

SAMSUNG

# SyncMaster 210T SyncMaster 240T

TFT-LCD Monitor



Owner's  
Instructions

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# Safety Instructions

- 1 Before connecting the AC power cord to the DC adapter outlet, make sure the voltage designation of the DC adapter corresponds to the local electrical supply.
- 2 Never insert anything metallic into the cabinet openings of the Liquid Crystal Display (LCD) monitor; doing so may create the danger of electric shock.
- 3 To avoid electric shock, never touch the inside of the LCD monitor. Only a qualified technician should open the case of the LCD monitor.
- 4 Never use your LCD monitor if the power cord has been damaged. Do not allow anything to rest on the power cord, and keep the cord away from areas where people can trip over it.
- 5 Be sure to hold the plug, not the cord, when disconnecting the LCD monitor from an electric socket.
- 6 Openings in the LCD monitor cabinet are provided for ventilation. To prevent overheating, these openings should not be blocked or covered. Also, avoid using the LCD monitor on a bed, sofa, rug, or other soft surface. Doing so may block the ventilation openings in the bottom of the cabinet. If you put the LCD monitor in a bookcase or some other enclosed space, be sure to provide adequate ventilation.
- 7 Put your LCD monitor in a location with low humidity and a minimum of dust.
- 8 Do not expose the LCD monitor to rain or use it near water (in kitchens, near swimming pools, etc.). If the LCD monitor accidentally gets wet, unplug it and contact an authorized dealer immediately. You can clean the LCD monitor with a damp cloth when necessary, but be sure to unplug the LCD monitor first.
- 9 Place the LCD monitor on a solid surface and treat it carefully. The screen is made of thin glass with a plastic front surface and can be damaged if dropped, hit or scratched. Do not clean the front panel with keton-type materials (e.g., acetone), ethyl alcohol, toluene, ethyl acid, methyl, or chloride – these may damage the panel.
- 10 Locate your LCD monitor near an easily accessible AC outlet.
- 11 If your LCD monitor does not operate normally – in particular, if there are any unusual sounds or smells coming from it – unplug it immediately and contact an authorized dealer or service center.
- 12 High temperature can cause problems. Don't use your LCD monitor in direct sunlight, and keep it away from heaters, stoves, fireplaces, and other sources of heat.
- 13 Unplug the LCD monitor when it is going to be left unused for an extended period of time.
- 14 Unplug your LCD monitor from the AC outlet before any service.

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

# Unpacking Your Monitor

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Please make sure the following items are included with your monitor. If any items are missing, contact your dealer.



Installation CD



Power Cord



Warranty Card  
(not available in all locations)



Remote Controller



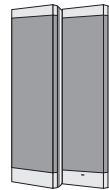
Monitor



Manual



Batteries  
(AAA x 2)



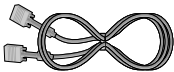
Speaker (option)



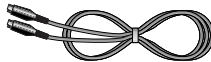
DC Adapter



RCA Cable



15-pin D-Sub Signal Cable



S-VHS Cable



DVI-D signal cable

# Setting up Your LCD Monitor

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## Setting up an Ergonomic Workstation

Consider the advice given below before you install your monitor.

### Monitor location

Choose a position that exposes your monitor to the least reflection from lights or windows, usually at a right angle to any window.

### Workstation height

Place your LCD monitor so that the top of the screen is slightly below your eye level when you are comfortably seated.

### Viewing angle

Tilt the screen until you feel comfortable working with your monitor. The best viewing angle can be obtained via AutoAngle™ provided by enclosed Colorific® software. Please install the program to get the best viewing angle adjustment.

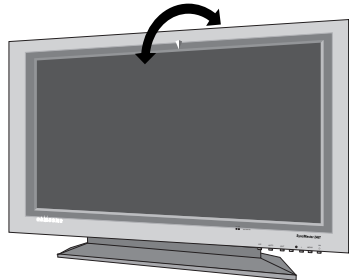


Figure 1. Tilt the screen

## Kensington Security Slot

This monitor offers you the opportunity to secure your monitor using a Kensington-type security device. Kensington lock is not included. Refer to your locking device documentation for installation instructions.

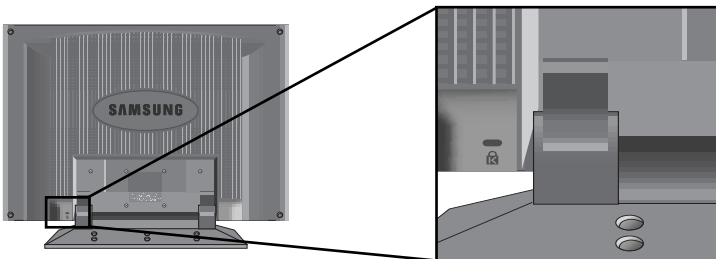


Figure 2. Kensington-type security slot location

# Setting up Your LCD Monitor

## Connecting Your LCD Monitor

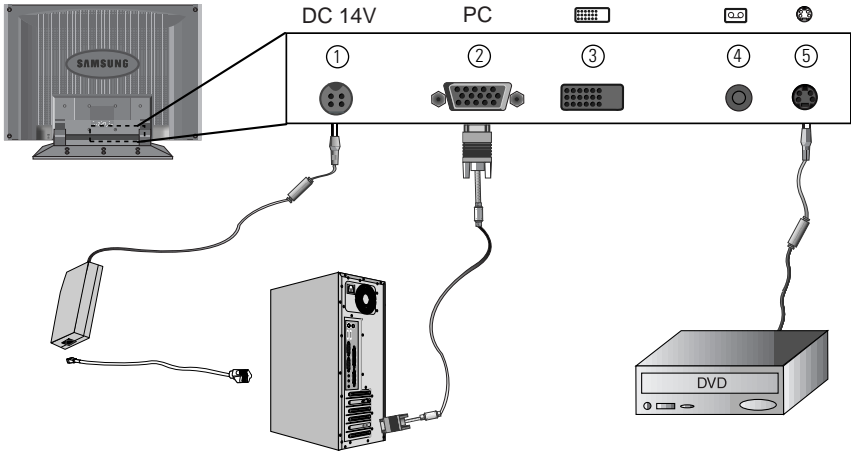


Figure 3. Cable connections

1. Connect the power cord to the DC adaptor and connect the adaptor plug to the DC14V power connector ① on the back of the monitor.
2. Connect the Analog video signal cable from PC to ②.
3. Connect RCA cable from external video devices such as VCR, DVD, and Camcorder to ④.
4. Connect S-Video cable from external video devices such as VCR, DVD, and Camcorder to ⑤.
5. If you have a DVI compliant video graphics adaptor, connect DVI video cable from PC to ③.
6. Turn the monitor on, and then turn on the computer.
7. Now, install the monitor driver with accompanied utility CD.
8. Recommended resolution of SyncMaster240T is WUXGA, 1920 x 1200.

