange is installed or not.	• Computer

		LXA420W	LXA520W
LCD MODULE	LCD Panel	36cm/14" Color TFT Panel	
	Type	Active Matrix	
	Resolution	1024 dots x 768 lines	
	Pixel Pitch	0.2775mm	0.297mm
	Color Tone	64 tone	
	Color Filter	R, G, B vertical stripe type	
	Face Finishing	Anti-glare, Hard Coated	
	Viewing Angle	±70° (Horizontal), -60° ~ +40° (Vertical)	
INPUT SIGNAL	Video	0.7Vp-p analog RGB	
	Sync	2.5 ~ 5.0Vp-p separated sync	
	Input Impedance	Video	75
		Sync	1k
SCANNING FREQUENCY	Horizontal	31.4 - 60.2kHz	
	Vertical	56.0 - 85.1Hz	
DISPLAY SIZE	H x V	284.2mm x 213.1mm	304.1mm x 228.1mm
BRIGHTNESS		180 cd/m ² , Standard full white video signal	200 cd/m ² , Standard full white video signal
SIGNAL INPUT CONNECTOR		DB9-15P	
OPERATING ENVIRONMENT	Temperature	5 - 35°C	
	Humidity	10 - 90%RH (without condensation)	
POWER SOURCE	Display Monitor	DC 15V	
	AC-Adapter	AC100~120V/220~240V±10% 50/60Hz 40W Max.	
REGULATIONS	Safety	UL1950 (UL), CSA C22.2 No.950 (C-UL) EN60950 (TÜV-GS), IEC950	
	EMC	FCC Class-B, DOC Class-B EN55022 Class-B, EN50082-1 VCCI Class-2	
	Other	CE-Marking, MPR-II ISO 9241-3, ISO 9241-8 TCO '95 ZH1/618 (TÜV-GS) International Energy Star Program NUTEK Spec. 803299/94	
CABINET		(W)14.7" x (H)14.0" x (D)6.3" (W)372mm x (H)356mm x (D)160mm	(W)15.4" x (H)14.7" x (D)6.3" (W)392mm x (H)374mm x (D)160mm
WEIGHT		4.5kg (10lbs.) without AC Adapter and cables	5.3kg (11.7lbs.) without AC Adapter and cables
TILT BASE		-5° ~ +35° Tilt Angle	

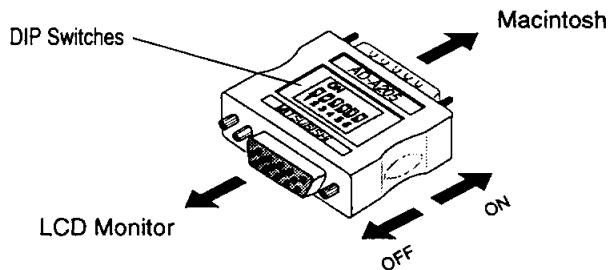
7.1 Macintosh Adapter AD-A205 settings

The AD-A205 Macintosh Adapter allows you to take advantage of the built-in video capabilities of your Macintosh computer with the monitor.

With it, you may select any available video mode via the DIP Switches.

Using the following chart, find the computer/resolution combination you wish to configure. There are alternate settings available for most computer / resolution combinations, but we recommend you set the factory preset timing. (see 1.2 Internal Preset Memory Capability)

The chart shows all available modes for Macintosh systems plus all possible combinations with monitor. Please be aware that not all Macintosh modes are capable of driving all Macintosh video modes.



In case of the computer corresponding to Multimode, you can select the resolution on your computer by setting the following switch.

Please refer to instruction book of your computer about resolution setting.

17" Multimode

1,2,5 = Set DIP switches 1,2 and 5 "ON" (Supports 640X480@67Hz; 832X624@75Hz; 1024X768@75Hz)

13" Multimode

1,2,5,6 = Set DIP switches 1,2,5 and 6 "ON" (Supports 640X480@67Hz; 832X624@75Hz)

AD-A205 Mac Adapter settings Chart

Macintosh COMPUTER RESOLUTION	Macintosh IIsi	Macintosh LC, LC II -or- Performa 400,405, 410,430	Macintosh LC III, LC 475 -or- Performa 450,460, 466,467, 475,476	Macintosh IIfx, IIfx -or- Performa 600, 600 CD	Macintosh LC 630, Performa 630 -or- Quadra 630	Macintosh Quadra 700,900	Macintosh Quadra 605,610, 650,800, 950 -or- Centris 610,650	Macintosh Quadra 840AV, 660AV -or- Centris 600AV	Apple display Card 4-8,8-24, 8-24GC (revision B)	Apple display Card 24AC	Power Macintosh Workgroup Server 9150
640X480@60Hz		3,4	3,4	3,4	3,4	3,4	3,4	3,4		3,4	3,4
640X480@67Hz	—	1,2	1,2	—	1,2	1,2	1,2	1,2	1,2	1,2,5	1,2,5,6
800X600@56Hz						—	—	—			
800X600@60Hz					3,4					1,2,5	
800X600@72Hz					3,4			3,4			
800X600@75Hz											
832X624@75Hz			2,4		2,4	2,4	2,4	2,4	2,4#	1,2,5	1,2,5,6
1024X768@60Hz								3,4		1,2,5	
1024X768@70Hz								3,4			
1024X768@72Hz											
1024X768@75Hz											
1024X768@75Hz							2,3	2,3		1,2,5	
1152X870@75Hz						—	—	—	—	—	
1280X960@75Hz											
1280X1024@75Hz											
Macintosh COMPUTER RESOLUTION	Power Macintosh 6100,6100AV, 7100,7100AV, 8100,8100AV -with- DRAM Video Port (HDI-45)	Power Macintosh 7100, 8100, -with- DRAM Video Card (DB-15)	Power Macintosh 6100AV, 7100AV, 8100AV -with- AV Video Card (DB-15)	Power Macintosh 6200	Power Macintosh 7200	Power Macintosh 7500, 8500	Power Macintosh 9500 -with- ATI Video Card	Macintosh PowerBook 160, 165,165C 180,180C	Macintosh PowerBook 520,520C, 540,540C	Macintosh PowerBook Duo 210,230, 250,270C -with- Duo Dock -or- Duo MiniDock	Macintosh PowerBook Duo 210,230, 250,270C -with- Duo Dockil
640X480@60Hz	3,4	3,4	3,4	1,2,5,6	3,4	3,4	3,4	3,4	3,4	3,4	3,4
640X480@67Hz	1,2,5,6	1,2,5	1,2,5	1,2,5,6	1,2,5	1,2,5	1,2,5	1,2	1,2,5,6	1,2	1,2
800X600@56Hz		—	—				—	—	—	—	—
800X600@60Hz				1,2,5,6	3,4	3,4	3,4				
800X600@72Hz		3,4	3,4	1,2,5,6	3,4	3,4	3,4				
800X600@75Hz					3,4	3,4	3,4				
832X624@75Hz	1,2,5,6	1,2,5	1,2,5	1,2,5,6	1,2,5	1,2,5	1,2,5	2,4	1,2,5,6	2,4	2,4
1024X768@60Hz		3,4	3,4		3,4	3,4	3,4				
1024X768@70Hz		3,4	3,4				3,4				
1024X768@72Hz					3,4	3,4					
1024X768@75Hz					3,4	3,4	3,4				
1024X768@75Hz		1,2,5	1,2,5		1,2,5	1,2,5	1,2,5				2,3
1152X870@75Hz		—	—		—	—	—				—
1280X960@75Hz						—	—				
1280X1024@75Hz						—	—				

= Must have revision B of ROM on video board

— = Not working combination.