

Setting Up

Read this chapter for important safety information and to set up and connect the Apple Multiple Scan 720 Display to your computer.

Important safety instructions

Warning Do not clean your display screen with a cleaner that contains alcohol or acetone, and never spray cleaner directly onto the screen. For more information about cleaning your display, see “Care and Cleaning” in Chapter 4.

For your own safety and that of your equipment, always take the following precautions.

Disconnect the power plug (by pulling the plug, not the cord) if any of the following conditions exists:

- the power cord or plug becomes frayed or otherwise damaged
- you spill something into the case
- your display is exposed to rain or any other excess moisture
- your display has been dropped or the case has been otherwise damaged
- you suspect that your display needs service or repair
- you want to clean the case or screen (use only the recommended procedure described in “Care and Cleaning” in Chapter 4)

Important The only way to disconnect power completely is to unplug the power cord. Make sure at least one end of the power cord is within easy reach so that you can unplug the display when you need to.

Be sure that you always follow these instructions:

- Keep your display away from sources of liquids and moisture.
- Don't set anything on top of the display.
- Keep the display's vents free from obstruction.
- Read all the installation instructions carefully before you plug your display into a power source.

Warning Never remove the case from the monitor! You could come in contact with hazardous voltage.

Electrical equipment may be hazardous if misused. Operation of this product, or similar products, must always be supervised by an adult. Do not allow children access to the interior of any electrical product and do not permit them to handle any cables.

What about electromagnetic emissions?

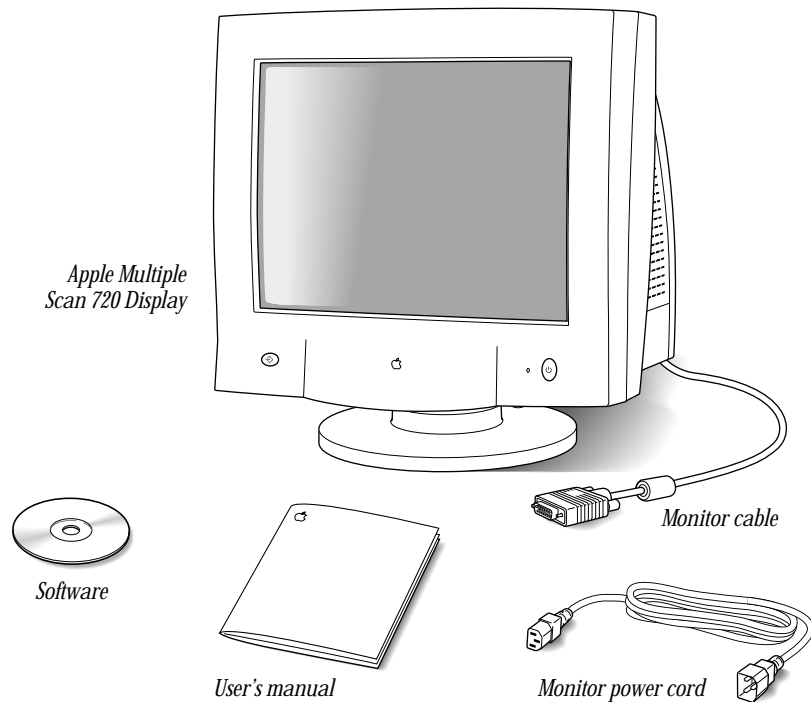
There has been recent public discussion of the possible health effects of prolonged exposure to extremely low frequency (ELF) and very low frequency (VLF) electromagnetic fields. Such fields are associated with electromagnetic sources such as television sets, electrical wiring, and some household appliances—as well as computer displays.

Apple has reviewed scientific reports and sought the counsel of government regulatory agencies and respected health organizations. Based on the prevailing evidence and opinions, Apple believes that the electric and magnetic fields produced by computer displays do not pose a health risk.

In response to those customers who wish to reduce their exposure to electromagnetic fields, Apple has lowered the emission levels of our products. We are also actively encouraging further scientific research so we can continue to promote the health and safety of our customers and employees.

Getting ready to set up

As you begin to set up your display system, be sure you have easy access to the following items.



Note: If you are connecting the display to an IBM PC-compatible computer, you also need an adapter, available from your Apple-authorized dealer or from Apple. (See the service and support information that came with your monitor for information on contacting Apple directly.)

Do you need a graphics card?

Your monitor works with any Mac OS–based or PC-compatible computer with either a built-in graphics adapter or a compatible graphics card. The Apple Multiple Scan 720 Display is capable of supporting any resolution and scan rate within certain ranges.

If you're not sure your computer or graphics card will work with the monitor, check to see that their video circuitry operates within the ranges specified here.

Tip: If no image appears on your monitor after you have completed the instructions in this chapter, you may need a compatible graphics card.

The monitor works with video circuitry that operates within these ranges:

- horizontal scan rate of 30–69 kilohertz
- vertical refresh rate of 48–160 hertz

Common video modes ranges*

Resolution	Vertical refresh rate (hertz)
640 x 480	60-85
800 x 600	60-85
832 x 624	75
1024 x 768	60-85
1152 x 870	75
1280 x 1024	60

* These are ranges only; the actual resolutions and vertical refresh rates that are available to you depend on your computer or graphics card. See the manual that came with your computer or graphics card for more information.