*NOTE: Although the monitor is designed to be compatible with wide variety of popular video adaptors, it is WUXGA, 1920x1200 mode, that needs special care. Since there is no industry standard for WUXGA mode, video adaptor manufacturers are using several different configurations that cause the monitor false video mode interpretation. If the screen image is quality is poor when you are using either UXGA or WUXGA mode, please check the followings.*

1. UXGA mode identified as WUXGA mode
  - Touch the “MENU” button, and then select “Hz”, information, icon.
  - Read the information and make sure that the video mode says “1600x1200”
  - If no resolution is appeared, then the monitor is in WUXGA mode.
2. WUXGA mode identified as UXGA mode
  - Touch the “MENU” button, and the select “HZ”, information, icon.
  - Read the information and make sure that the video mode says only “H\_Sync... V\_Sync...” without mentioning resolution.
  - If you read 1600x1200, then the monitor is in UXGA mode.

# Setting up Your LCD Monitor

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*If you are experiencing the above, then please follow the steps given below to solve the problem.*

- 1. Touch the "MENU" button to bring up OSD window.*
- 2. Select "Hz" menu.*
- 3. Press "MENU" button seven times while keeping "Hz" menu highlighted.*
- 4. The monitor's displayed mode will be changed from UXGA mode to WUXGA mode, or from WUXGA mode to UXGA mode depending on the current mode.*

## Plug and Play

The adoption of the new VESA<sup>®</sup> Plug and Play solution eliminates complicated and time consuming setup. It allows you to install your monitor in a Plug and Play compatible system without the usual hassles and confusion. Your PC system can easily identify and configure itself for use with your display. This monitor automatically tells the PC system its Extended Display Identification Data (EDID) using Display Data Channel (DDC) protocols so the PC system can automatically configure itself to use the flat panel display. If your PC system needs a video driver, follow the instructions given below according to the operating system your computer uses.

## Installing the Video Driver

The CD that accompanies this product contains the necessary drivers for installing your monitor. Please refer to the driver installation instructions included with your CD package for more information.

## Self-Test Feature Check (STFC)

Your monitor provides a self-test feature that allows you to check whether your monitor is functioning properly. Make sure that PC is selected as a primary source by checking if the source indicator LED labeled "PC" is on. If your monitor and computer are properly connected but the monitor screen remains dark and the power indicator is blinking, run the monitor self-test by following the steps given below:

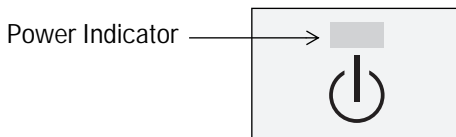


Figure 4. Power Indicator



# Setting up Your LCD Monitor

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- 1 Turn off both your computer and the monitor.
- 2 Unplug the video cable from the back of the computer.
- 3 Turn on the monitor.

If the monitor is functioning properly, you will see a white box with a large blue oval Samsung logo and an error message "CHECK SIGNAL CABLE." in black color.



Figure 5. Monitor self-test screen

\* It shows signal source is not connected with one of Analog, Digital, Video or S-Video.

This box also appears during normal operation if the video cable becomes disconnected or damaged.

- 4 Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

If your monitor screen remains blank after following the previous procedure, check your video controller and computer system; your monitor is functioning properly.

## Getting Help

If your monitor does not display an image, check your cable connections and refer to "Troubleshooting" on page 21. If you experience difficulties with the quality of the displayed image, run Auto Adjustment by touching "AUTO" control button. You may want to refer to "Adjusting Your LCD Monitor" on page 8 or "Troubleshooting" on page 21.

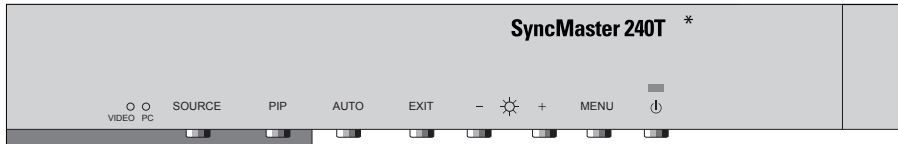
## Warm-up Time

All LCD monitors need time to become thermally stable whenever you turn on the monitor after letting the monitor be turned off for a couple of hours. Therefore, to achieve more accurate adjustments for parameters, allow the LCD monitor to warm (be on) for at least 20 minutes before making any screen adjustments.

# Adjusting Your LCD Monitor

## User Controls

Your LCD monitor allows you to easily adjust the characteristics of the image being displayed. All of these adjustments are made using the control buttons on the front of the monitor. While you use these buttons to adjust the controls, an OSD shows you their numeric values as they change.




