

Exhibit 5

**INSTALLATION AND OPERATING
INSTRUCTION**



Dell™ 1501FP Flat Panel Color Monitor User's Guide

- 1 INTRODUCTION
- 2 GETTING STARTED
- 3 CONNECTIONS
- 4 OPERATION
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Preface: Dell™ 1501FP Flat Panel Color Monitor User's Guide

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About This Guide

This guide is intended for anyone who uses the Dell 1501FP Flat Panel Color Monitor. It describes the monitor's features, setup, and operation.

The sections are as follows:

- **Safety Instructions** lists safety information.
 - **Introduction** gives an overview of the monitor's features and provides an orientation to the monitor.
 - **Setup** describes the initial setup process.
 - **Using the Monitor** gives an overview of how to use the monitor.
 - **Troubleshooting** provides tips and solutions for common problems.
 - **Specifications** lists the technical specifications of the monitor.
 - **Regulatory** lists regulatory certifications and notices.
 - **Warranty** describes the warranty information for this product.
 - **Documentation** provides additional documentation that supports this product.
-

Notational Conventions

The following subsections describe notational conventions used in this document.

Notes, Cautions, and Warnings

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, cautions, and warnings, and they are used as follows:

-  **NOTE:** A NOTE indicates important information that helps you make better use of your computer system.
-  **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.
-  **WARNING:** A WARNING indicates the potential for bodily harm and tells you how to avoid the problem.

Some warnings may appear in alternate formats and may be unaccompanied by an icon. In such cases, the specific presentation of the warning is mandated by regulatory authority.

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Safety Instructions: Dell™ 1501FP Flat Panel Color Monitor User's Guide

⚠ WARNING: Use of controls, adjustments, or procedures other than those specified in this documentation may result in exposure to shock, electrical hazards, and/or mechanical hazards.

Read and follow these instructions when connecting and using your computer monitor:

- To help avoid damaging your computer, be sure that the voltage selection switch on the power supply is set to match the alternating current (AC) power available at your location:
 - 115 volts (V)/60 hertz (Hz) in most of North and South America and some Far Eastern countries such as Japan, South Korea, and Taiwan.
 - 230 V/50 Hz in most of Europe, the Middle East, and the Far East

Also be sure that your monitor is electrically rated to operate with the AC power available in your location.

- Never insert anything metallic into the monitor openings. Doing so may create the danger of electric shock.
- To avoid electric shock, never touch the inside of the monitor. Only a qualified technician should open the monitor's case.
- Never use your monitor if the power cable has been damaged. Do not allow anything to rest on the power cable, and keep the cable away from where people could trip over it.
- Be sure to hold the plug, not the cable, when disconnecting the monitor from an electric socket.
- Openings in the monitor cabinet are provided for ventilation. To prevent overheating, these openings should not be blocked or covered. Also, avoid using the 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 monitor in a bookcase or some other enclosed space, be sure to provide adequate ventilation.
- Put your monitor in a location with low humidity and a minimum of dust. Avoid places like damp basement or dusty hallways.
- Do not expose the monitor to rain or use it near water (in kitchens, next to swimming pools, etc.). If the monitor accidentally gets wet, unplug it and contact an authorized dealer immediately. You can clean the monitor with a damp cloth when necessary, but be sure to unplug the monitor first.
- Place the monitor on a solid surface and treat it carefully. The screen is made of glass and can be damaged if dropped or sharply hit.
- Locate your monitor near an easily accessible electric outlet.
- If your 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 temperatures can cause problems. Don't use your monitor in direct sunlight, and keep it away from heaters, stoves, fireplaces, and other sources of heat.**
 - **Unplug the monitor when it is going to be left unused for an extended period of time.**
 - **Unplug your monitor from the electric outlet before any service.**
-

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Introduction: Dell™ 1501FP Flat Panel Color Monitor User's Guide

[Overview](#) • [Features](#) • [Graphics](#)

Overview

Congratulations on purchasing the Dell 1501FP Flat Panel color monitor. The 1501FP satisfies the need of high-end corporate and professional users. This monitor is for those who are seeking advanced design, a small footprint, high quality picture and ergonomic features in a monitor that takes minimal desk space. Its innovative technology delivers outstanding viewing angle and picture quality, zero emissions, dual input (Analog and Digital), and low-energy consumption.

Features

The 1501FP Flat Panel color monitor has the following features:

- | | |
|--|---|
| • Optimal Resolution & Refresh | 1024 x 768 at 60 Hz |
| • VIS (viewable image size) | 15.0 inches / 15.1 inches |
| • Screen Type | Active Matrix - TFT LCD |
| • Pixel Dot Pitch | 0.297 x 0.297 mm / 0.300 x 0.300 mm |
| • Faceplate coating | Anti-glare with hard coating 2H |
| • Physical Size (Height x Width x Depth) | 400 mm x 386.4 mm x 179.8 mm (15.7 inches x 15.2 inches x 7.1 inches) |
| • Weight (monitor only) | 5.7 kg (12.5 lbs) |
| • Weight (with packaging) | 7.2 kg (16.1 lbs) |

For more details see [Specifications](#) Section.

Graphics

The following links show various views of the monitor and its components.

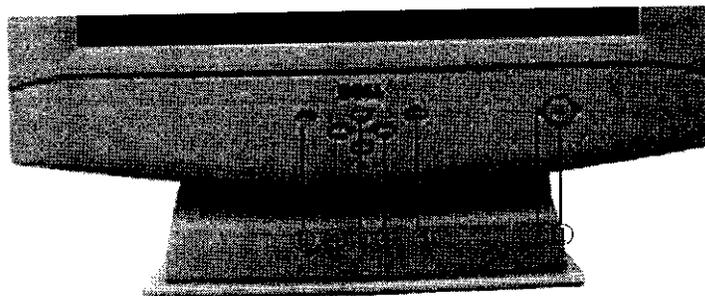
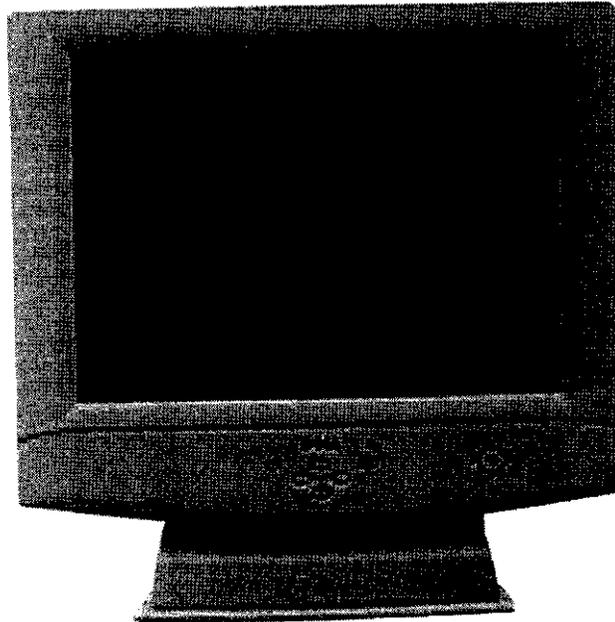
[Front View](#)
[Back View](#)

Bottom View
Side View

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Front View: Dell™ 1501FP Flat Panel Color Monitor User's Guide

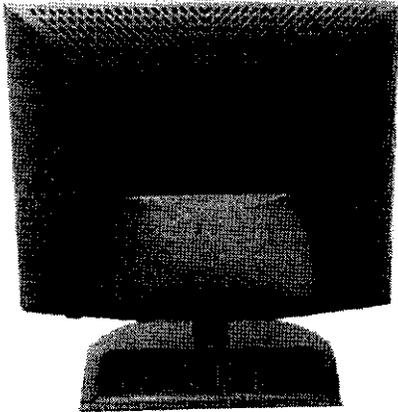


1. Power button 
2. Power Indicator 
3. OSD button 
4.  /  buttons
5.  /  buttons (Brightness hotkey)
6.  Auto button

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Back View: Dell™ 1501FP Flat Panel Color Monitor User's Guide

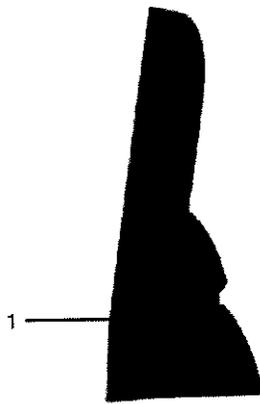


The signal cable is detachable.

