User Manual

LCD Monitor

JL1710B

FCC COMPLIANCE STATEMENT

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Modifications not expressly approved by the manufacturer could void the user's Authority to operated the equipment under FCC rules.

MONITOR FEATURES

Front View

Rear View

Side View

▶ Supports Analog IBM compatible PC, Apple Macintosh™ (Adapter optional).

▶ Supports DPMS for monitor power management.

▶ Supports DDC2B.

▶ On Screen Control: Contrast, Brightness, Color Temp, H-Position, V-Position Phase, Clock, Auto Adjust, Auto Color, OSD H-Pos, OSD V-Pos, OSD Timer, Language, Signal Source, Mode, Stand Light Timer.

▶ Built-in color active matrix TFT (Thin Film Transistor) Liquid Crystal Display (LCD) that uses amorphous silicon TFTs as a switching device.

▶ Resolution: up to 1280 X 1024.

▶ Color: 16.2M Color support.

▶ Pixel pitch: 0.264 mm (H) X 0.264 mm (W)

▶ Scanning frequency: 30 KHz ~ 80 KHz (H), 55 Hz ~ 75 Hz (V).

▶ Universal power supply: AC 100-240V allowed.

▶ Power consumption Normal: 40 Watt Max.
                                          Off: 3 Watt Max.

▶ Outside dimension: 387 mm (W) X 394 mm (H) X 201.8 mm (D).

General Information

■ Your new LCD monitor incorporates the latest state-of the art color Liquid Crystal Display (LCD) technology providing a wider viewing angle with higher contrast ratio.

■ Your new LCD monitor has many advantages: safe from electromagnetic wave, lights, sharps and slims. This makes the monitor extremely suitable in the environ ment of administration, transportation system research, etc.

■ Your new LCD monitor is designed for Analog, Digital inputs.

■ Your new LCD monitor does not emit any X-ray radiation and the magnetic emission greatly reduces the eyestrain. Moreover, our On Screen Controls on the front of the panel provide flexibility with simple controls.
You can use these controls to adjust the display as you desire.

■ Your new LCD monitor incorporates an active TFT module. It has a 1280 X 1024 pixel resolution, high contrast, wide viewing angle and colors up to 16.2M.

Caution

	CAUTION: RISK OF ELECTRIC SHOCK. DO NOT OPEN.	
⚡	TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	⚠

1 Do not open any covers on the monitor. No user serviceable parts are inside.

2 In an emergency, disconnect the AC power plug.

3 To avoid electrical shock, disconnect the power cord from the monitor before connecting the signal cable to the computer.

4 Keep away from liquids and flame. Do not immerse this monitor in water or any other liquid. Do not use this device in excessively hot conditions.

5 Handle the power cord with care. Do not bend the power cord excessively or place heavy objects on it. Do not use a damaged power cord, doing so can result in fire or electrical shock hazards.
When disconnecting the power cord, always grasp the plug, not the cord.

6 The liquid crystals in the display panel contain several irritants. If the panel is damaged or broken, do not allow the liquid to come in contact with skin, eyes, or mouth. If you come in contact with the liquid, flush the affected area with running water for at least 15 minutes, then consult a doctor.

7 Handle this monitor with care when moving it. When lifting the monitor, support it with one hand holding the stand, and one hand holding the LCD screen.

8 Always disconnect the power cord when moving this monitor.

9 Do not lay this monitor in a horizontal position when operating.

SAFETY INSTRUCTIONS

Handling

Due to its fragile glass panel, this monitor must be handled with caution and not be exposed to impact or shock. Never touch the display area or rub it with a hard object or tool, as the panel is easily scratched.

Cleaning

The display area is sensitive to scratching.
Do not use ketone-type cleaners (i.e. acetone), ethyl alcohol, toluene, ethyl acid or methyl chloride to clean the panel. Doing so may result in permanent damage. Water, IPA (Iso Prophyl Alcohol) and Hexane are safe cleaners. Do not allow oil or water to penetrate the display, this will cause staining and discoloration. Avoid getting food particles and fingerprints on the display area at all times.