\* 21" : SyncMaster 210T

Figure 6. User control locations

No.	Name	Description
1	Source	<ul style="list-style-type: none"><li>■ Selects Video source.</li><li>■ Two source indicator LEDs on the left of the control button indicate currently active Video source.</li></ul>
2	PIP	<ul style="list-style-type: none"><li>■ Activates PIP(Picture-in-Picture) window directly.</li><li>■ PIP to Fullscreen video.</li><li>■ PIP off.</li></ul>
3	Auto	<ul style="list-style-type: none"><li>■ Use this button to optimize image quality automatically.</li><li>■ "Auto adjustment" feature affects following parameters: Fine, Coarse, and Image Position.</li></ul>
4	Exit	<ul style="list-style-type: none"><li>■ Exits from menus and sub-menus.</li><li>■ Exits from the OSD system.</li><li>■ Turns the PIP off.</li></ul>
5	Menu	<ul style="list-style-type: none"><li>■ Opens the OSD and selects the highlighted function.</li></ul>
6	Power	<ul style="list-style-type: none"><li>■ Turns ON/OFF the monitor.</li><li>■ Indicates the status of the monitor.<ul style="list-style-type: none"><li>-Green : Normal Operation.</li><li>-Amber : Power Saving Mode or Disconnected Signal Cable.</li></ul></li></ul>

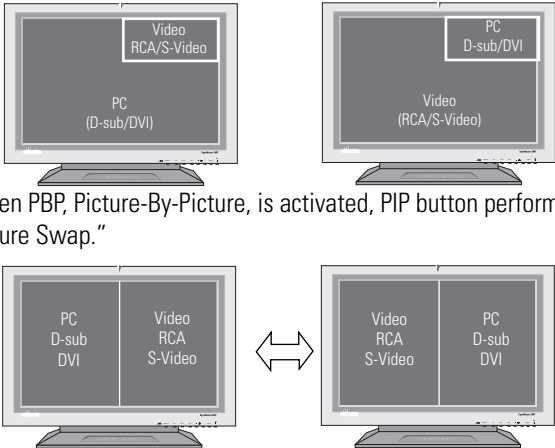
# Adjusting Your LCD Monitor

No.	Name	Description
7	–  +	<ul style="list-style-type: none"> <li>■ Moves the selector right or left on the OSD.</li> <li>■ Increases or decreases the Brightness.</li> <li>■ Increases or decreases the values of the selected function.</li> </ul>

## Automatic Save

Whenever you open the OSD and allow an adjustment window to remain active for about 3 seconds without pressing other buttons, the monitor automatically saves any adjustment you have made. These changes are saved into a user area in the monitor.

The monitor can save adjustments for up to 4 user modes. It has 13 for 210T (15 for 240T) factory preset or preload modes, one for each signal frequency as listed in table 7 on page 25. If you have made no adjustments, the on screen display disappears and the monitor does not save anything.

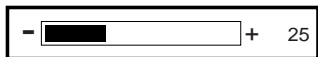
Function	Description
SOURCE	<ul style="list-style-type: none"> <li>■ Use this button to change a video source</li> <li>■ Video sources are changed in the following order: D-sub ⇄ DVI ⇄ RCA ⇄ S-VIDEO</li> <li>■ Video: RCA/S-Video    PC: D-Sub/DVI (Analog/Digital)</li> </ul>
PIP	<ul style="list-style-type: none"> <li>■ Use this button to see both PC and Video the same time with either PC or Video is in a small window superimposed on PC or Video.</li> </ul> <div style="text-align: center;">  <p>*When PBP, Picture-By-Picture, is activated, PIP button performs "Picture Swap."</p> </div>

# Adjusting Your LCD Monitor

Function	Description
AUTO	<ul style="list-style-type: none"><li>■ Use this button to optimize image quality automatically.</li><li>■ "Auto adjustment" feature affects following parameters: Fine, Coarse, and Image Position.</li></ul>
EXIT	<ul style="list-style-type: none"><li>■ Exits from menus and sub-menus.</li><li>■ Exits from the OSD menu.</li><li>■ Turns the PIP off.</li></ul>
-/+	<ul style="list-style-type: none"><li>■ Use this button to change Brightness.</li><li>■ When OSD is active, use "-" and "+" buttons to navigate through menus.</li></ul>
MENU	<ul style="list-style-type: none"><li>■ Use this button to bring OSD menu.</li></ul>
POWER	<ul style="list-style-type: none"><li>■ Use this button to turn ON or OFF the monitor.</li></ul>

## Direct Access Features

### Brightness



Follow these instructions to adjust the brightness.

- 1 With the menu off, push the "-" or "+" button to display the brightness adjustment menu.
- 2 Push the "+" button to increase the brightness; push the "-" button to decrease the brightness.

## OSD Lock/Unlock

This function allows you to secure the current settings so that they cannot be inadvertently changed, while still allowing you to adjust the Brightness and Contrast. You can unlock the OSD controls at any time by using the same procedure.

With the OSD screen off, push and hold the Menu button for at least 5 seconds to lock or unlock the controls. When locked, a 'LOCKED!' message will be displayed along the bottom of each OSD menu except for these screens :

- Brightness
- Contrast

# Adjusting Your LCD Monitor

## On Screen Display(OSD)

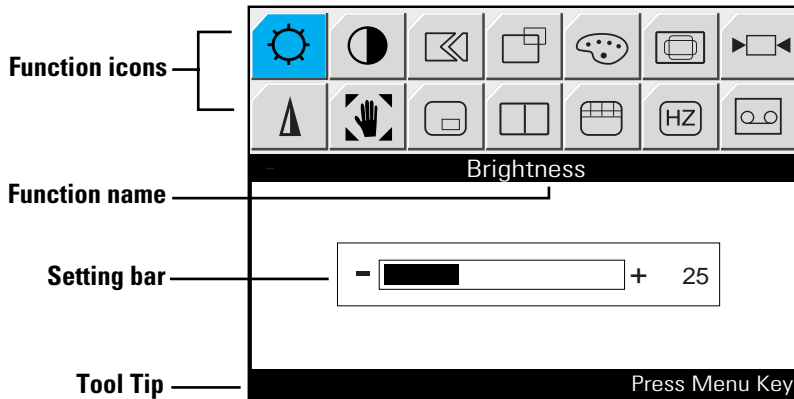


Figure 7. On Screen Display(OSD)

### Accessing the menu system

- 1 With the OSD off, push the **Menu** button to display the main OSD menu.
- 2 Use the "-", "+" buttons to move from one function to another. As you move from one icon to another, the function name changes to reflect the function or group of functions represented by that icon. See Table 1 starting on the next page to view a complete list of all of the functions available for the monitor.
- 3 Press the **Menu** button once to activate the highlighted function, then follow the Tool Tips to select the function and adjust the value.
- 4 Use "-" and "+" buttons to select the sub-menu, and press the **Menu** button once to activate the selected sub-menu.
- 5 After selecting a function, use the "-" and "+" buttons to make necessary adjustments. The setting bar moves and the numeric value indicator changes to reflect your adjustments.