If your computer supports any of these ranges, you don't need a graphics card. If your computer supports none of these video mode ranges, you need to install a compatible graphics card in your computer and connect the monitor to the video card.

Note: The Apple 8•24, Apple 8•24gc, some NuBus™ graphics cards, and some third-party PCI cards are not fully compatible with your monitor. If a card is not fully compatible, the software cannot be used to adjust the screen image or change resolutions, but the controls on the front of the monitor may be used to adjust some settings.

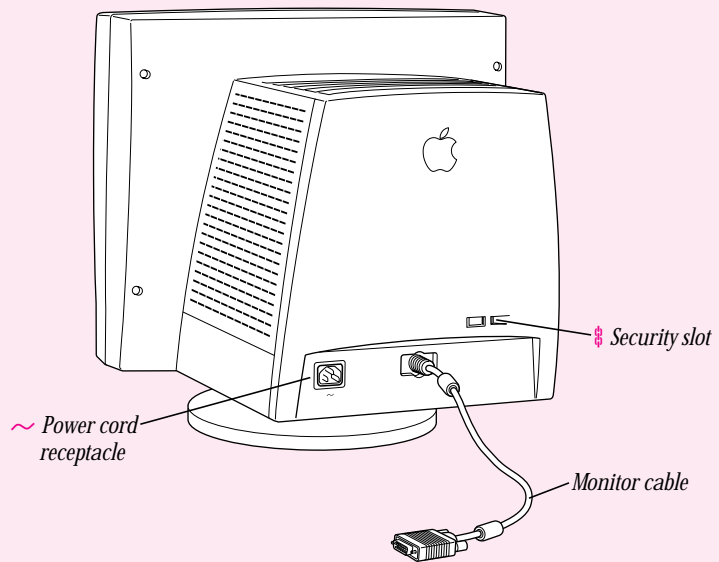
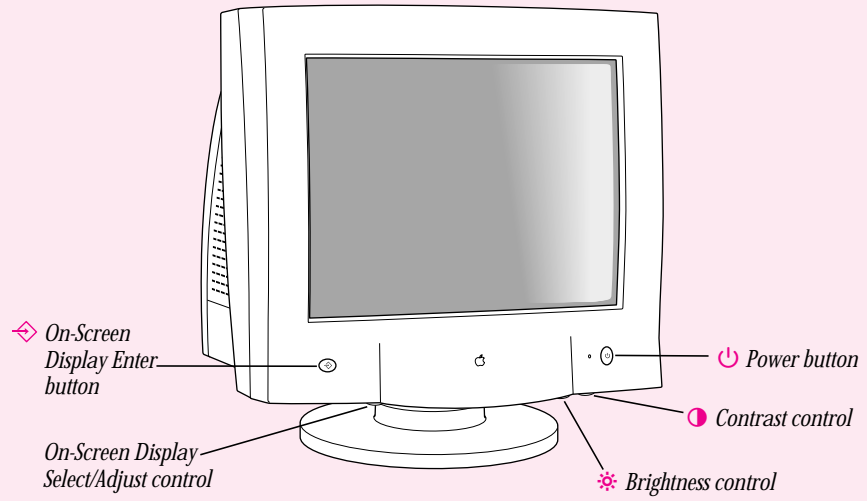
Your Apple-authorized dealer can help you select a compatible graphics card. Keep this information, the information in the Appendix, "Technical Information," and your computer manual handy when selecting a card.

Note: This monitor is preadjusted at common resolution and vertical refresh rate settings (see "Active Video Image Area" in the Appendix). If you don't use a preadjusted resolution, you'll need to adjust the screen geometry; to learn how to adjust the screen geometry, see Chapter 3, "Using Manual Controls and the On-Screen Display."

Using more than one monitor

If your computer has expansion slots, you can use your Apple Multiple Scan Display with one or more additional monitors connected to your computer. You may need a graphics card for each additional monitor you are using. See the manual that came with your computer for information on working with additional monitors.

Your Apple Multiple Scan Display at a glance



Positioning your Apple Multiple Scan Display

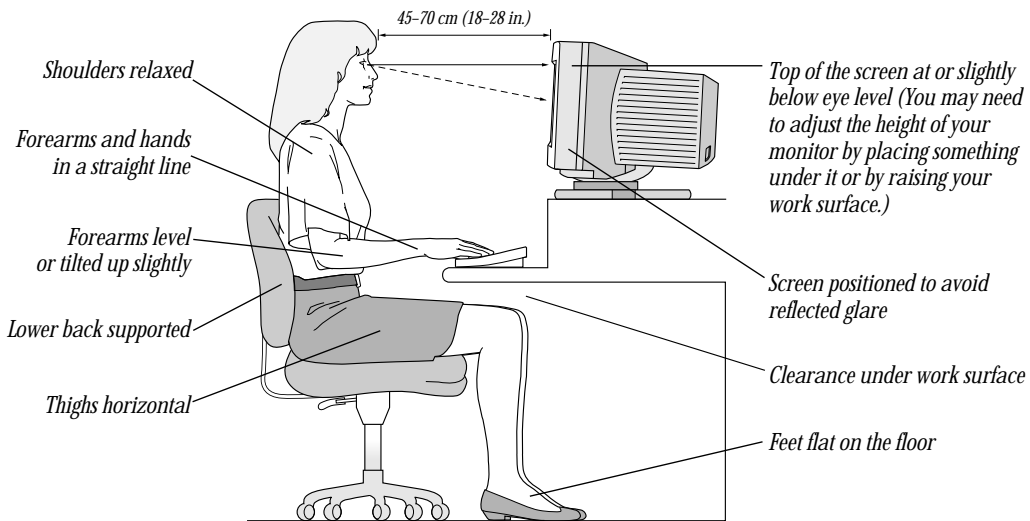
Here are some key factors to consider when determining where to place your monitor:

- Be sure that the desk or table can support the Apple Multiple Scan Display's weight—37.5 pounds (17 kg).
- Make sure that the monitor power cord reaches your computer. The cord should be unobstructed when you swivel and tilt the monitor, so allow at least 6 inches (15 cm) of clearance in the back. If you don't allow enough clearance, the monitor connector might be damaged when the cable hits an obstruction.

Once your monitor is in place, position it so that it faces you. Then adjust the viewing angle of the monitor by tilting it up or down and turning it left or right on its stand.


Position the monitor so that when you use it, no bright light is behind the monitor or reflected on the screen. Your eyes should be about level with the top edge of the screen and between 18 and 28 inches (45 to 70 cm) away. Take occasional breaks when using your computer, to focus your eyes on a distant object.

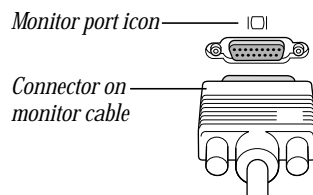
For your greatest comfort, use the following illustration to help you in positioning your monitor.



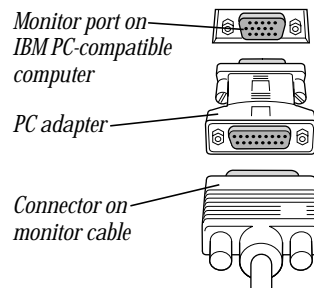
Connecting the Apple Multiple Scan Display to your computer

Important Before you connect any cords or cables, make sure that your computer is turned off and unplugged.

- 1 Connect the socket end of the monitor power cord to the power cord receptacle on the back of the display.
- 2 Plug the other end of the monitor power cord into the power socket on your computer.
- 3 If you are connecting the monitor to a Mac OS–based computer, insert the monitor connector into the monitor port (marked with ) on the back of the computer and tighten the thumbscrews.



- 4 If you are connecting the monitor to an IBM PC-compatible computer, connect the adapter that you acquired from your dealer to the monitor connector on the monitor cable, and tighten the thumbscrews. Then insert the monitor connector with the adapter into the monitor port on your computer.

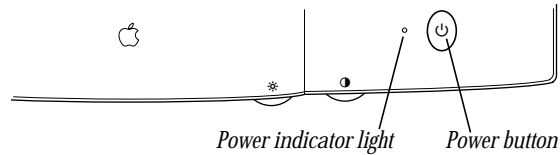


If you installed a graphics card in your computer, connect the monitor cable to the graphics card's port instead. For information about installing graphics cards, see the manual that came with your computer or graphics card.

Turning the Apple Multiple Scan Display on

To turn on the monitor for the first time:

- 1 Press the power button on the front right side of the display.



- 2 Plug your computer's power cord in the power outlet and start up your computer.

The monitor's green power indicator light goes on. If the green light does not go on, press the power button again. If this doesn't work, shut down and unplug your computer and make sure you've connected the monitor to your computer properly (see "Connecting the Apple Multiple Scan Display to Your Computer" earlier in this chapter).

- 3 If you are using any of the following computer models or graphics cards, reset the DDC control to ensure that the maximum number of resolution settings are available to your monitor:
 - Power Macintosh 9600 computer (with built-in graphics card)
 - IBM PC-compatible computer
 - IMS (or IX) Twin Turbo graphics card
 - ATI XCLAIM graphics card

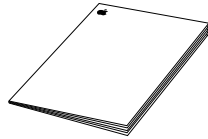
You may also need to reset the DDC control if you have another kind of graphics card.

For instructions on resetting the DDC control, see "Information: Mode, Absence, DDC" in Chapter 3 (in the "Adjusting the On-Screen Display Controls" section).

If you are not using any of the computer models or graphics cards listed here, you do not need to reset the DDC control. You are finished setting up your Apple Multiple Scan Display.

Finding answers

When you have questions about using your monitor, there are several places you can look for answers.



This manual

Use this manual to set up your monitor, install software, use the On-Screen Display, and find solutions to common problems.



Apple Guide for Mac OS-based computers

If you need help or experience a problem while using the Apple Displays Software, open the Guide (⌘) menu (or Help menu in System 8.0 and later) and choose Macintosh (or Mac OS) Guide or Monitors & Sound Guide. The Guide menu is the main source for information about the Apple Displays Software and your Mac OS-based computer. See Chapter 2 for more information.