Storage

Store the monitor in a dark place away from sunlight and ultraviolet (UV) radiation, this may cause air bubbles to develop within the glass panel.
Do not store the display in temperatures higher than 104°F/40°C or humidity greater than 90%. Avoid condensation.
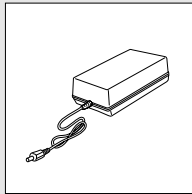
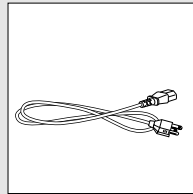Before operating your display, please check to make sure that all of the Items listed are present in your package:

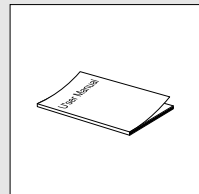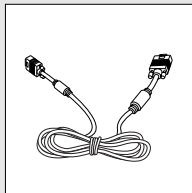The monitor and items may not match the following illustrations exactly.
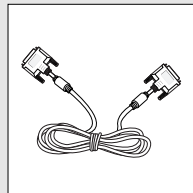
AC to DC Adapter

Power Cord

User Manual
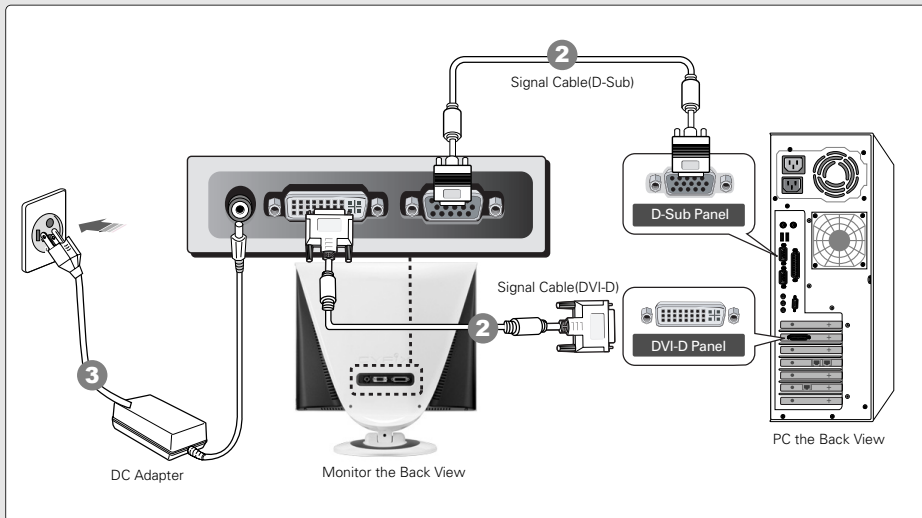
Monitor
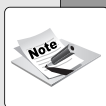
Signal Cable (D-Sub)

Signal Cable (DVI-D)

❖ Power Requirements

The monitor is equipped with an auto-sensing power supply for voltage ranging from 100-120VAC/200-240VAC, 50/60Hz. Confirm the power rating of the AC Source before you plug the AC cable to the wall outlet.

INSTALLATION

❖ Follow these steps to install the monitor

Signal Cable(D-Sub)

D-Sub Panel

Signal Cable(DVI-D)

DVI-D Panel
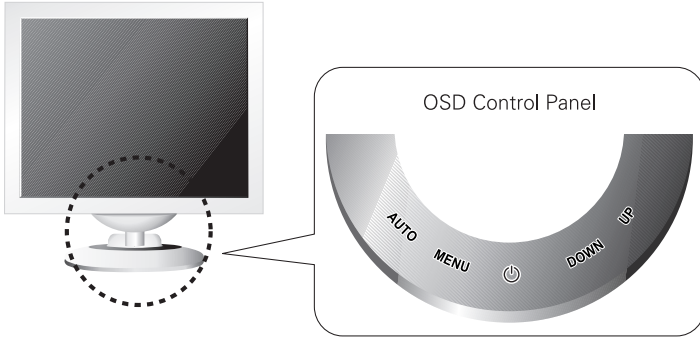
PC the Back View

DC Adapter

Monitor the Back View

1 Before you connect the cables, make sure that both the monitor and system unit power switches are turned off.

2 Plug the 15-pin D-SUB and, or 24-pin DVI signal cable between the rear of your monitor and system. The adapter may be required for certain Apple Macintosh computers. Tighten the two screws on the cable connector.

3 Connect the power cord to the inlet socket which is located at the AC to DC Adapter. Connect the plug into an AC wall outlet.

4 Connect DC Plug of AC to DC Adapter to the DC jack which is located at the rear of your monitor.

Note

■ "No Cable, No Signal" message.
Before calling for service, check that the signal cable is firmly connected to the PC or the Monitor.