*NOTE: The numeric value indicator is provided as a point of reference only and has nothing to do with a real measurement.*

- 6 Push the **Exit** button a couple of times to return to the main menu to select another function or to exit from the OSD.

# Adjusting Your LCD Monitor






## OSD functions and adjustment

Table 1. Screen controls

Icon	Menus and Sub-menus	Function Descriptions	
		-	+
	Brightness	Changes the overall light intensity of the images being displayed.	
	Contrast	Changes the ratio of light intensity between the brightest white and the darkest black. If "CONTRAST" ratio is set too high, color saturation occurs resulting loss of details. It work only with Analog source.	
	Image Lock	Image Lock is used to fine tune and get the best image by removing noises that creates unstable images with jitters and shimmers. It work only with Analog source.	
	<ul style="list-style-type: none"> <li>■ Fine</li> <li>■ Coarse</li> </ul>	The FINE and COARSE adjustments allow you to fine tune image quality of the monitor. Use “-” and “+” buttons to set the corresponding values to remove or minimize horizontal and vertical noise shown in Figure A and Figure B respectively.	
		Figure A	Figure B
			



# Adjusting Your LCD Monitor

Table 1. Screen controls (*Continued*)

Icon	Menus and Sub-menus	Function Descriptions - +
	<ul style="list-style-type: none"> <li>■ Fine</li> <li>■ Coarse</li> </ul>	<p>Although "Auto Adjustment" automatically finds the optimum values of FINE and COARSE parameters as well as image position, it may be necessary for you to adjust those parameters manually. It is recommended for you to use "Auto Adjustment" first. If the adjustment results are not satisfactory, then use COARSE and FINE adjustment features to get the best adjustment results. Bear in mind that COARSE and FINE adjustments may change the width of the image and affect image position as well. If the image is clear while out of center by a couple of pixels, use image position to center the image.</p>
	<p>H-Position</p>  <p>V-Position</p> 	<ul style="list-style-type: none"> <li>■ Changes the location of the image.</li> <li>■ In case of the image is off center, use this function to center the image.</li> <li>■ It work only with Analog source.</li> <li>■ H-Position               <ul style="list-style-type: none"> <li>"-" : Move to the LEFT</li> <li>"+" : Move to the RIGHT</li> </ul> </li> <li>■ V-Position               <ul style="list-style-type: none"> <li>"-" : Move to the Bottom</li> <li>"+" : Move to the Top</li> </ul> </li> </ul>
	<p>Color control</p> <ul style="list-style-type: none"> <li>■ Mode 1</li> <li>■ Mode 2</li> <li>■ Mode 3</li> <li>■ User Mode</li> <li>■ Reset</li> </ul>	<p>The tone of color can be changed from bluish white to redish white. The individual color components are also user customizable.</p> <p>Redish white.</p> <p>Plain white.</p> <p>Bluish white.</p> <p>User customizable.</p> <p>Color parameters are replaced with the factory default values.</p>

# Adjusting Your LCD Monitor



Table 1. Screen controls (*Continued*)

Icon	Menus and Sub-menus	Function Descriptions - +
	<b>Image Size</b>	<p>Aspect ratio is the proportion of a vertical versus a horizontal resolution, and it varies depending on the input video resolution. For example, 640x480, 800x600, and 1024x768 have the aspect ratio of 4:3, and 1280x1200 has the aspect ratio of 5:4. To view original image without geometrical distortion, aspect ratio must be preserved. The aspect ratio of SyncMaster240T is 16:10 that is neither 4:3 nor 5:4. Thus if the input image resolution has the aspect ratio of 4:3 or 5:4, full screen expansion to 16:10 makes image looked wider to the horizontal direction. This is not appropriate especially for those who do CAD, CAM, and Graphic oriented jobs. To resolve this, IMAGE SIZE control provides three different image expansion methods: Expand 1, Expand 2, and Normal.</p> <hr/> <p>Notice. This function is not available for UXGA and WUXGA modes.</p>
	<ul style="list-style-type: none"> <li>■ Expand 1</li> </ul>	<p>Performs full screen image expansion regardless of the aspect ratio of the input video resolution</p>
	<ul style="list-style-type: none"> <li>■ Expand 2</li> </ul>	<p>Performs image expansion while keeping the aspect ratio of the original video resolution. Usually, there will be some unfilled space to the horizon direction.</p>
	<ul style="list-style-type: none"> <li>■ Normal</li> </ul>	<p>Performs no image expansion. In this mode, input video is displayed at the center of the monitor as it is.</p>
		<b>RECALL</b>




# Adjusting Your LCD Monitor

Table 1. Screen controls (*Continued*)

Icon	Menus and Sub-menus	Function Descriptions – +
	Image Effect	<ul style="list-style-type: none"> <li>■ Performs digital image quality compensation.</li> <li>■ When an input video resolution is lower than 1920x1200 and if IMAGE SIZE is set to "Expand 1" or "Expand 2," then depending on the input video resolution, the expanded image becomes hazy or blurred. In this case, applying sharpening filter enhances the quality of the image, and Image Effect is the features providing such Digital Image Compensation Effects. Image Effect is applicable both Composite Video signals fed by RCA or S-Video connector and PC Video signals fed by D-Sub or DVI connector.</li> <li>■ Sharpen Makes image looked sharper</li> <li>■ Medium Makes image looked sharper but not as sharper as "Sharpen"</li> <li>■ Soften Makes image looked smoother</li> </ul>
	<ul style="list-style-type: none"> <li>■ Zoom</li> </ul>	<ul style="list-style-type: none"> <li>■ Performs Digital Zoom.</li> <li>■ Any part of an image can be magnified by ZOOM feature and the center of magnification can be arbitrarily changed by PAN feature.</li> <li>■ Magnifies an image</li> <li>■ It work only with PC source. (Not working with UXGA &amp; WUXGA mode.)</li> </ul>
	<ul style="list-style-type: none"> <li>■ Pan</li> </ul>	<ul style="list-style-type: none"> <li>■ H-Pan                             <ul style="list-style-type: none"> <li>– Moves magnified image to the horizontal direction</li> <li>– Same as changing the center of ZOOM to the horizontal direction</li> </ul> </li> <li>■ V-Pan                             <ul style="list-style-type: none"> <li>– Moves magnified image to the vertical direction</li> <li>– Same as changing the center of ZOOM to the vertical direction</li> </ul> </li> </ul>


