



15" TFT-LCD Monitor

Owner's Instructions



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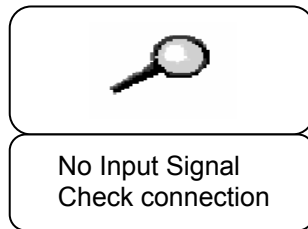
Self-Test Feature Check

Self-Test Feature Check (STFC)

Your monitor provides a self-test feature that allows you to check whether your monitor is functioning properly. 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 performing the following steps:

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 the following message:



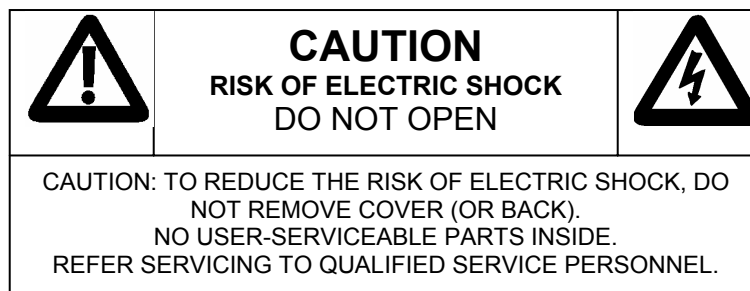
These messages also appear during normal operation if the video cable becomes disconnected or damaged.

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 using the previous procedure, check your video controller and computer system; your monitor is functioning properly.

Precautions

- Before connecting the AC power cord to the DC adapter outlet, make sure the voltage of the local electrical supply is within the range of 100-240VAC.
- Never insert anything metallic into the openings in the cabinet of the LCD monitor; doing so may create the danger of electric shock.
- To avoid electric shock, never touch the inside of the LCD monitor. Only a qualified technician should open the case of the LCD monitor.
- Never use your LCD monitor if the power cord has been damaged. Do not allow anything to rest on the power cord or pinch the power cord.
- Be sure to hold the plug, not the cord, when disconnecting the LCD monitor from an electric socket.
- Openings in the LCD monitor cabinet are provided for ventilation. To prevent overheating, these openings should not be blocked or covered.
- Put your LCD monitor in a location with low humidity and a minimum of dust.
- 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.
- 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 monitor.
- Locate your LCD monitor near an easily accessible AC outlet.
- 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.
- High temperature can cause problems. Don't use your LCD monitor in direct sunlight, and keep it away from heaters and other sources of heat.
- Unplug the LCD monitor when it is going to be left unused for an extended period of time.
- Unplug your LCD monitor from the AC outlet before any service.
- Maximum operating ambient temperature is 40°C.
- Never restrict the airflow through the devices' fan or vents. Install the unit in a well-ventilated area.
- When installing equipment into a rack, distribute the units evenly. Otherwise, hazardous conditions may be created by an uneven weight distribution.
- Connect the unit only to a properly rated supply circuit.
- Mouse (trackball) and keyboard connections to be connected only to Listed ITE with Limited Power Source (LPS) keyboard and mouse (trackball) outputs.



Installation

Plug and Play

Our adoption of the new VESA @ 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 (EDID) data using Display Data Channel (DDC) protocols so the PC system can automatically configure itself to use the LCD monitor.

Connecting Your LCD Monitor

Before connecting the LCD monitor to your computer, make sure that your computer supports at least one of the video modes supported by the LCD monitor. If the video mode, at the time of installation, is not one supported by the LCD monitor, the LCD monitor may not display the image as it is intended.

1. Be sure the power switches of both the computer and the LCD monitor are off.
2. Connect the VGA video cable from the LCD monitor to the video output connector on a server/computer or console switch. Connect the trackball and keyboard mini din connectors from the LCD monitor to the mouse and keyboard port of a server/computer or console switch.
3. Plug the computer and monitor power cables into a power outlet.
4. Turn on the monitor power and then the server power (if connected to a console switch, be sure to turn on the power to the console switch first, followed by the LCD monitor and then the server/computer).