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Side View: Dell™ 1501FP Flat Panel Color Monitor User's Guide



1. Location of the serial number label.

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Setup: Dell™ 1501FP Flat Panel Color Monitor User's Guide

Tilt/Swivel Base

Attaching the Cables

Positioning the Monitor

Maintenance

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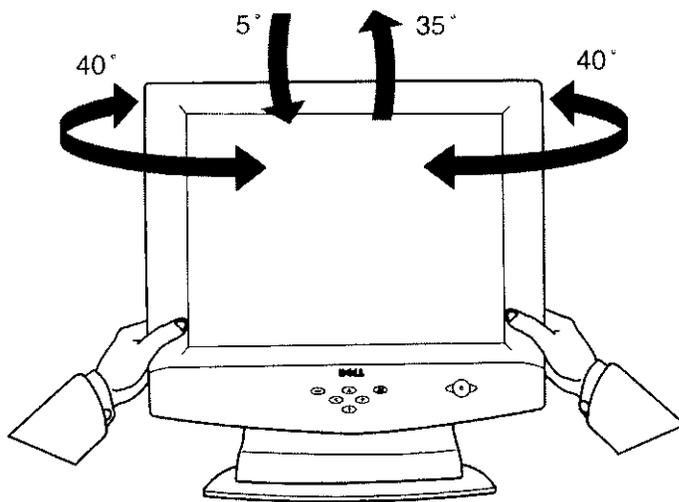
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Tilt/Swivel Base: Dell™ 1501FP Flat Panel Color Monitor User's Guide

- [Pedestal](#)

Pedestal

With the built-in pedestal, you can tilt and/or swivel the monitor for the most comfortable viewing angle.



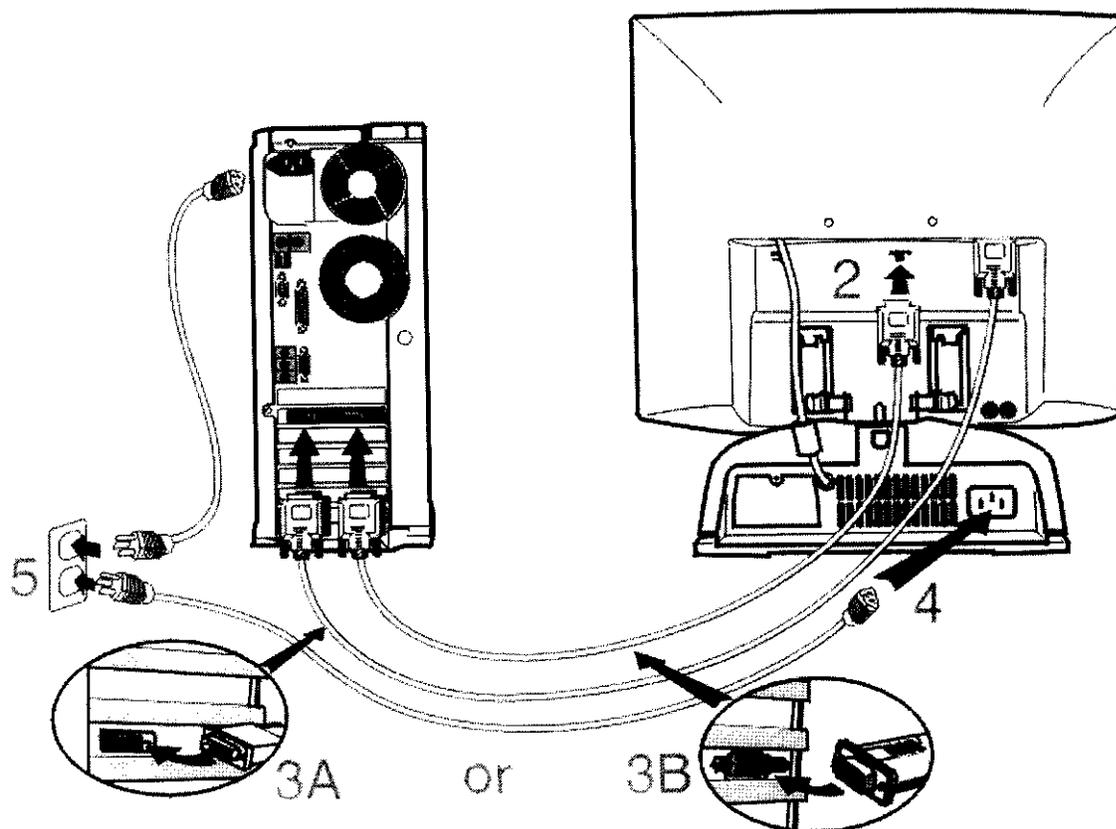
⚠ CAUTION: The tilt/swivel base is not detachable.

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Attaching the Cables: Dell™ 1501FP Flat Panel Color Monitor User's Guide

Cable Connections On Back of Monitor and Computer



1. Turn off your computer and unplug its power cord.
2. Connect Analog cable signal to Flat Panel if you prefer to use Analog instead of Digital. Do not use both Analog and Digital at the same time for one computer.
3. **A. For Digital Input:**
Attach DVI-D signal cable to digital input port on the back of your computer for digital video connection. Do not connect both digital and analog connector, you only need one signal cable to support one computer.
- B. For Analog Input:**
Attach Analog signal cable to analog input port on the back of your computer. Do not attach digital signal cable, you only need one signal cable to support one computer.

Tighten the connector screws finger-tight. Do not overtighten.

4. Connect power cord of your monitor to the power port on the back of the monitor.
5. Plug power cords of your computer and your monitor into a nearby outlet.
6. Turn on your monitor and computer.
7. If your monitor displays an image, installation is complete. If it does not display an image, see [Troubleshooting](#).

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Positioning the Monitor: Dell™ 1501FP Flat Panel Color Monitor User's Guide

Consider the following environmental factors when you are deciding how to position the monitor:

- Do not store or use the LCD monitor in locations exposed to heat, direct sunlight, or extreme cold.
- Avoid moving the LCD monitor between locations with large temperature differences. Choose a site falling within the following temperature and humidity ranges.
 - Temperature: 5° to 35°C (41° to 95°F)
 - Humidity: 80% max. (non-condensing)
- Do not subject the LCD monitor to severe vibration or high impact conditions. Do not place the LCD monitor inside a car trunk.
- Do not store or use the LCD monitor in locations exposed to high humidity or dusty environment. Also do not allow water or other liquids to spill on or into the LCD monitor.

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Maintenance: Dell™ 1501FP Flat Panel Color Monitor User's Guide

▲ WARNING: To avoid risk of electric shock, do not disassemble the monitor cabinet (except for gaining access to the cable connectors as described in [Attaching the Cables](#)). Users cannot service the monitor. User maintenance is restricted to cleaning.

⚠ NOTE: Before cleaning the monitor, unplug it from the electrical outlet.