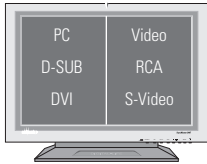
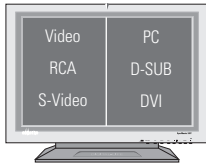

# Adjusting Your LCD Monitor

Table 1. Screen controls (*Continued*)

Icon	Menus and Sub-menus	Function Descriptions - +
	PIP(Picture-in-Picture)	<ul style="list-style-type: none"> <li>■ Shows a small sub-window superimposed on Video or PC. (Refer to page 9.)</li> <li>■ When Video is a full screen video source, then PC will be appeared in a small window. Likewise, when PC is a full screen video source, then Video will be appeared in a small window.</li> <li>■ The monitor remembers the previous state of Video and PC. Thus if the previous state of PC was S-Video, and currently PC video is displayed in full screen, then S-Video will appear in the PIP window.</li> <li>■ When powered on, PIP source is from DVI and Video is from S-Video. If your PC connects Analog or Video connects RCA, change source like below method.</li> <li>■ When you touch SOURCE button when PIP feature is active, PIP source will be changed from RCA or S-Video to S-Video or RCA respectively, and from D-Sub or DVI to DVI or D-Sub respectively.</li> </ul>
	<ul style="list-style-type: none"> <li>■ Size</li> </ul>	Off: Disables PIP 1: 400 x 300 2: 640 x 480 3: 800 x 600
	<ul style="list-style-type: none"> <li>■ Position</li> </ul>	<ul style="list-style-type: none"> <li>■ H-Position Changes PIP window position to the horizontal direction.</li> <li>■ V-Position Changes PIP window position to the vertical direction.</li> </ul>




# Adjusting Your LCD Monitor

Table 1. Screen controls (*Continued*)

Icon	Menus and Sub-menus	Function Descriptions - +
	<p>PBP (Picture by picture)</p>	<ul style="list-style-type: none"> <li>■ Shows PC and Video side by side.</li> <li>■ The monitor screen splits by half and one side is filled with PC and the other side is filled with Video. Again, the monitor remembers the previous state of PC and Video. Thus if the previous state of PC is D-Sub and currently RCA is displayed in full screen mode, PC video signal from D-sub and Composite video signal from RCA will be displayed side by side.</li> <li>■ PBP OFF: Disable PBP feature</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>PBP1</p>  </div> <div style="text-align: center;"> <p>PBP2</p>  </div> </div> <ul style="list-style-type: none"> <li>■ PC Source 1: PC Video Signal Analog (D-Sub)</li> <li>■ PC Source 2: PC Video Signal Digital (DVI)</li> <li>■ Video Source 1: Normal Composite Video Signal (RCA)</li> <li>■ Video Source 2: Super Video Signal (S-Video)</li> <li>■ The method for source change is the same as PIP.</li> </ul>
	<p>MENU CONTROL</p>	<ul style="list-style-type: none"> <li>■ Sets up OSD appearances</li> <li>■ Language <ul style="list-style-type: none"> <li>– Selects one OSD language out of six different languages</li> <li>– English /Deutsch /Español /Français /Italiano /Svenska</li> </ul> </li> <li>■ Halftone <ul style="list-style-type: none"> <li>– Sets the transparency of the background of OSD</li> <li>– Use “-” and “+” buttons to adjust values</li> </ul> </li> <li>■ Menu Position <ul style="list-style-type: none"> <li>– Sets OSD window display position</li> <li>– H-Position: Moves OSD window to the horizontal direction</li> <li>– V-Position: Moves OSD window to the vertical direction</li> </ul> </li> <li>■ Menu Duration <ul style="list-style-type: none"> <li>– Sets time span before OSD window disappears.</li> <li>– The units are seconds.</li> <li>– 5 / 10 / 20 / 50 / 200 are selectable.</li> </ul> </li> </ul>