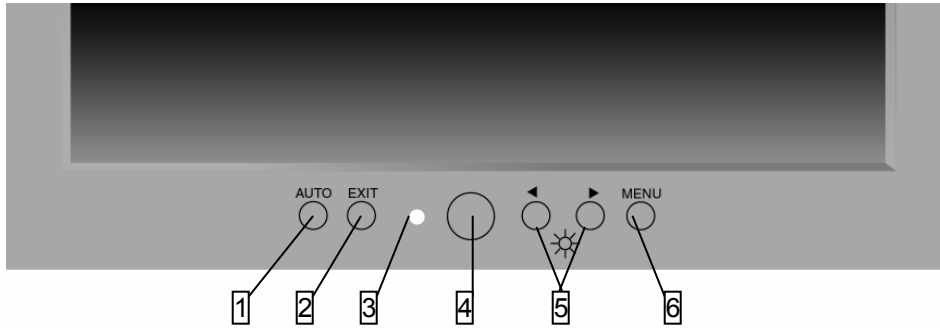
If your monitor displays an image, you have successfully installed the monitor.

If the monitor does not display an image, check all the connections and follow the "Troubleshooting" guide beginning on page 13.

5. Your LCD monitor is now ready to use, but to get the best image on the LCD monitor, most of the LCD monitor parameters must be fine tuned to work with the video adapter you are using. The following sections will guide you through the step-by-step procedures for adjusting the parameters for your specific needs.

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 on-screen menu shows you their numeric values as they change.



User Controls

1. Auto

- Activates the Auto adjustment function. The “Auto adjustment is being process” message appears.

2. Exit

- Exit from the OSD function or back to previous menu.

3. Power Indicator

- Indicates the status of monitor operation.
- Green: Normal
- Black: Power OFF
- Amber: Power saving mode or Disconnection of signal cable.

4. Power Button

- Turn on and off the monitor power.

5. ◀/▶

- Moves the selector left and right on the OSD menu.
- Increase or decrease the value of selected adjustment or select proper setting.
Brightness: Adjusts the brightness of back light lamp by pressing the ◀or ▶ buttons without OSD menu. (Hot key)

6. Menu

- Calls OSD menu.
- Select the function to be adjusted.
- Moves the selector down on the OSD menu.

Adjusting Your LCD Monitor

Automatic Save

Whenever you open the on-screen menu and allow an adjustment window to remain active for about 3 seconds without pressing another button, the monitor automatically saves any adjustments you have made. These changes are saved into a user area in the monitor. User areas are reserved according to the signal frequency from your computer. The monitor can save adjustments for up to 5 user modes. It has 10 factory preset or preload modes, one for each signal frequency as listed in "Display Modes" on page 16.

If you have made no adjustments, the on-screen menu disappears and the monitor does not save anything. To exit without saving the changes you have made, press the EXIT button before the 3 seconds elapse.

Adjusting Your LCD Monitor

Getting Help

If your monitor does not display an image, check your cable connections and refer to "Troubleshooting" on page 13. If you experience difficulties with the quality of the displayed image, run Auto Adjustment (see below) and refer to "Adjusting Your LCD" on page 5 or "Troubleshooting" on page 13.

Warm-up Time

All LCD monitors need time to become thermally stable the first time you turn them on each day. 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.

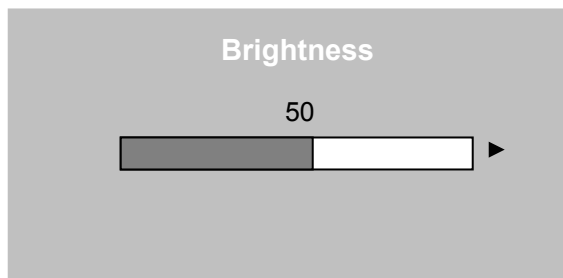
Direct-Access Features

The features described in this section can be accessed quickly, at the touch of one button. Once you finish making adjustments to a feature, push the EXIT button to turn off the menu or allow the OSD to time-out and disappear automatically.

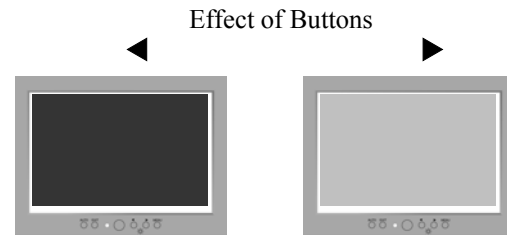
Auto Adjustment

Your computer system can recognize your new LCD monitor; the Auto Adjustment function will optimize the display settings for use with your computer.