- To clean your flat panel display screen, lightly dampen a soft, clean cloth with water or isopropyl alcohol. Never use methyl or ethyl alcohol, benzene, thinner, ammonia, abrasive cleaners, or compressed air; these substances could damage the crystals that make up the flat panel display.
- To clean the monitor cabinet, use a cloth lightly dampened with a mild detergent.
- Wipe off stubborn stains from the cabinet with a cloth lightly dampened in isopropyl alcohol. Do not use benzene, thinner, ammonia, abrasive cleaners, or compressed air.

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Using the Monitor: Dell™ 1501FP Flat Panel Color Monitor User's Guide

Setting the Optimal Resolution

Controls and Indicators



1501FP Flat Panel Color Monitor

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Setting the Optimal Resolution: Dell™ 1501FP Flat Panel Color Monitor User's Guide

For optimal monitor performance while using the Microsoft® Windows® 95, Windows 98, or Windows NT® operating systems, set the display resolution to 1024 x 768 pixels by performing the following steps:

1. Click the **Start** button, point to **Settings**, and click **Control Panel**.
 2. Double-click the **Display** icon in the **Control Panel** window, and then click the **Settings** tab.
 3. In the **Desktop** area, move the sidebar to 1024 by 768 pixels. Then click **OK**.
-

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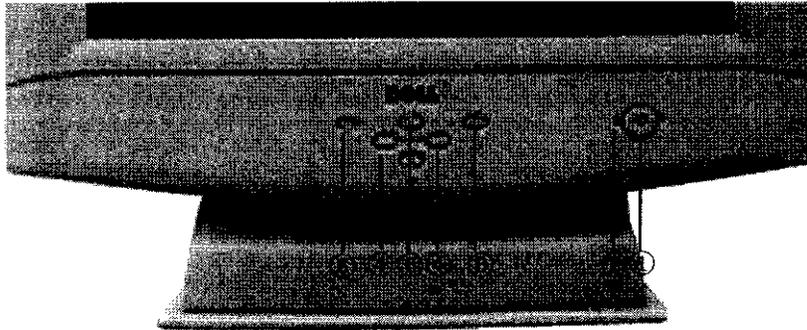
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Controls and Indicators: Dell™ 1501FP Flat Panel Color Monitor User's Guide

[Overview](#) • [On-Screen Display \(OSD\) Menu System](#) • [Automatic Save](#) • [Reset Features](#) • [OSD Attention Messages](#) • [LED Indicators](#)

Overview

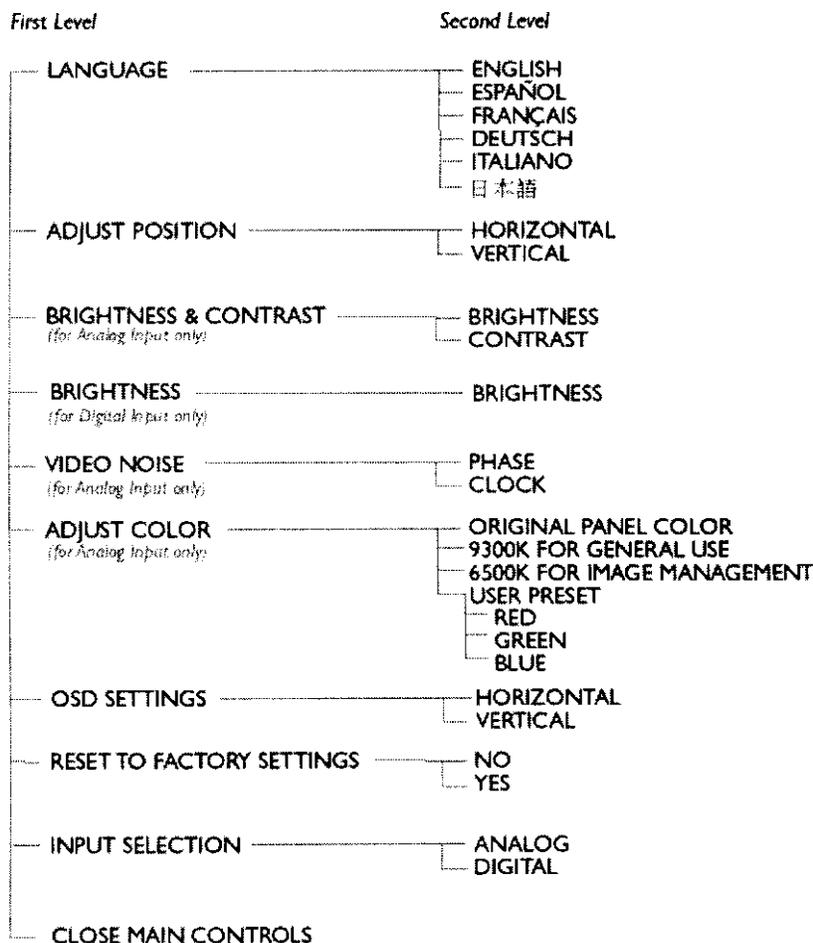
Use the control buttons on the front of the monitor to adjust the characteristics of the image being displayed. As you use these buttons to adjust the controls, an on-screen display (OSD) shows their numeric values as they change.



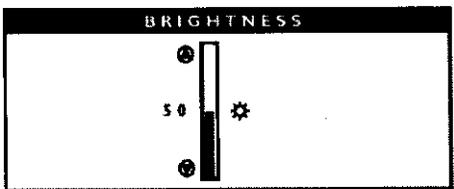
- 1  Power button switches your monitor on.
 - 2  Power indicator
 - 3  OK button which when pressed will take you to the OSD controls.
 - 4  LEFT and RIGHT buttons, like the UP and DOWN buttons, are also used in adjusting the OSD of your monitor.
 - 5  UP and DOWN buttons are used when adjusting the OSD of your monitor. These buttons are also direct access buttons for **Brightness** control.
 - 6  AUTO button which when pressed will perform the **AUTO Adjustment** to optimize the display settings for use with your computer.
-

On Screen Display (OSD) Menu System

The OSD Tree



Direct-Access Function

Function	Description
<p>Brightness:</p> 	<p>Brightness is the overall intensity of the light coming from the screen. A 50% brightness is recommended. Brightness can be accessed through the OSD (see Brightness and Contrast) or use the direct access instructions below:</p> <ol style="list-style-type: none"> 1. With the OSD off, press the  or  button on the monitor. The BRIGHTNESS window appears. 2. Press the  or  button to adjust the brightness. 3. When the brightness is adjusted to the level desired, stop pressing the  or  button and after three seconds the BRIGHTNESS window will disappear with the new adjustment saved.
<p>Auto Adjustment:</p> 	<p>The Auto Adjustment function optimizes automatically the display settings, including horizontal position, vertical position, phase, and clock, for use with your computer.</p>



1. Press the  button on the monitor to activate the AUTO ADJUSTMENT function. The Attention message of waiting for automatic adjustment appears.
2. The message will disappear when the monitor is properly adjusted.
3. Choose YES to keep the new setting or NO to restore the previous settings.

Accessing the Menu System

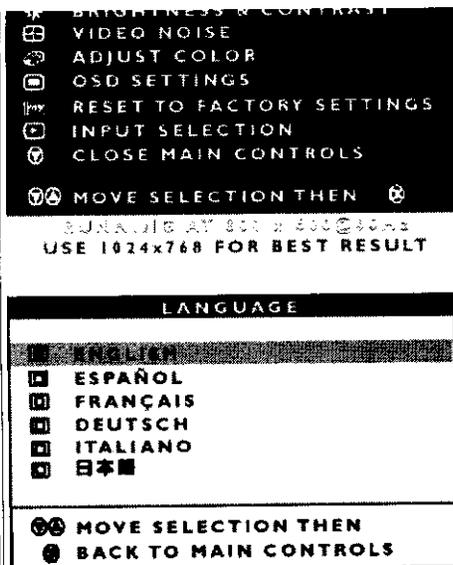
1. With the menu off, push the  button to open the menu system and display the main features menu.