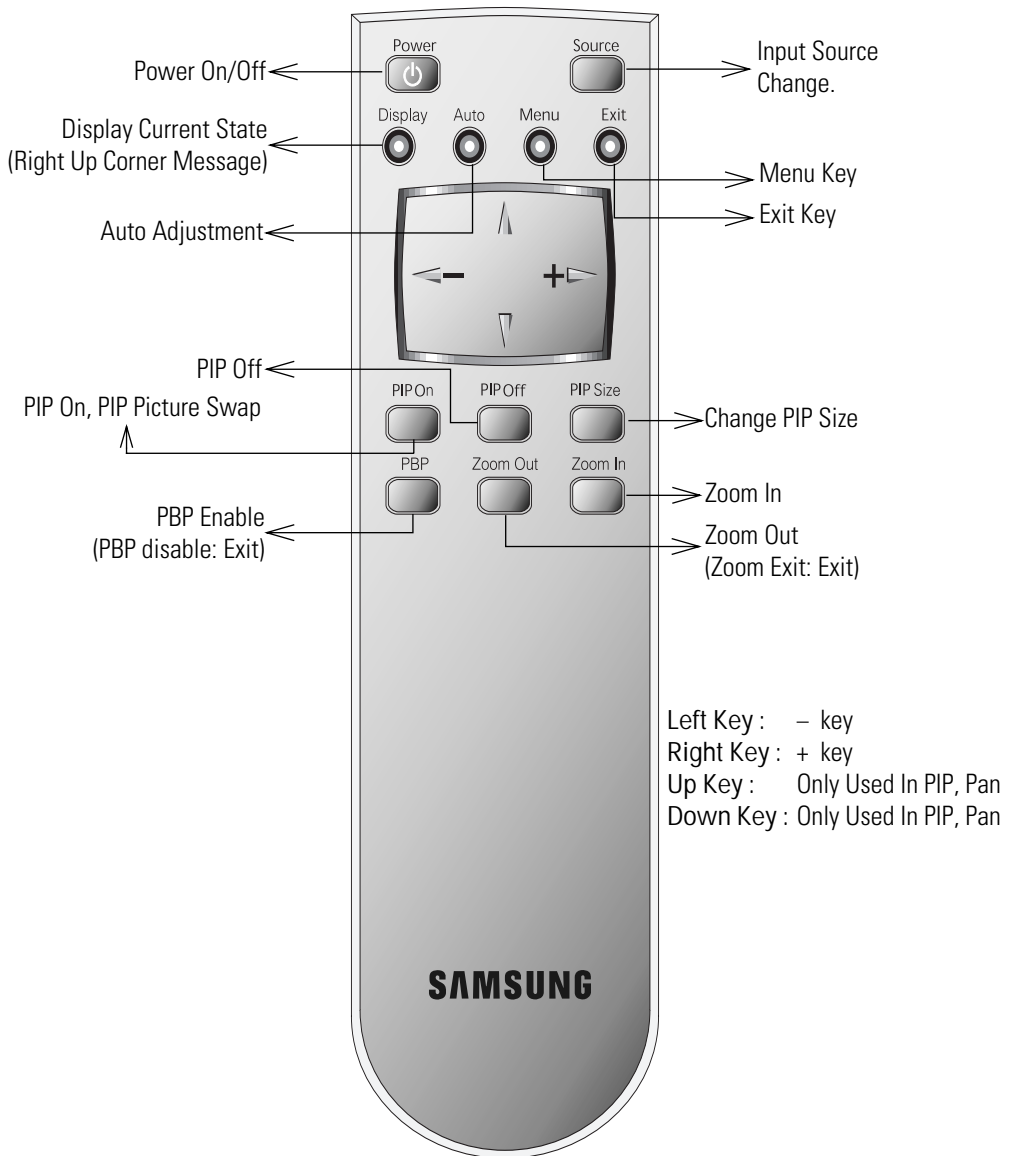
# Adjusting Your LCD Monitor

Table 1. Screen controls (*Continued*)

Icon	Menus and Sub-menus	Function Descriptions - +
	Information	<ul style="list-style-type: none"> <li>■ Shows the information of the current video signal.</li> <li>■ The information includes the following</li> <li>■ Video Signal Type: Analog/Digital</li> <li>■ Sync. Types and frequencies with polarities</li> <li>■ Resolution</li> <li>■ Example                             <div style="text-align: center; margin: 10px 0;">  </div> </li> <li>■ The example shown above says the following.</li> <li>■ Video Signal Type: Analog PC video                             <ul style="list-style-type: none"> <li>H_Sync: "+ / +" 74.8 kHz</li> <li>V_Sync: "- / -" 59.8 HZ</li> <li>S/M 210T Resolution: 1600 x 1200</li> <li>S/M 240T Resolution: 1920 x 1200</li> </ul> </li> </ul>
	VIDEO CONTROL	<ul style="list-style-type: none"> <li>■ The color characteristic of Composite Video is often different from the one of PC Video signal.</li> <li>■ Use VIDEO CONTROL feature to adjust Color Characteristic of Composite Video independent of the one of PC Video.</li> <li>■ Brightness                             <ul style="list-style-type: none"> <li>Increases or decreases the light intensity of composite video.</li> </ul> </li> <li>■ Contrast                             <ul style="list-style-type: none"> <li>Increases or decreases the ratio of the light intensity between the brightest white and the darkest dark.</li> </ul> </li> <li>■ Saturation                             <ul style="list-style-type: none"> <li>Increases or decreases the pureness of color.</li> </ul> </li> <li>■ Hue                             <ul style="list-style-type: none"> <li>Changes the tone of colors.</li> </ul> </li> </ul>

# Adjusting Your LCD Monitor

## By Remote-Control



# Appendix

## PowerSaver

This monitor has a built-in power management system called PowerSaver. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain period of time. The available modes are "On", "Standby", "Sleep", and "Deep Sleep". Power Saver operates with a VESA DPMS compliant video card installed in your computer. You use a software utility installed on your computer to set up this feature. See Table 2 below for details.

Table 2. Power-saving modes

State	Normal Operation	Power-Saving Function mode (EPA/NUTEK)		
		Standby Mode	Sleep Mode Position A1	Deep Sleep Mode Position A2
Horizontal Sync	Active	Inactive	Active	Inactive
Vertical Sync	Active	Active	Inactive	Inactive
Video	Active	Blanked	Blanked	Blanked
Power Indicator	Green	Amber	Amber Blinking (0.5 sec interval)	Amber Blinking (1 sec. interval)
Power Consumption	<b>210T:</b> 90W (Max.) <b>240T:</b> 95W (Max.)	Less than 5W	Less than 5W	Less than 5W

*NOTE: This monitor automatically returns to normal operation when horizontal and vertical sync return. This occurs when you move the computer's mouse or press a key on the keyboard.*

\*This monitor is EPA ENERGY STAR<sup>®</sup> compliant and NUTEK compliant when used with a computer equipped with VESA DPMS functionality.

For energy conservation, turn your monitor OFF when you are not using it or when leaving it unattended for long periods.

*NOTE: Maximum power consumption is measured after letting the monitor turned on for 30 minutes that is the time required for the unit to be thermally stable.*

# Appendix

## Troubleshooting

If you have a problem setting up or using your LCD monitor, you may be able to solve it yourself. Before contacting customer service, try the suggested actions that are appropriate to your problem.

Table 3. Troubleshooting – Image

What you see...	Suggested Actions	Reference
Screen is blank and power indicator is off	<ul style="list-style-type: none"><li>■ Ensure that the power cord is firmly connected and the LCD monitor is on.</li></ul>	Connecting your LCD monitor, page 5.
“Check Signal Cable” message	<ul style="list-style-type: none"><li>■ Ensure that the signal cable is firmly connected to the PC or video sources.</li><li>■ Ensure that the PC or video sources are turned on.</li></ul>	Connecting your LCD monitor, page 5.
“Sync. Out of Range” message	<ul style="list-style-type: none"><li>■ Check the maximum resolution and the frequency of the video adaptor.</li><li>■ Compare these values with the data in the Display Modes Timing Chart.</li></ul>	Display Modes, page 25.
The image is too light or too dark	<ul style="list-style-type: none"><li>■ Adjust the Brightness and Contrast.</li></ul>	Brightness, page 12. Contrast, page 12.
Horizontal bars appear to flicker, jitter or shimmer on the image	<ul style="list-style-type: none"><li>■ Adjust the Fine function.</li></ul>	Image Lock, Fine, page 12.
Vertical bars appear to flicker, jitter or shimmer on the image.	<ul style="list-style-type: none"><li>■ Adjust the Coarse function and then adjust the Fine function.</li></ul>	Image Lock, Coarse, page 12. Image Lock, Fine, page 12.