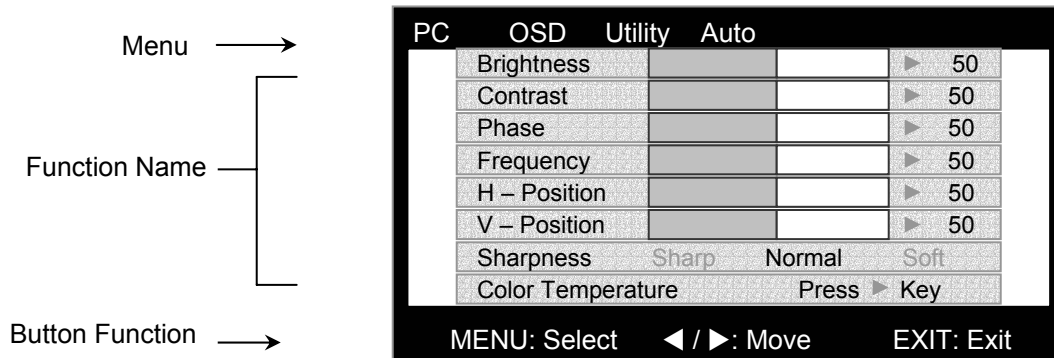
Brightness



To adjust the brightness of the monitor's display, with the menu off, push the ◀ or ▶ button to display the brightness screen.



Adjusting Your LCD Monitor



On-Screen Display (OSD) Accessing Menu System

1. With the OSD off, push the MENU button to open it and display the OSD.
2. Use the ◀ and ▶ buttons to move between the menus. A complete list of all the functions available for the monitor begins on page 9.
3. Push the MENU button once to activate the highlighted menu/function.
4. After selecting a menu use the MENU button to move between functions.
5. Use the ◀ and ▶ buttons to make the adjustments to the highlighted functions. The setting sidebar 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 does not reflect any measurable value.

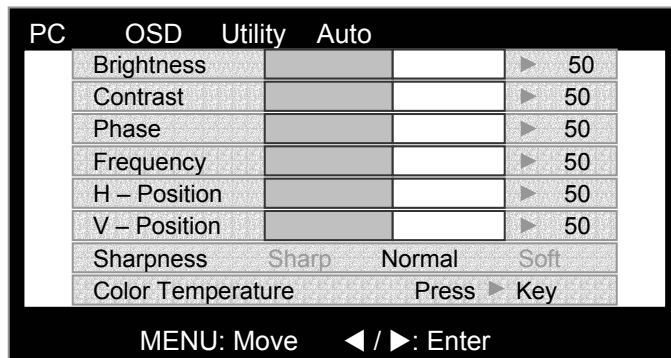
6. Push the EXIT button to return to the previous menu or to close the OSD.

NOTE: If the timeout function closes the OSD, the next time the MENU button is pushed the OSD will be in the same place. The timeout function does not return the OSD to the main menu. The EXIT button must be used to get back to a previous menu/function.

Adjusting Your LCD Monitor

OSD Functions and Adjustments -Screen Controls

PC MENU



Brightness: Adjusts the brightness of the display (Increase & Decrease).

Contrast: Adjusts the contrast of the display (Increase & Decrease).

Phase & Frequency: The Phase and Frequency adjustments allow you to more closely adjust your monitor to your preference. Use the ◀ and ▶ buttons to adjust away interference.

If satisfactory results are not obtained using the Phase adjustment, use the Frequency adjustment and then use Phase again.

This function may change the width of the display image. Use the H-Position menu to center the display image on the screen.

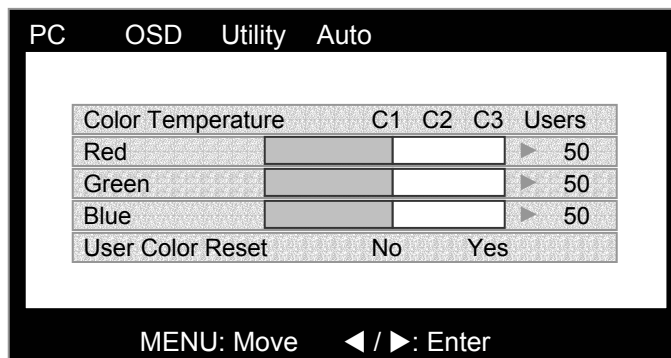
Horizontal Position: Moves the Display Area location (Left & Right).

Vertical Position: Moves the Display Area location (Up & Down).