2. Push the  and  buttons to move between the function items.
3. Push the  button once to activate the adjustment function; then use the / or / buttons to make your changes.
4. Push the  button to confirm your selection and return to MAIN CONTROLS window to select another function or push the  button to exit from the OSD.

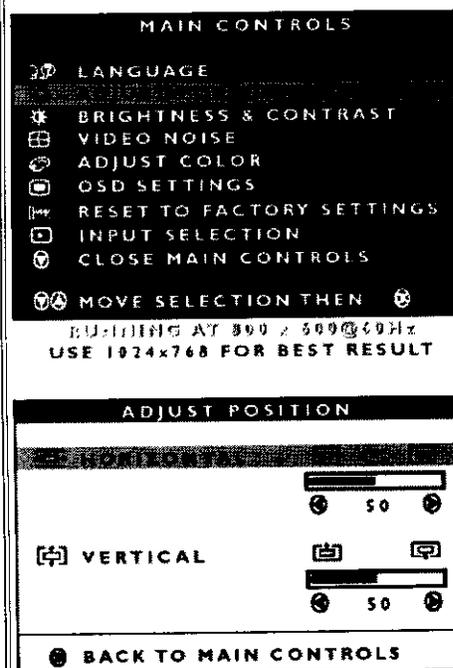
For Analog Input:

1st level / 2nd level	Description
<p>Language:</p> 	<p>The OSD shows its settings in one of six languages. The default is English, but you can select French, Spanish, German, Italian, or Japanese.</p> <ol style="list-style-type: none"> 1. Press the  button on the monitor. The MAIN



1. Press the button on the monitor. The MAIN CONTROLS window appears. LANGUAGE should be highlighted.
2. Press the button again. The LANGUAGE window appears.
3. Press the or button until the desired language is highlighted.
4. Press the button to confirm your selection and return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
5. Press the button to exit OSD or press the button to select other functions.

Adjust position:



HORIZONTAL under ADJUST POSITION shifts the image on your screen either to the left or right. VERTICAL shifts the image on your screen either up or down. Use this feature if your image does not appear centered.

1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until ADJUST POSITION is highlighted.
3. Press the button. The ADJUST POSITION window appears. HORIZONTAL should be highlighted.
4. Press the or button to move the image to the left or right.
5. When the horizontal position is adjusted, press the button to return to MAIN CONTROLS window, or press the to highlight VERTICAL.
6. To adjust the vertical position, press or button.
7. When the vertical position is adjusted, press the button to return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
8. Press the button to exit OSD or press the button to select other functions.

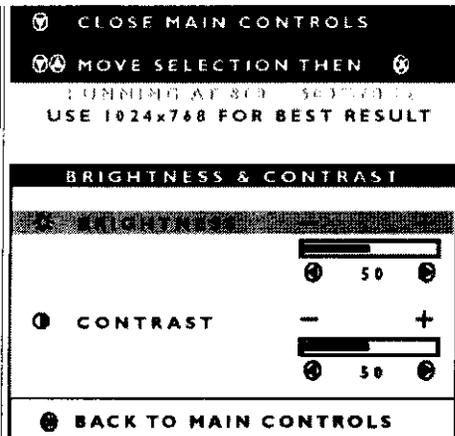
Brightness & contrast:



Brightness is the overall intensity of the light coming from the screen. A 50% brightness is recommended.

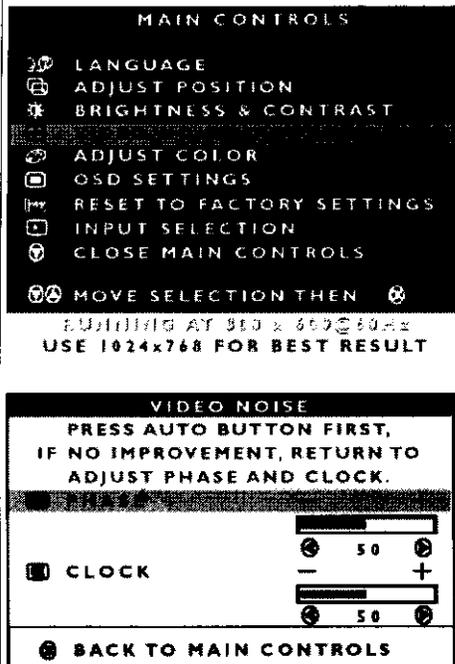
Contrast is the difference between the light and dark areas on the screen. A 100% contrast is recommended.

1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until BRIGHTNESS &



2. Press the button until BRIGHTNESS & CONTRAST is highlighted.
3. Press the button. The BRIGHTNESS & CONTRAST window appears. BRIGHTNESS should be highlighted.
4. Press the or button to adjust the brightness.
5. When the brightness is adjusted to the level desired, press the button to return to MAIN CONTROLS window, or press the to highlight CONTRAST.
6. To adjust the contrast, press or button.
7. When the contrast is adjusted to the level desired, press the button to return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
8. Press the button to exit OSD or press the button to select other functions.

Video noise :

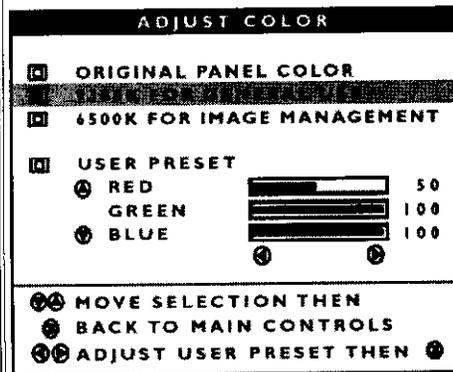


PHASE adjustment under VIDEO NOISE reduces the horizontal flicker of the image on the screen to a minimum.

CLOCK adjustment under VIDEO NOISE reduces the vertical flicker of the image on the screen to a minimum.

1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until VIDEO NOISE is highlighted.
3. Press the button. The VIDEO NOISE window appears. PHASE should be highlighted.
4. Press the or button to adjust the phase.
5. When the phase is adjusted to the level desired, press the button to return to MAIN CONTROLS window, or press the to highlight CLOCK.
6. To adjust the clock, press or button.
7. When the clock is adjusted to the level desired, press the button to return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
8. Press the button to exit OSD or press the button to select other functions.

Adjust color :



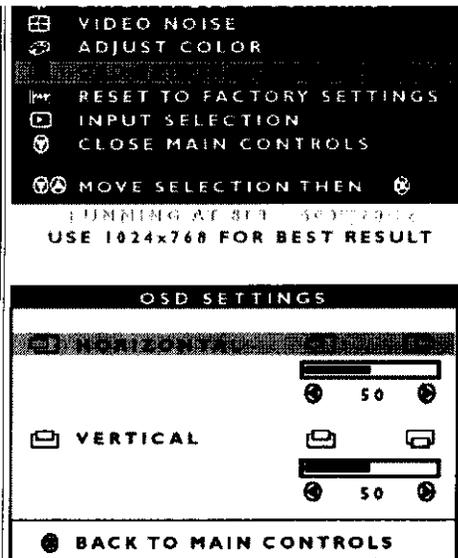
Your monitor has three preset options you can choose from. The first option is the original panel color, which is the default setting. The second option is 9300K for GENERAL USE, which is fine for most most applications. The third option is 6500K for IMAGE MANAGEMENT. When you select one of these options, the monitor automatically adjusts itself to that option. There is also a fourth option, USER PRESET, which allows you to adjust the colors on your screen to ad setting you desire.