Obtaining online support and updated Apple software

Apple technical support information and software updates are available from online services. You can get troubleshooting and other important information by using these services. You can also get the latest versions of Apple software, including most printer drivers, system enablers, and updates to utilities and networking and communications software.

Support information and Apple software updates are available via Apple's World Wide Web site:

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

Installing and Using the Apple Displays Software

This chapter explains how to install the Apple Displays Software on your Mac OS–based computer and provides an overview of the software’s features.

If you’re using your monitor with an IBM PC-compatible computer, you cannot install the Apple Displays Software. However, if you are using a Windows-based computer, you may need to install one file, included on the *Apple Displays Software* CD-ROM disc, so that your computer can identify your monitor. Mac OS–based and PC-compatible computers can also use manual controls on the monitor and the On-Screen Display to adjust settings that the Apple Displays Software does not affect. (For more information, see Chapter 3, “Using Manual Controls and the On-Screen Display.”)

What’s included in the Apple Displays Software?

The Apple Displays Software consists of several applications for adjusting basic picture and sound settings, adjusting the color on your monitor, and saving energy. These applications include

- *Monitors & Sound control panel software*, which you use to adjust basic image and sound settings
- *Control Strip software*, which you use to easily change screen resolution and color depth
- *DigitalColor Meter*, which you use to magnify pixels and obtain RGB values
- *PANTONE® Color Picker*, which you use to set PANTONE® values for colors
- *ColorSync*, which helps you synchronize on-screen color with print color
- *Energy Saver*, (*Energy Saver may already be installed on your computer*) which automatically turns off your monitor when it’s not in use

Installing the Apple Displays Software on Mac OS-based computers

You need system software version 7.5 or later on your computer to use the Apple Displays Software. If you don't have System 7.5 or later, contact an Apple-authorized dealer or service provider.

If you do not have a CD-ROM drive, see the service and support information that came with your monitor for information on how to contact Apple.

Note: Make sure you use the Installer to install the software. Do not install the software by dragging files.

To install the Apple Displays Software, follow these steps:

- 1** Insert the *Apple Displays Software* CD-ROM disc into the computer's CD-ROM drive.
The floppy disk icon appears on the desktop.
- 2** Double-click the CD-ROM icon.
The Apple Displays Software window opens.
- 3** Double-click the folder that contains the language you want the software to appear in.
- 4** Double-click the Apple Displays Software folder.
- 5** Double-click the Apple Displays Software Read Me file and read the document that appears.
The Read Me file contains important information about the applications included with your software. It also provides a list of the Apple Displays Software applications.
- 6** Choose Quit from the File menu when you're finished reading.
- 7** Double-click the Installer icon to start the Installer program.
A Welcome screen appears.
- 8** Click Continue.
The software license agreement dialog box appears.
Note: Be sure you're acting within the terms of the software license agreement before you agree to install this software on your computer. The license agreement specifies how many copies of the program you can make for yourself and others.
- 9** Click Agree once you've read and agreed to the terms in the license agreement.
The Install Apple Displays Software dialog box appears.
- 10** Make sure the destination disk named is the startup disk of your computer. If it isn't, click Switch Disk until you see the name of your startup disk.

- 11 Click Install.

The Installer takes a few moments to calculate what needs to be done and then begins to copy files. If other applications are open, a message asks you to quit them. Click Continue to quit the applications and continue with the installation.

- 12 Follow the instructions on the screen until the installation is complete.

The Installer checks to make sure you have the system software you need to use the monitor. If anything is missing, a message tells you what you need. You won't be able to install the software until you correct the problem. If a message says you don't have the correct system software, you can purchase a new version from an Apple-authorized dealer.

After the installation, the Installer tells you to restart your computer.

- 13 Click Restart.

The software is now installed and the monitor is ready for use.

Important If you ever reinstall system software on your computer, you must reinstall the Apple Displays Software.

Installing setup information on Windows-based computers

On Windows-based computers, a new device is usually detected automatically when it is connected to your computer. To determine that Windows has correctly identified your monitor, check Monitor Type in the Display Properties dialog box. If the Apple Multiple Scan 720 Display is not listed, you need to install setup information; otherwise, some resolutions and refresh rates may not be available on your monitor.

To see whether Windows has identified your monitor, follow these steps:

- 1 Open the Start menu and choose Settings.
- 2 Open the Control Panel and double-click the Display icon.

The Display Properties dialog box appears.

- 3 Click the Settings tab at the top of the dialog box.

The Settings panel appears.

- 4 Click the Change Display Type button in the lower-right corner to display the current Monitor Type.

If the Monitor Type shown is the Apple Multiple Scan 720, your computer has correctly identified your monitor. You are ready to use your Apple Multiple Scan 720 Display with your computer.

If the Monitor Type shown is not the Apple Multiple Scan 720, continue with step 5.

- 5 Press the Change button next to the Monitor Type field; then select Apple Multiple Scan 720 and click OK.

If Apple Multiple Scan 720 is not in the list displayed, the setup information file needs to be installed. Continue with step 6.

- 6 Insert the *Apple Displays Software* CD-ROM into your CD-ROM drive.

If you do not have a CD-ROM drive, see the service and support information that came with your monitor for information on how to contact Apple.

- 7 Click the Have Disk button.