Sharpness: Sharp, normal, and soft are the available settings.

Color Temperature: Press the ▶ key to access the color temperature adjustments.

Color Temperature Menu



Color Temperature: Sets the Color Mode of the LCD monitor.

- C1 sets the color to a cool (bluish) white.
- C2 sets the color to the natural characteristics of the LCD.
- C3 sets the color to a warm (reddish) white.
- User mode adjusts the saturation of red, green, and blue in the display area.

Red: In User Mode decreases (◀) or increases (▶) the redness.

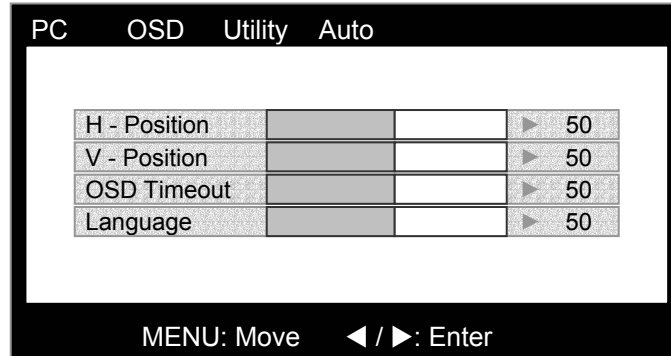
Green: In User Mode decreases (◀) or increases (▶) the redness.

Blue: In User Mode decreases (◀) or increases (▶) the redness.

User color reset: Sets the red, green, and blue to a value of 50.

OSD Functions and Adjustments-Screen Controls (continued)

OSD Menu



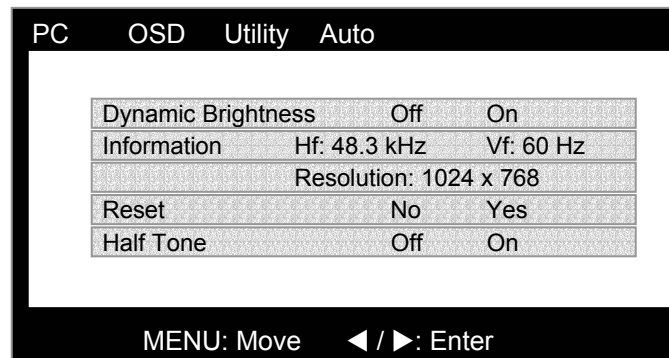
OSD Horizontal Position: Moves the OSD window location (Left & Right).

OSD Vertical Position: Moves the OSD window location (Up & Down).

Language: Changes the OSD language.

OSD Timeout Control: Sets time span before OSD menu disappearance. (5 to 200 seconds)

Utility Menu



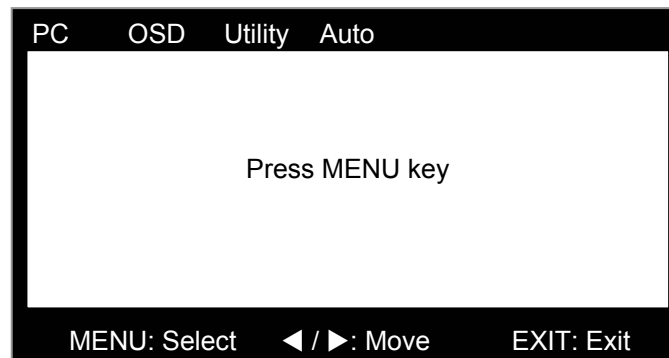
Dynamic Brightness: N/A

Information: Current monitor settings.

Reset: User setting becomes invalid, and return to factory default settings.

Half Tone: Changes the background color of OSD window.

Auto Menu



Press the Menu button. The “Automatic adjustment in progress” message appears. When finished, the current and the best monitor resolutions are displayed in the bottom right corner.

Power Management

This monitor has a built-in power management system. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain amount of time. The available modes are **On**, **Standby** and **Suspend**.

The Power Management system 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 the table below for details.

Power-Saving Function Mode (EPA/NUTEK)			
State	Normal Operation	Standby Mode	Suspend Mode
Horizontal Sync	Active	Inactive	Active
Vertical Sync	Active	Active	Inactive
Power Indicator	Green	Amber	Green/Amber Blink
Power Consumption	20W (Nom.)	Less than 3W	Less than 3W

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® and NUTEK/ ENERGY 2000 compliant when used with a computer equipped with VESA DPMS functionality.