# Appendix

Table 3. Troubleshooting – Image (*Continued*)

What you see...	Suggested Actions	Reference
Screen is blank and power indicator light is steady amber or blinks every 0.5 or 1 seconds	<ul style="list-style-type: none"> <li>■ The monitor is using its power management system.</li> <li>■ Move the computer's mouse or press a key on the keyboard</li> </ul>	Power Saver, page 20.
Image is not stable and may appear to vibrate	<ul style="list-style-type: none"> <li>■ Check that the display resolution and frequency from your PC or video board is an available mode for your monitor. On your computer check: Control Panel, Display, Settings</li> </ul>	Display Modes, page 25.
	<ul style="list-style-type: none"> <li>■ If the setting is not correct, use your computer utility program to change the display settings.</li> </ul>	Installing the Video Driver, page 6.
	<i>NOTE: Your monitor supports multiscan display functions within the following frequency domain:</i>	
<ul style="list-style-type: none"> <li>■ Horizontal frequency:  Vertical frequency: Maximum refresh rate:</li> </ul>	Analog: 30 kHz ~ 93 kHz Digital: 30 kHz ~ 81 kHz 30 ~ 85 Hz <b>210T:</b> 1600 x 1200 <b>240T:</b> 1920 x 1200	
Image is not centered on the screen.	<ul style="list-style-type: none"> <li>■ Adjust the horizontal and vertical position.</li> </ul>	H-Position, page 13. V-Position, page 13.
You need the monitor driver software	<ul style="list-style-type: none"> <li>■ Download the driver from WWW pages:  <a href="http://www.samsung-monitor.com">http://www.samsung-monitor.com</a>  <a href="http://www.samsungmonitor.com">http://www.samsungmonitor.com</a> (USA only)</li> </ul>	



# Appendix

## Specifications

Table 4. Technical and environmental specifications

		210T	240T
Panel	Size Display Size Type Pixel pitch Viewing Angle	21.3" Diagonal 432 (H) x 324 (V) mm a-si TFT Active matrix 0.27 (H) x 0.27 (V) mm 80°/80°/80°/80°	24.06" Diagonal 518.4 (H) x 324 (V) mm a-si TFT Active matrix 0.27 (H) x 0.27 (V) mm 80°/80°/80°/80°
* Frequency	Horizontal Vertical Display color	Analog: 30 ~ 93 kHz Digital: 30 ~ 81 kHz 30 ~ 85 Hz 16,777,216 colors	
Display Resolution	Analog Digital	1600 x 1200 1280 x 1024	1920 x 1200 1280 x 1024
Input Signal	Sync. Video signal	H/V Separate, TTL, P. or N. H/V Composite, TTL, P. or N. Sync-on-green 0.3 Vp-p, N. 0.7 Vp-p @ 75 ohm	
Power Supply	Input Output	AC 100-240 Vrms (50/60Hz) DC 14V/6A	
Power Consumption	Maximum Power Saving	90 W 5 W	95 W 5 W
Dimensions/ Weight ( W x H x D )	Unit	549.1 x 228 x 483.4mm/11.3 kg	620.4 x 228 x 483.4mm/13.8 kg
Environmental Considerations	Operating Temperature: 50 °F to 104 °F (10 °C to 40 °C) Operating Humidity: 10% to 80% Storage Temperature: 13 °F to 113 °F (-25 °C to 45 °C) Storage Humidity: 5% to 95%		

*NOTE: Maximum power consumption is measured after letting the monitor turned on for 30 minutes that is the time required for the unit to be thermally stable.*

\* Referring to preset timing modes, page 25.

# Appendix

## Pin Assignments

Table 5. 15 pin D-sub connector

Pin	Separate H/V	Composite H/V	Sync-on-green
1	Red	Red	Red
2	Green	Green	Green + H/V Sync
3	Blue	Blue	Blue
4	GND	GND	GND
5	GND (DDC Return)	GND (DDC Return)	GND (DDC Return)
6	GND-Red	GND-Red	GND-Red
7	GND-Green	GND-Green	GND-Green
8	GND-Blue	GND-Blue	GND-Blue
9	No Connection	No Connection	Not used
10	GND-Sync/Self Test	GND-Sync/Self Test	GND-Sync/Self Test
11	GND	GND	GND
12	DDC_SDA	DDC_SDA	DDC_SDA
13	H_Sync	H/V Sync	Not used
14	V_Sync	Not used	Not used
15	DDC_SCL	DDC_SCL	DDC_SCL

Table 6. DVI-D Connector

Pin	Signal Assigneut	Pin	Signal Assigneut
1	T.M.D.S Data 2-	13	No Connect
2	T.M.D.S Data 2+	14	15V Power
3	T.M.D.S Data 2 Shield	15	Ground (for 15V)
4	No Connect	16	Hot Plug Detect
5	No Connect	17	T.M.D.S Data 0-
6	DDC Clock	18	T.M.D.S Data 0+
7	DDC Clock	19	T.M.D.S Data 0 Shield
8	No Connect	20	No Connect
9	T.M.D.S Data 1-	21	No Connect
10	T.M.D.S Data 1+	22	T.M.D.S Clock Shield
11	T.M.D.S Data 1Shield	23	T.M.D.S Clock +
12	No Connect	24	T.M.D.S Clock -

# Appendix

## Display Modes

If the signal from the system equals to the standard signal mode, the screen is adjusted automatically. If the signal from the system doesn't equal to the standard signal mode, adjust the mode with referring to the Videocard user guide because the screen might not display or only the power LED might be on. For the display modes listed below, the screen image has been optimized during manufacture.