1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until ADJUST COLOR is highlighted.
3. Press the button . The ADJUST COLOR window appears. ORIGINAL PANEL COLOR should be highlighted and the monitor automatically adjusts itself to the original panel color.
4. Press the or button to highlight 9300K for GENERAL USE, 6500K for IMAGE MANAGEMENT, or USER PRESET.
5. Once you have highlighted the original panel color, 9300K or 6500K, press the button to confirm your selection and return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted. Then, go to step 10.
6. If you want to set a custom color temperature, press the or button until USER PRESET is highlighted. Press the to highlight RED. Next, press the or button to adjust the color red.
7. When finished with RED, press the button to highlight GREEN. Next, press the or button to adjust the color green.
8. When finished with GREEN, press the button to highlight BLUE. Next, press the or button to adjust the color blue.
9. When all adjustments are complete, press the button to confirm your adjustments and return to the MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
10. Press the button to exit OSD or press the button to select other functions.

OSD settings:



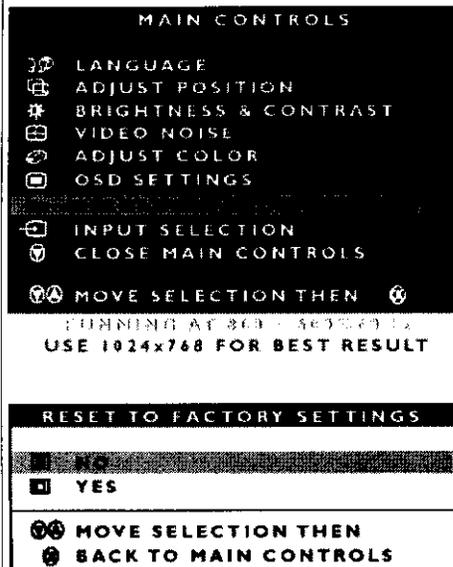
HORIZONTAL under OSD SETTINGS shifts the OSD window on your screen either to the left or right. VERTICAL under OSD SETTINGS shifts the OSD window on your screen either up or down. Use this feature if your OSD window does not appear in the



feature if your OSD window does not appear in the desired position.

1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until OSD SETTINGS is highlighted.
3. Press the button. The OSD SETTINGS window appears. HORIZONTAL should be highlighted.
4. Press the or button to move the OSD to the left or right.
5. When the position is adjusted, press the button to return to MAIN CONTROLS window, or press the to highlight VERTICAL.
6. To adjust the vertical position of OSD, press or button.
7. When the vertical position is adjusted, press the button to return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
8. Press the button to exit OSD or press the button to select other functions.

Reset to factory settings:



RESET TO FACTORY SETTINGS returns everything in all the windows to factory presets.

1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until RESET TO FACTORY SETTINGS is highlighted.
3. Press the button. The RESET TO FACTORY SETTINGS window appears.
4. Press the or button to select YES or NO. No is the default. Yes returns all settings to their original factory adjustments.
5. Press the button to confirm your selection and return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
6. Press the button to exit OSD or press the button to select other functions.

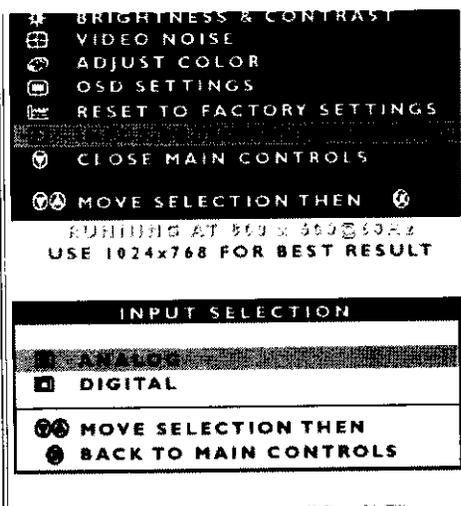
There is no "Undo" when you use the Reset function. To return to the previous function settings, you have to adjust the functions again.

Input selection:



Input selection is to switch between digital and analog manually.

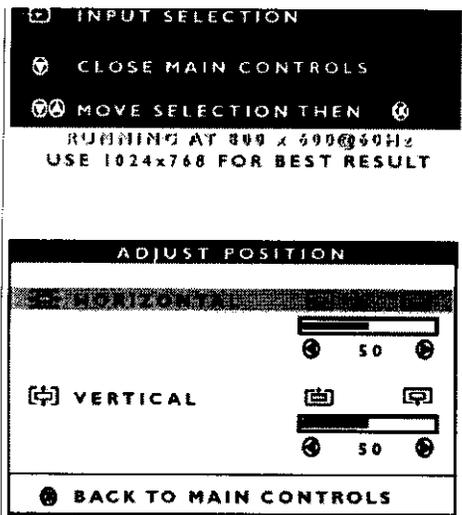
1. Press the button on the monitor. The MAIN CONTROLS window appears.



1. CONTROLS window appears.
2. Press the button until INPUT SELECTION is highlighted.
3. Press the button. The INPUT SELECTION window appears.
4. Press the or button to select ANALOG or DIGITAL.
5. Press the button to confirm your selection and return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
6. Press the button to exit OSD or press the button to select other functions.

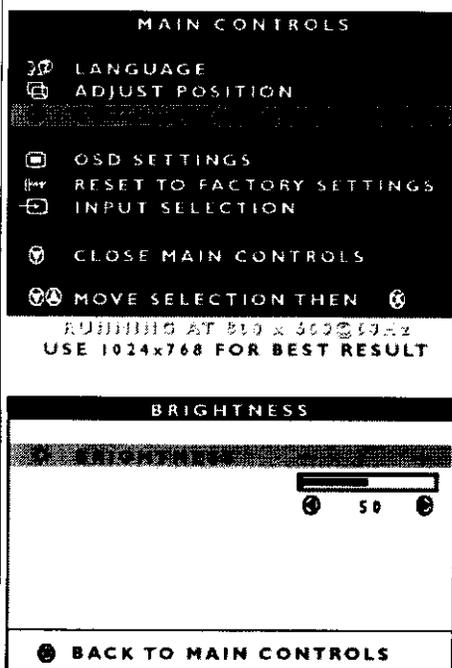
For Digital Input:

Menu	Description
<p>Language:</p> <p>The screenshot shows the 'LANGUAGE' sub-menu with the following options: ESPAÑOL, FRANÇAIS, DEUTSCH, ITALIANO, and 日本語. Below the sub-menu, there are instructions: 'MOVE SELECTION THEN' and 'BACK TO MAIN CONTROLS'. At the bottom, it says 'RUNNING AT 600 X 360 @ 60Hz USE 1024x768 FOR BEST RESULT'.</p>	<p>The OSD shows its settings in one of six languages. The default is English, but you can select French, Spanish, German, Italian, or Japanese.</p> <ol style="list-style-type: none"> 1. Press the button on the monitor. The MAIN CONTROLS window appears. LANGUAGE should be highlighted. 2. Press the button again. The LANGUAGE window appears. 3. Press the or button until the desired language is highlighted. 4. Press the button to confirm your selection and return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted. 5. Press the button to exit OSD or press the button to select other functions.
<p>Adjust position:</p> <p>The screenshot shows the 'ADJUST POSITION' sub-menu with the following options: HORIZONTAL and VERTICAL. Below the sub-menu, there are instructions: 'MOVE SELECTION THEN' and 'BACK TO MAIN CONTROLS'. At the bottom, it says 'RUNNING AT 600 X 360 @ 60Hz USE 1024x768 FOR BEST RESULT'.</p>	<p>HORIZONTAL under ADJUST POSITION shifts the image on your screen either to the left or right. VERTICAL shifts the image on your screen either up or down. Use this feature if your image does not appear centered.</p> <ol style="list-style-type: none"> 1. Press the button on the monitor. The MAIN



1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until ADJUST POSITION is highlighted.
3. Press the button. The ADJUST POSITION window appears. HORIZONTAL should be highlighted.
4. Press the or button to move the image to the left or right.
5. When the horizontal position is adjusted, press the button to return to MAIN CONTROLS window, or press the to highlight VERTICAL.
6. To adjust the vertical position, press or button.
7. When the vertical position is adjusted, press the button to return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
8. Press the button to exit OSD or press the button to select other functions.