For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods.

Maintenance of Your LCD Monitor

WARNING

To avoid risk of electric shock, do not disassemble the monitor cabinet. 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.

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.

Image Problems

Problem	Suggested Action	References
LED doesn't light/ No image	<ul style="list-style-type: none"> Check if the display is in power saving mode Check if the display is switched on or the power cable is properly connected 	
Image is unstable (Flicker, Interference, Noise, etc.)	<ul style="list-style-type: none"> Check if signal cable is secured Check if frame (vertical) frequency of video signal is lower than 75Hz because this monitor cannot run over 75Hz. In this case, please change the setting of 'Display Control Panel' of Windows to 60Hz, that displays the best performance 	
Dull image	<ul style="list-style-type: none"> Try to pushing the Auto button Adjust the Frequency or Phase Adjust the frame (vertical) frequency to 60Hz Remove any video signal distributor 	
Dark or saturated image	Adjust the Brightness or Contrast	

Technical Specifications

LCD Panel

Size	15.0" Diagonal
Display area	304.1 (H) x 228.1(V) mm
Type	a-Si TFT active matrix
Pixel pitch	0.264 (H) x 0.264 (W) mm

Frequency

Horizontal	30- 61 kHz
Vertical	50 -75Hz
Display Color	16.7M Colors

Display Resolution

Optimum Mode	1024 x 768 @ 60Hz
Maximum Mode	1280 x 1024 @ 60Hz

Input Signal

Sync	Separate H/V sync, TTL, Positive or Negative Composite H/V sync, TTL, Positive or Negative Sync-on-green (SOG), TTL, Positive or Negative
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Video Signal 0.700Vp-p @ 75ohm, Positive

Power Supply

AC 100-240V, 60Hz -50Hz to 12V/ 3.75A

Power Consumption

Normal	20 Watt
Power Saving	Less than 3 Watts

Environmental Considerations

Operating Temperature	(0°C to 40°C)
Operating Humidity	10% to 80%
Storage Temperature	(-25°C to 60°C)
Storage Humidity	5% to 95%

Pin Assignment

15 pin D-sub connector

Pin no.	Function	Pin no.	Function	Pin no.	Function
1	Red	6	R GND	11	GND
2	Green	7	G GND	12	SDA (DDC data)
3	Blue	8	B GND	13	Hsync
4	NC	9	NC	14	Vsync
5	GND	10	GND	15	SCL (DDC clock)

Video Mode Support

No.	Mode	Resolution	Total	Horizontal		Vertical		Pixel Clock
				Frequency	Polarity	Frequency	Polarity	
1	VGA	720x400	900x449	31.47KHz	N	70.0 Hz	P	28.322MHz
2		640x480	800x525	31.47KHz	N	60.0 Hz	N	25.175MHz
3		640x480	864x525	35.00KHz	N	66.7 Hz	N	30.240MHz
4		640x480	832x520	37.86KHz	N	72.8 Hz	N	31.500MHz
5		640x480	840x500	37.50KHz	N	75.0 Hz	N	31.500MHz
6		640x480	832x509	43.27KHz	N	85.0 Hz	N	36.000MHz
7	SVGA	800x600	1024x625	35.16KHz	N/P	56.3 Hz	N/P	36.000MHz
8		800x600	1056x628	37.88KHz	P	60.3 Hz	P	40.000MHz
9		800x600	1040x666	48.08KHz	P	72.2 Hz	P	50.000MHz
10		800x600	1056x625	46.87KHz	P	75.0 Hz	P	49.500MHz
11		800x600	1048x631	53.67KHz	P	85.1 Hz	P	56.250MHz
12		832x624	1152x667	49.73KHz	N	74.6 Hz	N	57.284MHz
13	XGA	1024x768	1344x806	48.36KHz	N	60.0 Hz	N	65.000MHz
14		1024x768	1328x806	56.48KHz	N	70.1 Hz	N	75.000MHz
15		1024x768	1312x800	60.02KHz	P	75.0 Hz	P	78.750MHz
16		1024x768	1376x808	68.67KHz	P	85.0 Hz	P	94.500MHz
17	SXGA	1280x1024	1708x1056	64.00KHz	N	60.0 Hz	N	108.000MHz
<p>■ 6, 11, 16, 17 mode is "Fail-safe Mode"</p>								