Table 7. Preset timing modes

Mode	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock Frequency (MHz)	Sync Polarity (H/V)
VGA	720 x 400	31.469	70.087	28.322	-/+
	640 x 480	31.469	59.940	25.175	-/-
	640 x 480	37.500	75.000	31.500	-/-
	640 x 480	43.269	85.008	36.000	-/-
SVGA	800 x 600	46.875	75.000	49.500	+/+
	800 x 600	53.674	85.061	56.250	+/+
XGA	1024 x 768	48.363	60.004	65.000	-/-
	1024 x 768	60.023	75.029	78.750	+/+
	1024 x 768	68.677	84.997	94.500	+/+
SXGA	1280 x 1024	63.981	60.020	108.000	+/-,+/-
	1280 x 1024	79.976	75.025	135.000	+/+
UXGA (Analog only)	1600 x 1200	75.000	60.000	162.000	+/-,+/-
WUXGA (Analog/240T only)	1920 x 1200	75.000	60.000	193.156	+/-,+/-

*1600 x 1200 / 1920 x 1200 Mode change function*

*The recommended mode of SyncMaster 240T is 1920 x 1200, however you may prefer 1600 x 1200 to 1920 x 1200. Then, please use mode change function for optimal screen display.*

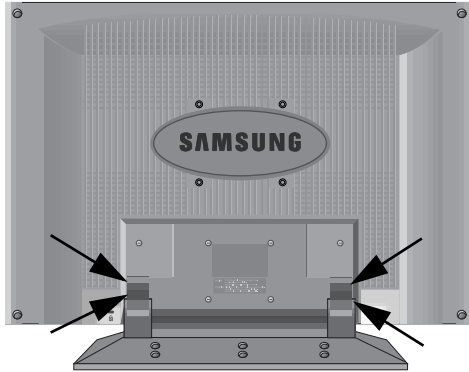
- 1. Press "menu" button on the Monitor front.*
- 2. Choose "information" menu by using +/- key*
- 3. Press "menu" button 7 times continuously*
- 4. Then, the mode change function operates*
- 5. If you want to revert to the original mode, then do the 1-3 procedure again.*

# Appendix

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## Changing the Base

### Removing the base

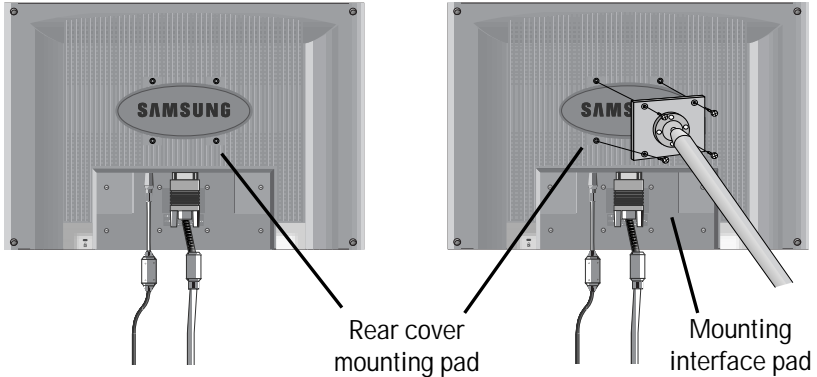


- 1 Turn off your monitor and unplug its power cord.
- 2 Lay the LCD monitor face-down on a flat surface with a cushion beneath it to protect the screen.
- 3 Remove the four screws and then remove the Stand from the LCD monitor.

# Appendix

## Attaching a base

*NOTE: This monitor accepts a 100mm x 100mm VESA-compliant mounting interface pad.*



- 1 Align the Mounting Interface Pad with the holes in the Rear Cover Mounting Pad and secure it with the four screws that came with the arm-type base, wall mount hanger or other base.

## Maintenance of Your LCD

**WARNING:** To avoid risk of electric shock, do not disassemble the monitor cabinet (except for gaining access to the cable connectors as described on page 6). Users cannot service the monitor. User maintenance is restricted to cleaning as explained below:

Unplug the monitor from the power outlet before cleaning.

- To clean your LCD screen, lightly dampen a soft, clean cloth with water or mild detergent. If possible, use a special screen cleaning tissue or solution suitable for the antistatic coating.
- To clean the monitor cabinet, use a cloth lightly dampened with a mild detergent.
- Never use flammable cleaning material to clean your LCD or any other electrical apparatus.

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# Regulatory Information

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## FCC Information

### User Instructions

The Federal Communications Commission Radio Frequency Interference Statement includes the following warning:

**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 receptions, 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.

### User Information

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may find the booklet called How to Identify and Resolve Radio/TV Interference Problems helpful. This booklet was prepared by the Federal Communications Commission. It is available from the U.S. Government Printing Office, Washington, DC 20402, Stock Number 004-000-00345-4.

### Warning

User must use shielded signal interface cables to maintain FCC compliance for the product.

### Declaration of conformity for products Marked with FCC Logo

This device complies with Part 15 of the 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.

The party responsible for product compliance:

SAMSUNG ELECTRONICS CO., LTD  
America QA Lab of Samsung  
85 West Tasman Drive  
San Jose, CA 95134 USA  
Tel) 408-544-5124  
Fax) 408-544-5191

Provided with this monitor is a detachable power supply cord with IEC320 style terminations. It may be suitable for connection to any UL Listed personal computer with similar configuration. Before making the connection, make sure the voltage rating of the computer convenience outlet is the same as the monitor and that the ampere rating of the computer convenience outlet is equal to or exceeds the monitor voltage rating.

For 120 Volt applications, use only UL Listed detachable power cord with NEMA configuration 5-15P type (parallel blades) plug cap. For 240 Volt applications use only UL Listed Detachable power supply cord with NEMA configuration 6-15P type (tandem blades) plug cap.

## IC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations of ICES-003.

Cet appareil Numérique de classe B respecte toutes les exigences du Règlement ICES-003 sur les équipements produisant des interférences au Canada.

## MPR II Compliance

This monitor complies with SWEDAC(MPR II) recommendations for reduced electric and magnetic fields.

## European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC), (92/31/EEC), (93/68/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022:1998 – Radio Frequency Interference
- EN55024:1998 – Electromagnetic Immunity
- EN61000-3-2:1995 + A1 + A2 – Power Line Harmonics
- EN61000-3-3:1995 – Voltage Fluctuations
- EN60950 – Product Safety.

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