■ There may be few red, green, blue, white, or black pixels on the screen.
This is normal and not a defect of the unit. These pixels will have no impack on the performance of the product.

OSD Buttons: The OSD control keys are located on the upper of the stand.

OSD Control Panel

AUTO MENU DOWN UP

Button	Description
AUTO	a. No OSD : This button can be used for 'Auto Adjustment' function. (Size, Phase) Press this button for 3 seconds. b. Main OSD menu : Press this button to exit from the main OSD menu. c. OSD control Menu: Press this button to return to the previous menu.
MENU	a. No OSD : This button will enable the main OSD menu. b. Main OSD menu: Press this button to enter to the selected OSD control menu.
⏻	Power Button : Turns the monitor on and off.
DOWN	a. Main OSD menu: Use these button to move down the OSD selection menu. b. OSD control Menu: Use this button to decrease each value.
UP	a. Main OSD menu: Use these button to move up the OSD selection menu. b. OSD control Menu: Use this button to increase each value.

ON-SCREEN DISPLAY

This LCD monitor features an On-Screen Display (OSD) menu. These icons are designed to make your monitor display settings easier. When highlighted, the icons illustrate the control function to assist you in identifying which control needs adjustment.

Before activating the OSD menu, the 'AUTO' button can be used to automatically adjust the display to the proper size and horizontal and vertical position.

The OSD menu activates automatically when you press the 'MENU' button on the upper of the stand. The OSD remains centered on the screen while you make your adjustments. Use either the 'UP' or 'DOWN' button to move the highlight to your selection. 'OSD' sub menu or control with a status bar will appear.
The status bar indicates the direction which adjustments are being made. Use the 'UP' or 'DOWN' button to adjust the control.

When you have finished making adjustments, press the 'AUTO' button to save setting and exit back to main menu.

RGB
1280X1024@60

R-GAIN (RED)
Select "USER" then use the 'MENU' button to scroll up and down the RGB menu to R (Red). Use the 'UP' and 'DOWN' buttons to adjust the red level of the display.

G-GAIN (GREEN)
Select "USER" then use the 'MENU' button to scroll up and down the RGB menu to G (Green). Use the 'UP' and 'DOWN' buttons to adjust the green level of the display.

B-GAIN (BLUE)
Select "USER" then use the 'MENU' button to scroll up and down the RGB menu to B (Blue). Use the 'UP' and 'DOWN' buttons to adjust the blue level of the display.

Icon	Description
	Contrast This control allows you to make adjustments to the contrast of the display screen.
	Brightness Selecting this control menu allows you to make adjustments to the luminosity level of the display screen
	Color Temp Select this control menu, then use the 'UP' and 'DOWN' buttons to scroll to the desired color temperature. Use the 'MENU' button to select the 9300K, 6500K, 5500K or USER for custom setting.
	H.Position Select this control menu, and then use the 'UP' and 'DOWN' buttons to center the image horizontally on the screen.

MENU DESCRIPTIONS

Icon	Description
	V.Position Select this control menu, and then use the 'UP' and 'DOWN' buttons to center the image vertically on the screen.
	Clock Select this control menu, and then use the 'UP' and 'DOWN' buttons to expend or decrease the image width to horizontally fill the display screen.
	Phase Select this control menu, and then use the 'UP' and 'DOWN' buttons to adjust the screen image until it looks focused, crisp and sharp.
	Auto Adjust This control will automatically make adjustments to the horizontal and vertical size, horizontal and vertical position, phase.
	Auto Color This control will automatically make adjustment to the input levels of video signal. (ex. 0.714Vp-p, 1.0Vp-p)
 	OSD H,V POSITION Select this control menu, and then use 'UP' and 'DOWN' buttons to move the OSD menu OSD TIMER Select this control menu, and then use the 'MENU' button to select the duration time for the OSD menu. Use the 'UP' and 'DOWN' buttons to select the time. (5 ~ 60 SEC)
	OSD Timer Select this control menu, and then use the 'MENU' button to select the duration time for the OSD menu. Use the 'UP' and 'DOWN' buttons to select the time. (5 ~ 60 SEC)
	Language Select this control menu, and then use the 'UP' and 'DOWN' buttons to choose from English (ENGLISH), French (FRANÇAIS), German (DEUTSCH), Spanish (ESPAÑOL), Italian (ITALIANO), Japanese (日本語) , Korean (한국어).