- 8 Choose the CD-ROM disc drive and click OK.

If an error occurs, make sure you've selected the correct disc drive.

- 9 Choose Apple Multiple Scan 720 in the Monitor Type field and click OK.

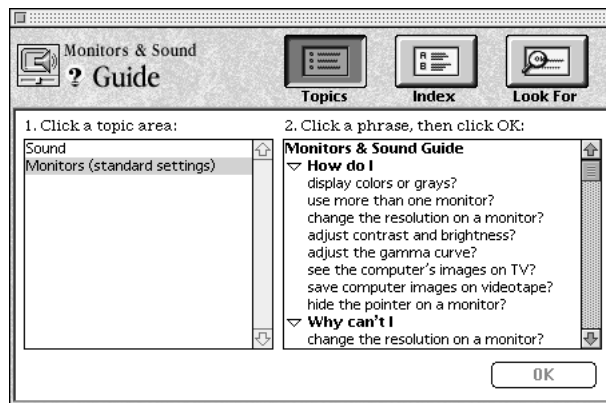
You're now ready to use the Apple Multiple Scan Display with your computer. See Chapter 3 if you want to learn how to use your monitor's manual controls and On-Screen Display to adjust your picture.

Learning about the Apple Displays Software with Monitors & Sound Guide

This section explains how to open Monitors & Sound Guide for information about using the Apple Displays Software with your monitor. The Monitors & Sound Guide is your main source of information about Apple Displays Software.

To open Monitors & Sound Guide, open the Apple () menu and choose Monitors & Sound from the Control Panels folder. Then click the Guide (🔍) icon in the top-right corner of the control panel to open Monitors & Sound Guide.

The Monitors & Sound Guide, or the Monitors & Sound Guide section of the Macintosh (or Mac OS) Guide, appears.



Click the Topics button to display and choose a topic from the topic area list. Then select a question in the list and click OK to open detailed instructions.

About the Monitors & Sound control panel

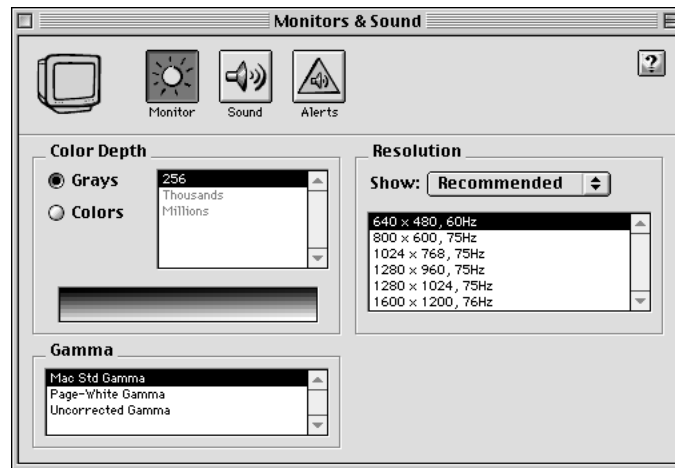
You use the Monitors & Sound control panel to control basic settings that affect the way your computer displays images and processes sound. Because different computers have different capabilities, Monitors & Sound automatically adjusts itself to the capabilities of the computer and monitor you're using. That's why the Monitors & Sound control panel shown in this book may appear slightly different on your computer.

If you have more than one monitor attached to your computer, a separate Monitors & Sound control panel appears on each one so you can customize your settings for each monitor separately.

Opening Monitors & Sound




To open the Monitors & Sound control panel, choose Control Panels from the Apple () menu and open the Monitors & Sound control panel.

After a moment, the Monitors & Sound control panel appears on your screen.



Monitors & Sound buttons at a glance

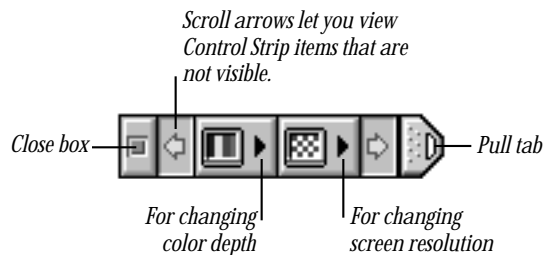
The large buttons across the top of the Monitors & Sound control panel are used to select the options described below. See Monitors & Sound Guide for detailed information.

Button	Description
	Use the <i>Monitor</i> button to adjust color depth, resolution, and gamma settings.
	Use the <i>Sound</i> button to adjust your computer system's sound. You can also set the volume for speakers attached to your computer, choose sound input devices such as a microphone or CD player, and select sound output quality.
	Use the <i>Alerts</i> button to change your computer's alert sound.

Using the Control Strip

The Control Strip is a quick and easy way to access the settings of the Monitors & Sound control panel you are likely to adjust most often.

When you turn on your monitor, the Control Strip appears in the lower-left corner of the screen. Click the pull tab once to open it.



The Control Strip may look slightly different depending on the options on your computer. Move the pointer over the item you want to use and hold down the mouse button. Choose a setting from the pop-up menu that appears.

If you want to change the position of the Control Strip on your desktop, hold down the Option key and drag the Control Strip up or down the left or right side of the desktop. Release the Option key and mouse button when the Control Strip is located where you want it.