Brightness:



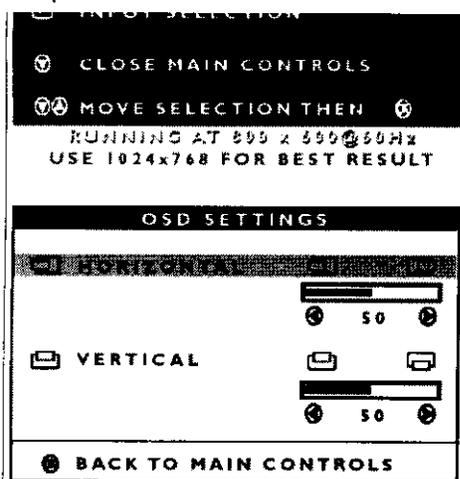
Brightness is the overall intensity of the light coming from the screen. A 50% brightness is recommended.

1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until BRIGHTNESS is highlighted.
3. Press the button. The BRIGHTNESS window appears. BRIGHTNESS should be highlighted.
4. Press the or button to adjust the brightness.
5. When the brightness is adjusted to the level desired, press the button to return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
6. Press the button to exit OSD or press the button to select other functions.

OSD settings:

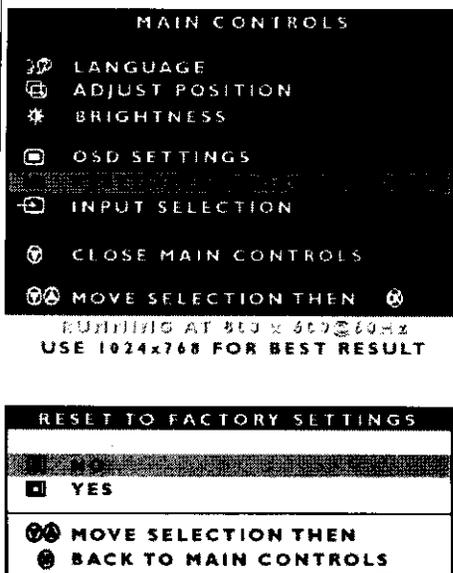


HORIZONTAL under OSD SETTINGS shifts the OSD window on your screen either to the left or right. VERTICAL under OSD SETTINGS shifts the OSD window on your screen either up or down. Use this feature if your OSD window does not appear in the desired position.



1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until OSD SETTINGS is highlighted.
3. Press the button. The OSD SETTINGS window appears. HORIZONTAL should be highlighted.
4. Press the or button to move the OSD to the left or right.
5. When the position is adjusted, press the button to return to MAIN CONTROLS window, or press the to highlight VERTICAL.
6. To adjust the vertical position of OSD, press or button.
7. When the vertical position is adjusted, press the button to return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
8. Press the button to exit OSD or press the button to select other functions.

Reset to factory settings:



RESET TO FACTORY SETTINGS returns everything in all the windows to factory presets.

1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until RESET TO FACTORY SETTINGS is highlighted.
3. Press the button. The RESET TO FACTORY SETTINGS window appears.
4. Press the or button to select YES or NO. No is the default. Yes returns all settings to their original factory adjustments.
5. Press the button to confirm your selection and return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
6. Press the button to exit OSD or press the button to select other functions.

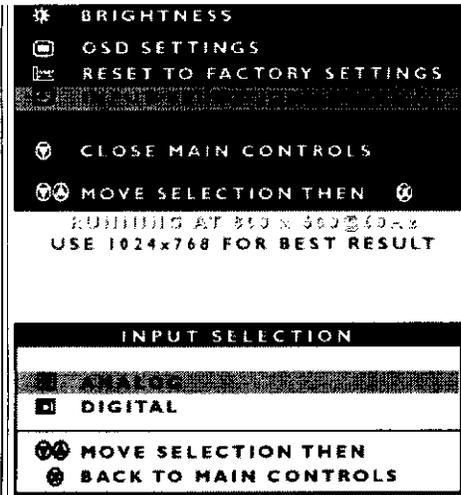
There is no "Undo" when you use the Reset function. To return to the previous function settings, you have to adjust the functions again.

Input selection:



Input selection is to switch between digital and analog manually.

1. Press the button on the monitor. The MAIN CONTROLS window appears.



1. CONTROLS window appears.
2. Press the button until INPUT SELECTION is highlighted.
3. Press the button . The INPUT SELECTION window appears.
4. Press the or button to select ANALOG or DIGITAL.
5. Press the button to confirm your selection and return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
6. Press the button to exit OSD or press the button to select other functions.

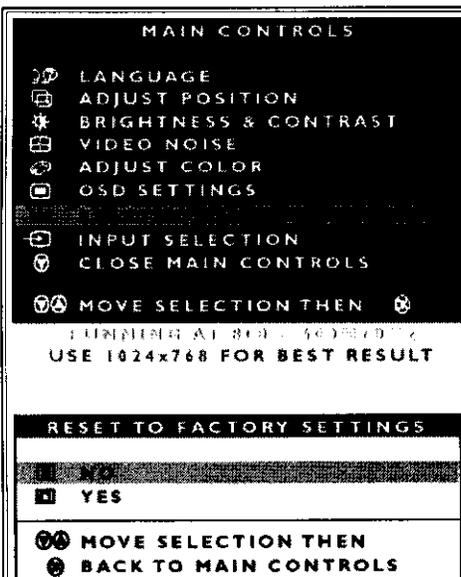
Automatic Save

Whenever you open the OSD and allow an adjustment window to remain on screen for about 60 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 of your computer. The monitor can save adjustments for up to 14 user modes. It has 14 preset modes, one for each signal frequency, as listed in [Preset Display Modes](#).

If you have made no adjustments, the on-screen menu disappears and the monitor does not save anything.

Reset Features

Reset to Factory Settings



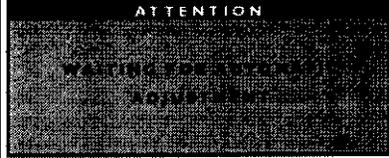
RESET TO FACTORY SETTINGS returns everything in all the windows to factory presets.

1. Press the button on the monitor. The MAIN CONTROLS window appears.
2. Press the button until RESET TO FACTORY SETTINGS is highlighted.
3. Press the button . The RESET TO FACTORY SETTINGS window appears.
4. Press the or button to select YES or NO. No is the default. Yes returns all settings to their original factory adjustments.
5. Press the button to confirm your selection and return to MAIN CONTROLS window. CLOSE MAIN CONTROLS will be highlighted.
6. Press the button to exit OSD or press the button to select other functions.

 *There is no "Undo" when you use the Reset function. To return to the previous function settings, you have to adjust the functions again.*

OSD Attention Messages

The monitor will detect various display situation automatically. When the monitor detects the problems, the screen will automatically show the different warning message to remind you.