Icon	Description
	Signal Source Select this control menu, and then use the 'UP' and 'DOWN' buttons to select proper video input signal either D-Sub (Analog R,G,B) or DVI-D (TMDS). Default setting is D-Sub.
	Mode Select this control menu, and then use the 'UP' and 'DOWN' buttons to select most proper mode among the PC, GAME and MOVIE mode.
	Stand Light Timer Select this control menu, and then use the ˈMENUˈ button to select the duration time for the stand light. Use the ˈUPˈ and ˈDOWNˈ buttons to select the time. (ON: lighting for 10sec on touching the osd button, OFF: lighting continuously).

POWER MANAGEMENT

LED INDICATOR (POWER MANAGEMENT ACTIVE)

The power management feature is comprised of two stages:
On or Out Of Range (Blue), Off (Blue blinking). In the Off mode, all circuitry in the monitor is shut down, except for a low power detection circuit. This circuit allows the monitor to wake up when the mouse is moved or a key on the keyboard is pressed.

Power Mode	H-Sync	V-Sync	Video	LED Color
Normal	Pulse	Pulse	Active	Blue
Out Of Range	Pulse	Pulse	Active	Blue
Suspend	Pulse	No Pulse	Blanked	Blue Light Blink (ON 0.5 sec / OFF 1.0 sec)
Stand By	No Pulse	Pulse	Blanked	Blue Light Blink (ON 0.5 sec / OFF 1.0 sec)
Off	No Pulse	No Pulse	Blanked	Blue Light Blink (ON 0.5 sec / OFF 1.0 sec)

The LCD is a multi-frequency display. It operates at horizontal frequencies between 30KHz-80KHz and vertical frequencies between 55Hz-75Hz. Because of its microprocessor-based design, it offers auto- synchronization and auto-sizing capabilities. This monitor offers 10 pre- programmed settings that are listed in the following time table.

These preset modes cover most of the common video modes supported by popular graphics adapters. However, each adapter's implementation of these video modes may vary slightly.
If you find it necessary to make minor display adjustments (for example, horizontal and vertical position), please refer to the On Screen Display section of this manual for instructions.

If you would like to use one of the preset timing modes, please refer to your video card manufacturer's installation guide for instructions on how to make these changes. The video card controls the refresh rate. Most Video cards provide a software utility or hardware DIP switches that allows you to change the frequency used for each resolution.

[Timing Table]

| Preset		Resolution		Frequency		Clock [MHz]	Polarity [H/V]
		Horizontal [Dots]	Vertical [Lines]	Horizontal [KHz]	Vertical [Hz]		
VGA	M1	720	400	31.5	70	28.322	−/+
VESA	M2	640	480	31.5	60	25.175	−/−
	M3	640	480	37.5	75	31.500	−/−
	M4	800	600	37.9	60	40.000	+/+
	M5	800	600	46.9	75	49.500	+/+
	M6	1,024	768	48.4	60	65.000	−/−
	M7	1,024	768	60.0	75	78.750	+/+
	M8	1,280	1,024	64.0	60	108.000	+/+
	M9	1,280	1,024	80.0	75	135.000	+/+
MAC	M10	832	624	49.7	75	57.284	−/−

Note If you use a Macintosh computer, you may need a Mac adapter.

PIN ASSIGNMENT

VGA Connection (Cable Side)

Pin	Signal	Pin	Signal
1	Red	9	No Connection
2	Green	10	Ground
3	Blue	11	Ground
4	No Connection	12	DDC SDA
5	Ground	13	Horizontal Sync.
6	Red Ground	14	Vertical Sync.
7	Green Ground	15	DDC SCL
8	Blue Ground		

VGA CONNECTOR
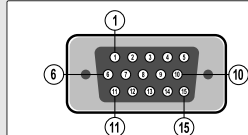
POWER JACK (Monitor Side)
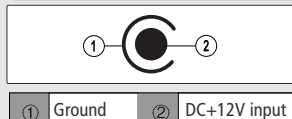
① Ground	② DC+12V input

DVI Connection (Cable Side)