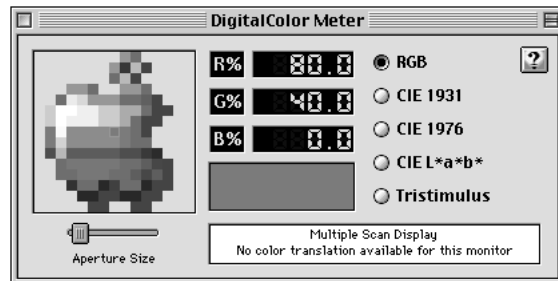
Using DigitalColor Meter

You can use DigitalColor Meter to obtain the RGB (red, green, and blue) values your computer uses to create colors and to magnify the pixels on your screen.

To begin working with DigitalColor Meter, follow these steps:

- 1 Choose DigitalColor Meter from the Apple () menu.

The DigitalColor Meter window opens.

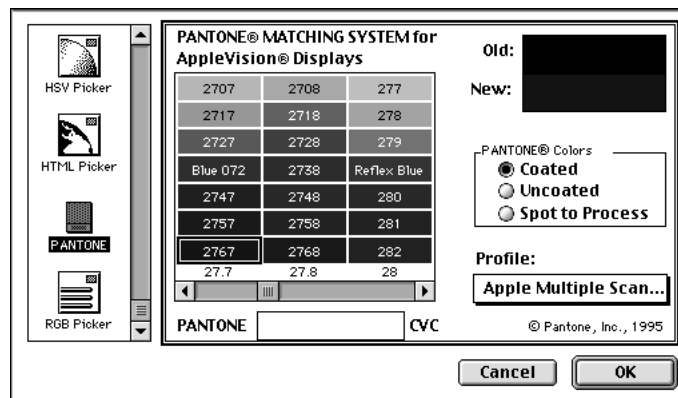


- 2 Click the Guide (?) icon in the top-right corner of the window for information on how to use DigitalColor Meter.

Specifying colors using the PANTONE® Color Picker

In some application programs, you can use PANTONE® Color Picker to specify PANTONE® colors, often used in producing professionally printed documents. In these applications, PANTONE® Color Picker is automatically launched when a new color needs to be specified.

When PANTONE® Color Picker is launched, you can click a PANTONE® color to select it, or type a PANTONE® number in the text box, and click OK.



Using ColorSync

ColorSync is Apple's unique color-matching software that ensures that Apple color printers print the best possible reproduction of the colors that appear on your screen. ColorSync is also used by Apple color scanners and the QuickTake camera to capture color images and accurately reproduce their colors on the screen.

The ColorSync software works automatically in the background. When you install the Apple Displays Software, your computer is automatically set to use ColorSync with your monitor.

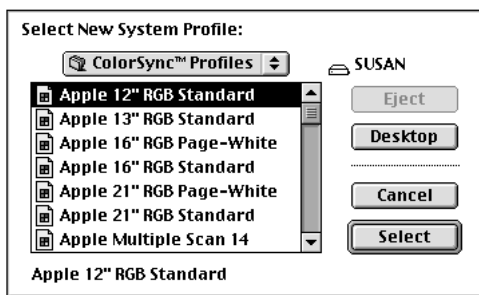
To set up ColorSync for your monitor:

- 1 Open the Apple () menu and choose ColorSync System Profile from the Control Panels folder.

The ColorSync System Profile control panel appears.

- 2 Click Set Profile.

A dialog box appears.



- 3 Click the name of the monitor you want to use.

The monitor name you should use for your Apple Multiple Scan 720 Display is "Apple Multiple Scan 17-9300."

- 4 Click Select.
- 5 Close the control panel by clicking the close box in the upper-left corner.

Conserving energy

You can use the Energy Saver control panel to tell the monitor whether to conserve energy after a specified period of inactivity.

Note: You can save even more energy by turning the computer off if you won't be using it for a while—for example, overnight or over the weekend.

You can use Energy Saver with any Apple monitor that complies with the United States Environmental Protection Agency's Energy Star program. (Look for the EPA Energy Star logo on the monitor box.)

For more information about power-saving and environmental features, see the Appendix in this book and the document named "TCO 95 Information" on your software CD.

What happens after you turn on the energy-saving feature?

When Energy Saver detects that you're not using the computer, it darkens the monitor screen and reduces the amount of energy it consumes. While the monitor is darkened, your computer is still working, but to avoid accidental changes, Energy Saver won't let any typing or mouse movement affect any of your work.

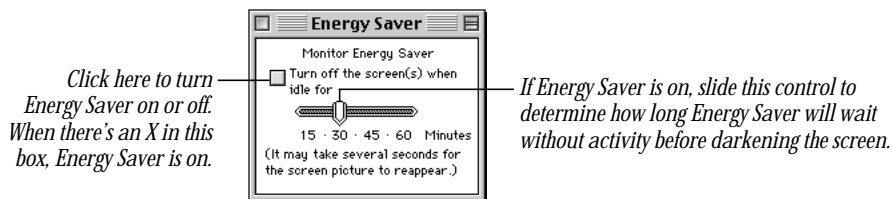
To "wake up" the monitor, press any key on the keyboard. Your computer may beep while the monitor is waking up and you can begin work as soon as the computer stops beeping. (The beep volume cannot be adjusted.)