Attention Messages	Description
	<p>CANNOT DISPLAY THIS VIDEO MODE</p> <p>This screen warns when the input from the computer is not a standard video mode or out of the monitor's scanning range. Please change the display mode of the operating software in the computer (i.e. Windows) to 1024 x 768 @ 60 Hz for best display results. See Specifications for the Horizontal and Vertical scan ranges addressable by this monitor.</p> <p>Sometimes, no warning message appears, but the screen is blank, which could also indicate that the monitor is not synchronizing with the computer.</p>
	<p>NO VIDEO INPUT</p> <p>This screen is displayed when there is no video signal input. Please check that the signal cable is properly connected to the Video card or PC.</p>
	<p>ENTERING SLEEP MODE</p> <p>This screen appears when the monitor is about to enter the sleep mode. Please press any key on the keyboard or click the mouse to wake up the monitor and computer.</p>
	<p>WAITING FOR AUTOMATIC ADJUSTMENT</p> <p>This screen appears when you touch the AUTO button on the monitor. It will disappear when the monitor is properly adjusted.</p>

See [Troubleshooting](#) for more information.

LED Indicators

LED		
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LED Indicator	Status	LED Color
Power LED	Full Power Mode	Green
	Sleep Mode	Amber
	Non standard video mode	Green (blinking)

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Troubleshooting: Dell™ 1501FP Flat Panel Color Monitor User's Guide

Monitor Specific Troubleshooting • Common Problems • Product Specific Problems

Monitor Specific Troubleshooting

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, 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 a message box with a RGB color and black text inside, as shown in the following illustration:

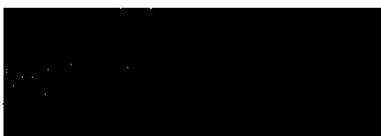


This box also appears during normal system operation if the video cable becomes disconnected or damaged.

1. Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.
2. While in self-test mode, the LED remains green and the pattern remains on and stationary.

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

On-Screen Messages

Attention Messages	Description
	<p>CANNOT DISPLAY THIS VIDEO MODE</p> <p>This screen warns when the input from the computer is not a standard video mode or out of the monitor's scanning range. Please change the display mode of the operating software in the computer (i.e. Windows) to 1024 x 768 @ 60 Hz for best display results. See <u>Specifications</u> for the Horizontal and Vertical scan ranges addressable by this monitor.</p> <p>Sometimes, no warning message appears, but the screen is blank, which could also indicate that the monitor is not synchronizing with the computer.</p>

	<p>NO VIDEO INPUT</p> <p>This screen is displayed when there is no video signal input. Please check that the signal cable is properly connected to the Video card or PC. See No Video in Common Problems section for possible solutions.</p>
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Common Problems

The following table contains general information about common monitor problems you might encounter.

COMMON SYMPTOMS	WHAT YOU SEE	POSSIBLE SOLUTIONS
No Video / LED Off	No picture, monitor looks dead.	<ul style="list-style-type: none"> • Check connection integrity • Electric outlet verification • Ensure power button depressed fully
No Video / LED On	No picture or no brightness	<ul style="list-style-type: none"> • Increase brightness & contrast controls • Perform monitor self test feature check • Check for bent or broken pins
Poor Focus	Picture is fuzzy, blurry or ghosting	<ul style="list-style-type: none"> • Eliminate video extension cables • Perform monitor reset • Decrease brightness & contrast controls • Lower video resolution or increase font size
Shaky/Jittery Video	Wavy picture or fine movement	<ul style="list-style-type: none"> • Perform monitor reset • Check environmental factors • Relocate and test in other room
Missing Pixels	Screen has spots, specs or blemishes on the screen	<ul style="list-style-type: none"> • Dots that remain dark are characteristic of the liquid crystal used in today's technology • If the blemish is on the surface of the screen, try cleaning the monitor screen (See Maintenance for cleaning instructions)
Brightness Problems	Picture too dim or	<ul style="list-style-type: none"> • Adjust the Contrast setting.

Brightness Problems	too bright	<p>Adjust the Contrast setting. (For Analog Input only)</p> <ul style="list-style-type: none"> • Adjust the <u>Brightness</u> setting. • The backlight of the LCD monitor has a fixed life span. When the screen becomes dark or begins to flicker, please contact your dealer.
Horizontal/Vertical Lines	Screen has one or more lines	<ul style="list-style-type: none"> • Perform monitor self test feature check • Check for bent or broken pins • Horizontal lines could be damper wires
Sync Problems	Screen is scrambled or appears torn	<ul style="list-style-type: none"> • Perform monitor self test feature check • Check for bent or broken pins • Boot up in the "safe mode"
Flat Panel Scratched	Screen has scratches or smudges	<ul style="list-style-type: none"> • Turn monitor off and clean the screen (See <u>Maintenance</u> for cleaning instructions)
Safety Related Issues	Visible signs of smoke or sparks	<ul style="list-style-type: none"> • Do not perform any troubleshooting steps • Monitor needs to be replaced
Intermittent Problems	Monitor malfunctions on & off	<ul style="list-style-type: none"> • Ensure monitor is in proper video mode • Perform monitor reset • Perform monitor self test feature check

PRODUCT SPECIFIC SYMPTOMS

SPECIFIC SYMPTOMS	POSSIBLE SOLUTIONS
Picture presents but with blinking LED	<ul style="list-style-type: none"> • This blinking LED means that the input video mode is either not in the factory <u>Preset Display Modes</u> or user modes. • There is no hardware problem at all, but just a reminder to adjust the monitor with the preferred monitor <u>Resolution</u> for best quality.
"NO VIDEO INPUT" appears	<ul style="list-style-type: none"> • Make sure the monitor cable is properly connected to your computer.

	<ul style="list-style-type: none"> • Check to see if the monitor cable has bent pins. • Make sure the computer is turned on. • Increase the brightness and contrast levels to maximize settings. • The message appears when the flat panel power save is set to off and the computer is in a power save mode.
<p>AUTO button not working properly</p>	<ul style="list-style-type: none"> • The AUTO function is designed for use on standard Macintosh or IBM-compatible PC running Microsoft Windows. • It may not work properly if using nonstandard PC or video card.
<p>Display position is incorrect</p>	<ul style="list-style-type: none"> • Push the AUTO button. • Adjust the image position using the <u>Adjust Position</u> in OSD menu system.
<p>Image vibrates on the screen</p>	<ul style="list-style-type: none"> • Check that the signal cable is properly connected to the graphics board or PC.
<p>Vertical flicker appears (for analog input only)</p>	<ul style="list-style-type: none"> • Push the AUTO button. • Eliminate the vertical bars using the <u>Clock Adjustment</u> under <u>Video Noise</u> in OSD menu system.
<p>Horizontal flicker appears (for analog input only)</p>	<ul style="list-style-type: none"> • Push the AUTO button. • Eliminate the vertical bars using the <u>Phase Adjustment</u> under <u>Video Noise</u> in OSD menu system.
<p>An afterimage appears</p>	<ul style="list-style-type: none"> • If an image remains in the screen for an extended period of time, it may be imprinted in the screen and leave an afterimage. This usually disappears after a few hours.
<p>An afterimage remains after the power has been turned off</p>	<ul style="list-style-type: none"> • This is characteristic of liquid crystal and is not caused by a malfunction or deterioration of the liquid crystal. The afterimage will disappear after

	a set amount of time.
Green, red, blue, dark and white dots remain on the screen	<ul style="list-style-type: none">• The remaining dots are normal characteristic of the liquid crystal used in today's technology.