DVI-D Connector (TMDS Single Link)			
Pin	**Signal**	**Pin**	**Signal**
1	T.M.D.S. Data2-	13	T.M.D.S. Data3+ (N,C)
2	T.M.D.S. Data2+	14	+5V Power
3	T.M.D.S. Data2/4 Shield	15	GND (for+5V)
4	T.M.D.S. Data4- (N,C)	16	Hot Plug Detect
5	T.M.D.S. Data2+ (N,C)	17	T.M.D.S. Data0
6	DDC Clock	18	T.M.D.S. Data0+
7	DDC Data	19	T.M.D.S. Data0/5
8	N,C	20	T.M.D.S. Data5- (N,C)
9	T.M.D.S. Data1-	21	T.M.D.S. Data5+ (N,C)
10	T.M.D.S. Data1+	22	T.M.D.S. Clock Shield
11	T.M.D.S. Data1/3 Shield	23	T.M.D.S. Clock+
12	T.M.D.S. Data3- (N,C)	24	T.M.D.S. Clock-

Note
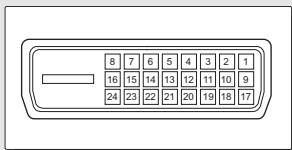
When resolutions are shown that are lower than the pixel count of the LCD panel, text may appear choppy or bold. This is normal for all current flat panel technologies when displaying non-native resolutions on a full screen (below than 1280°ø1024 resolution). In flat panel technologies, each dot on the screen is actually one pixel, so to expand resolutions to full screen, an interpolation of the resolution must be down. When the interpolated resolution is not an exact multiple of the native resolution, the mathematical interpolation necessary may cause some lines to appear thicker than others.

Problem	Possible Solution
No power	• Flip the power switch ON. The Power LED turns on. • Make sure AC power cord is securely connected to a power outlet.
Power on but no screen image	• Make sure the video cable attached with this monitor is tightly secured to the video output port on the back of the computer. • Adjust the brightness and contrast.
Image is unstable, unfocused.	• Use "AUTO-TUNE" to adjust automatically. • If the image is still unstable after "AUTO-TUNE" processing, please adjust "PHASE" manually to get image focused. • Check whether the resolution or refresh rate in windows display setting is beyond supported range (please refer to the specification of supported mode).
Flickering	• Not enough power is being supplied to the LCD Monitor. Connect the LCD Monitor to a different outlet. If a surge protector is being used, there may be too many devices plugged in. • See Timing Guide in this manual with a list of refresh rates and frequency settings showing the recommended setting for the LCD Monitor
Wrong or abnormal colors	• If any colors (Red, Green, or Blue) are missing, check the video cable to make sure it is securely connected. Loose pins in the cable connector could cause a bad connection. • Connect the LCD Monitor to another computer. • Check the graphics card for proper sync scheme (or sync polarities) to match the LCD Monitor's specifications.
Double (split) screen image	• Make sure your graphics card is set to Non-Interlaced mode.
Entire screen image rolls (scrolls) vertically.	• Make sure the input signals are within the LCD monitor's specified frequency range. (Maximum: VESA, MAC 1280 X 1024 (75 Hz) • Connect the video cable securely. • Try the this Monitor with another power source.
Control buttons do not work.	• Press only one button at a time.

SPECIFICATIONS

JL1710B LCD Monitor		
LCD Panel	Size	17`` Diagonal
	Display Size	337.92mm (H) × 270.336mm (V)
	Type	TFT active matrix
	Pixel Pitch	0.264 × 0.264mm
Viewing Angles	Left / Right	75° / 75°
	Up / Down	75° / 60°
Frequency	Horizontal Sync	30~80 KHz
	Vertical Sync	55~75 Hz
	Display Color	16.2M colors
	Surface Treatment	Anti-glare coating
Contrast Ratio	Typ.	700:1
Luminance of White	Typ.	300cd/m^2
Compatibility	PC	IBM XT, AT, 386, 486, Pentium or PS/2 and compatibles (from VGA and DVI up to 1280X1024@75 Hz)
Display Resolution	Max.	1280X1024@75Hz (60 Hz for optimal display)
Connectors	Input Signal	15-pin D-SUB, 24-pin DVI
	Power	Jack Type DC+12V In
Power	Input	AC 100-240V, 50-60 Hz
	Output	DC 12V
	Consumption	40 watts (Maximum)
Operating	Temperature	32°F to 104°F (0°C to 40°C)
	Humidity	20% RH to 80% RH (no condensation)
	Altitude	To 10,000 feet
Storage Conditions	Temperature	-13°F to 104°F (-25°C to 40°C)
	Humidity	5% RH to 90% RH (no condensation)
Dimension		387 mm (W) X 394 mm (H) X 201.8 mm (D)
Weight	Net	5.0Kg (11 lbs)