Important If you use Energy Saver, make sure you turn it off when you're doing disk-intensive tasks such as copying a large number of files, downloading large files from an online service, or printing a very large file. If Energy Saver is activated during a disk-intensive task, the task may be terminated prematurely and you may need to recopy or reprint a file.

Setting up Energy Saver

To use the Energy Saver control panel, follow these steps:

- 1 Open the Apple () menu and choose Energy Saver from the Control Panels folder. The Energy Saver control panel appears.
- 2 Make the following choices in the control panel:



The Energy Saver control panel on your system may look slightly different from the one shown here. If you see a Show Details button, you can click it to specify separate timings for Display Sleep and Hard Disk Sleep. (Hard Disk Sleep saves energy by stopping the spin of the hard disk.)

- 3 Close the control panel.

Using Energy Saver with a screen saver

Screen savers are applications you can purchase that put moving patterns on your monitor when you're not using your mouse or keyboard. Screen savers and Energy Saver both help prevent screen "burn-in." Energy Saver also conserves energy.

If you wish, you can use Energy Saver and a screen saver program. Set the screen saver to come on before Energy Saver. If your screen saver program includes its own energy-saving feature, you can turn off Energy Saver.

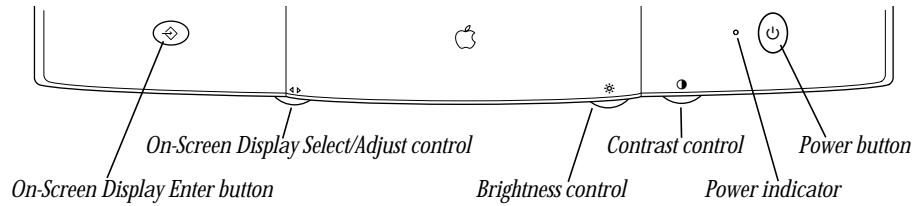
Using Manual Controls and the On-Screen Display

You can adjust your picture by using the buttons and knobs on the front of your monitor, as well as adjusting the controls in the On-Screen Display.

The On-Screen Display lets you fine-tune the picture on your monitor. It can be used with both Mac OS–based computers and IBM PC-compatible computers. In most cases, you won't need to make any adjustments to your picture. But if you do, follow the instructions in this chapter.

Using manual controls on your monitor

You use the buttons and knobs on the front of your monitor to adjust the brightness and contrast, and to control the On-Screen Display.



The following table describes the function of each control.

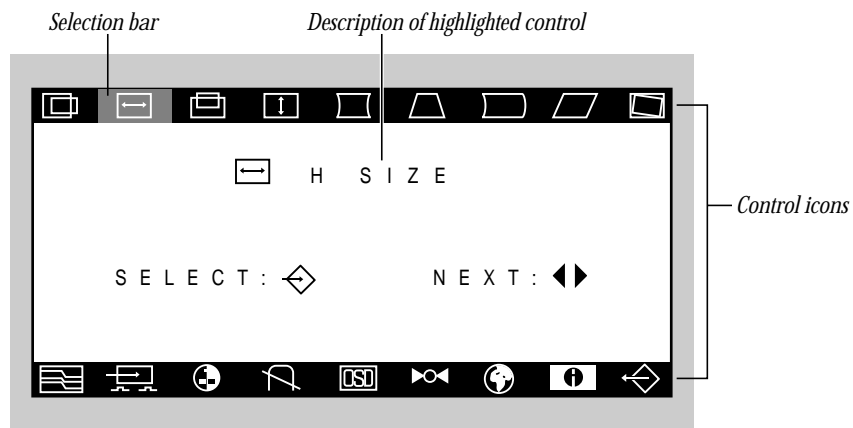
Control	Function
On-Screen Display Enter button	Use this button to turn on the On-Screen Display and enter choices.
On-Screen Display Select/Adjust knob	Use this knob to select (highlight) choices and adjust levels in the On-Screen Display.
Brightness control	Use this knob to increase or decrease the brightness of the picture.
Contrast control	Use this knob to increase or decrease the contrast of the picture.
Power button	Use this button to turn the monitor on or off.
Power indicator	A green light indicates the monitor is on. An amber light indicates the power-saving mode. Move your mouse or press a key on the keyboard to return the monitor to its normal display operation.

Accessing controls in the On-Screen Display

To access controls in the On-Screen Display, follow these steps:

- 1 Press the On-Screen Display Enter button (↵) on the left of the monitor.
The On-Screen Display appears.
- 2 Rotate the On-Screen Display Select/Adjust knob (on the underside of the monitor) to move the selection bar across the icons at the top and bottom of the On-Screen Display window.



















The icons represent controls that you use to adjust the picture and the On-Screen Display window. As each control icon is highlighted, a description of the control appears in the window.



Note: The On-Screen Display disappears after a number of seconds if you haven't turned the Select/Adjust knob or pressed the Enter button. (You can change the number of seconds by accessing the OSD control; see the sections that follow for more information.)

- 3** To access a control, move the selection bar to highlight the corresponding icon and press the Enter button (↵).