Specifications: Dell™ 1501FP Flat Panel Color Monitor User's Guide

General • Flat Panel • Resolution • Preset Display Modes • Electrical • Physical Characteristics • Environmental • Power Management Modes • Pin Assignments • Plug and Play Capability

General

Model number 1501FP

Flat Panel

Screen type	active matrix — TFT LCD
Screen dimensions	15 inches / 15.1 inches
Preset display area:	
Horizontal	304.1 mm (11.97 inches)
Vertical	228.1 mm (8.98 inches)
Pixel pitch	0.297 x 0.297 mm / 0.300 x 0.300 mm
Viewing angle	±60° (vertical) ±70° (horizontal)
Luminance output	200 CD/m ²
Contrast ratio	200 to 1
Faceplate coating	Anti-glare with hard coating 2H
Backlight	CCFL edgelight system

Resolution

Horizontal scan range	30 kHz to 61 kHz (automatic)
Vertical scan range	56 Hz to 75 Hz (automatic)
Optimal preset resolution	1024 x 768 at 60 Hz
Highest preset resolution	1024 x 768 at 75 Hz
Highest addressable resolution*	1024 x 768 at 75 Hz

Preset Display Modes

Display Mode	Horizontal	Vertical	Pixel Clock	Sync Polarity
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Display Mode	Frequency (kHz)	Frequency (Hz)	(MHz)	(Horizontal / Vertical)
IBM [®] , VGA3h, 720 x 400	31.5	70.1	28.3	-/+
IBM, VGA12h, 640 x 480	31.5	60.0	25.2	-/-
VESA [®] , 640 x 480	37.5	75.0	31.5	-/-
VESA, 640 x 480	37.9	72.8	31.5	-/-
VESA, 800 x 600	35.2	56.3	36.0	+/+
VESA, 800 x 600	37.9	60.3	40.0	+/+
VESA, 800 x 600	48.0	72.0	50.0	+/+
VESA, 800 x 600	46.9	75.0	49.5	+/+
VESA, 1024 x 768	48.36	60.0	65	-/-
VESA, 1024 x 768	56.5	70.1	75	-/-
VESA, 1024 x 768	60.0	75.0	78.75	+/+

Electrical

Video input signals	analog, 0.7 Vpp, positive at 75 ohm
Synchronization input signals	separate horizontal and vertical; TTL level, positive or negative
AC input voltage / frequency / current	90 to 264 VAC / 50 or 60 Hz \pm 3 Hz / 1.2 A (RMS) at 120 VAC and 0.6 A (RMS) at 220 VAC
Inrush current at 120 V	30 A
Inrush current at 240 V	60 A

Physical Characteristics

Connector type	DVI-D, 15-pin D-subminiature (Optional)
Signal cable type	Detachable
Dimensions:	
Height	400 mm (15.7 inches)
Width	386.4 mm (15.2 inches)
Depth	179.8 mm (7.1 inches)
Weight (monitor only)	5.7 kg (12.5 lb)
Weight (with packaging)	7.2 kg (16.1 lb)

Environmental

Temperature:

Operating	5° to 35°C (41° to 95°F)
Non-operating	-20° to 60°C (-43° to 140°F)

Humidity:

Operating	80% max. (non-condensing)
Non-operating	95% max. (non-condensing)

Altitude:

Operating	3,576 m (12,000 ft)
Non-operating	12,192 m (40,000 ft)

Thermal dissipation	XXX BTU/hour (maximum)
	XXX BTU/hour (typical)

Power Management Modes

If you have VESA's DPMS compliance display card or software installed in your PC, the monitor can automatically reduce its power consumption when not in use. If input from keyboard, mouse or other input devices is detected, the monitor will automatically "wake up". The following table shows the power consumption and signaling of this automatic power saving feature:

Power Management Definition					
VESA's Mode	Video	H-sync	V-sync	Power Used	LED color
ON	Active	Yes	Yes	maximum 38W typical 30W	Green
Stand-by	Blanked	No	Yes	Less than 5W	Amber
Suspend	Blanked	Yes	No	Less than 5W	Amber
Active-OFF*	Blanked	No	No	Less than 5W	Amber

This monitor is ENERGY STAR®-compliant and TCO'99 power management compatible.

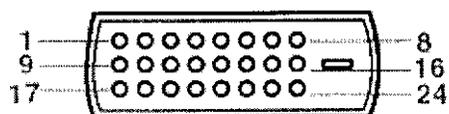


Energy Star logo is a registered trademark of the U.S. Environmental Protection Agency.

ENERGY STAR® is a U.S. registered mark. As an ENERGY STAR® Partner, DELL has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Pin Assignments

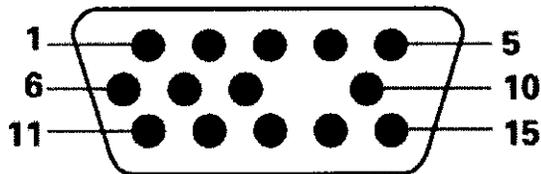
DVI-D connector



Pin Number	24-Pin Side of the Signal Cable
1	TMDS Data 2-
2	TMDS Data 2+
3	TMDS Data 2/4 Shield
4	TMDS Data 4-
5	TMDS Data 4+
6	DDC Clock
7	DDC Data
8	No connection
9	TMDS Data 1-
10	TMDS Data 1+
11	TMDS Data 1/3 Shield
12	TMDS Data 3-
13	TMDS Data 3+
14	+5V Power
15	Ground (+5)
16	Hot Plug Detect
17	TMDS Data 0-
18	TMDS Data 0+
19	TMDS Data 0/5 Shield
20	TMDS Data 5-
21	TMDS Data 5+
22	TMDS Clock Shield

23	TMD5 Clock+
24	TMD5 Clock-

15-pin D-Sub connector



Pin Number	15-Pin Side of the Signal Cable
1	Red video input
2	Green video input
3	Blue video input
4	Identical output - connected to pin 10
5	Self test
6	Red video ground
7	Green video ground
8	Blue video ground
9	No pin present
10	Logic ground
11	Identical output - connected to pin 10
12	Serial data line (SDA)
13	H. Sync / H + V
14	V. Sync (VCLK for DDC)
15	Data clock line (SCL)

Plug and Play Capability

You can install the monitor in any Plug and Play-compatible system. The monitor automatically provides the computer system with its Extended Display Identification Data (EDID) using Display Data Channel (DDC) protocols so the system can configure itself and optimize the monitor settings. If desired, the user can select different settings, but in most cases monitor installation is automatic.

Cadmium

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 TCO'99 requirement states that batteries, the colour-generating layers of display screens and the electrical or electronics components must not contain any cadmium.

Mercury is sometimes found in batteries, relays and switches. It damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries may not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit.

Chlorofluorocarbons

The relevant TCO'99 requirement states that neither CFCs nor HCFCs may be used during the manufacture and assembly of the product. CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on earth of ultraviolet light with e.g. increased risks of skin cancer (malignant melanoma) as a consequence.

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning. The relevant TCO'99 requirement permits the inclusion of lead since no replacement has yet been developed.

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

** *Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.*

Energy Efficiency



The proper operation of the function requires a computer with VESA® DPMS power management capabilities. When used with a computer equipped with VESA DPMS, the monitor is ENERGY STAR®-compliant.

As an ENERGY STAR® Partner, Dell Computer Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Federal Communications Commission (FCC) Notice (U.S. Only)

▲ WARNING: 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 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.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

Instructions to Users: This equipment complies with the requirements of FCC (Federal Communication Commission) equipment provided that following conditions are met.

1. I/F Cable : Shielded I/F cable must be used.
2. Video inputs: The input signal amplitude must not exceed the specified level.

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

CE Declaration of Conformity

Documentation: Dell™ 1501FP Flat Panel Color Monitor User's Guide

You must right-click the link for a portable document format (PDF) file and save the file to your hard-disk drive. Attempting to link directly to large PDF files causes your system to freeze.

To save PDF files (files with an extension of **.pdf**) to your hard-disk drive, right-click the document title, click **Save Target As** in Microsoft® Internet Explorer or **Save Link As** in Netscape Navigator, and specify a location on your hard-disk drive.

Right-click only the following link:

"Quick Set-up" (.pdf)

To view a PDF file, launch Adobe™ Acrobat Reader. Click **File** —> **Open** and select the PDF file.

 **NOTE: PDF files require Adobe Acrobat Reader, which can be downloaded from the Adobe World Wide Web site.**