These are the control icons and their functions. (A detailed explanation of each control is provided in the next section.)

Control	Function
 Horizontal Position	Use this control to adjust the horizontal position of the screen image.
 Horizontal Size	Use this control to adjust the horizontal size (or width) of the screen image.
 Vertical Position	Use this control to adjust the vertical position of the screen image.
 Vertical Size	Use this control to adjust the vertical size (or height) of the screen image.
 Side Pincushion	Use this control to adjust the shape of the screen.
 Trapezoid	Use this control to adjust the shape of the screen.
 Side Pincushion Balance	Use this control to adjust the shape of the screen.
 Parallelogram	Use this control to adjust the shape of the screen.
 Tilt	Use this control to rotate the screen image.
 Moire Reduction	Use this control to reduce the Moire pattern on the screen.
 Video Input Level	Use this control to select the monitor's input signal level.
 Color Control	Use this control to set the white point color temperature.
 Degauss	Use this control to degauss the screen for picture quality.
 OSD (On-Screen Display)	Use this control to set the time that the On-Screen Display window remains on screen and to change its position on the screen.
 Recall	Use this control to recall the factory settings.
 Language	Use this control to select the language you would like the On-Screen Display to appear in.
 Information	Lets you choose from three categories of information to view and change: Mode, Absence, and DDC (Data Display Channel).
 Exit	Lets you exit the On-Screen Display.

Adjusting the On-Screen Display controls

After you have accessed a control by selecting its icon and pressing the Enter button (↵), the control's unique menu appears. This section provides information about the controls and how to adjust them.

Tip: When you're finished adjusting a control, you may need to press the Enter button (↵) to exit the control's menu. Or, if you're finished with the On-Screen Display, you can wait for the window to disappear on its own.

After you finish adjusting a control, the setting is automatically saved.

Horizontal Position, **Horizontal Size**, **Vertical Position**, and **Vertical Size**

Turn the Select/Adjust knob to set the size and position of the screen image.

Side Pincushion

Turn the Select/Adjust knob to bring in or expand the sides of the image, changing the shape from convex to concave.

Trapezoid

If the image is narrower at the top than at the bottom, or vice versa, turn the Select/Adjust knob to adjust the shape of the image.

Side Pincushion Balance

Turn the Select/Adjust knob to curve the sides of the image in one direction or the other.

Parallelogram

Turn the Select/Adjust knob to adjust the slant of the image.

Tilt

Turn the Select/Adjust knob to rotate the screen image.

Moire Reduction

If you notice an interfering striped pattern on your screen, you may need to adjust the Moire control. This control is normally set to Off. To adjust the Moire control, turn the Select/Adjust knob to select On, then press the Enter button (↵). Turn the Select/Adjust knob to adjust the horizontal and vertical levels of moire, then press the Enter button again. To exit the Moire Reduction menu, turn the Select/Adjust knob to select the rectangles icon, and press the Enter button.

Video Input Level

Change the video input signal level to change the overall brightness and contrast. Turn the Select/Adjust knob to highlight the level you want (.7 V or 1.0 V), then press the Enter button (↵).

Color Control

This menu lets you set the white point color temperature in three different ways: by selecting from two color temperatures, by adjusting RGB (red, green, and blue) values, and by setting a new color temperature.

9300° K or 6550° K temperature: The color temperature (or *white point*) you select for your monitor sets the mix of red, green, and blue light that makes the color white. This color temperature sets the foundation for other colors on your monitor. 6550° K creates reddish whites, and 9300° K creates bluer whites. To select a temperature, turn the Select/Adjust knob to highlight the temperature you want, and press the Enter button (↵).

User: Use this control to change RGB values. To select this control, turn the Select/Adjust knob to highlight User, then press the Enter button (↵). When the RGB menu appears, press the Enter button again until the triangle appears next to the color value you want to change. Then turn the Select/Adjust knob to increase or decrease the amount of that color value.

Curve: Use this control to set a color temperature between 6500° K and 9300° K. To select this control, turn the Select/Adjust knob to highlight Curve, then press the Enter button (↵). When the Curve menu appears, turn the Select/Adjust knob to increase or decrease the color temperature.

Degauss

Changes to the magnetic field around a monitor can distort the picture on the screen. The magnetic field may change whenever you tilt or swivel the monitor dramatically, or when you bring a magnetized object close to the monitor. Your monitor has a feature that immediately counteracts the effects of sudden changes in the magnetic field. This feature is called automatic degaussing. Most monitors degauss only when they first turn on. If you leave your monitor turned on over long periods (more than 3 days), it's a good idea to press the Degauss button. This ensures that you are getting the best quality picture possible.

To degauss your monitor, press the Enter button (↵).

Note: The monitor may make a crackling sound when you degauss it; this is normal.

OSD Control

Use this menu to choose from three options that affect the On-Screen Display window: Timer, Horizontal position, and Vertical position. Turn the Select/Adjust knob until the option you want to adjust is highlighted, then press the Enter button (↵).

Timer: Changes the amount of time the On-Screen Display remains on the screen after you stop making adjustments. Turn the Select/Adjust knob to increase or decrease the number of seconds.

Hori. (horizontal position): Changes the horizontal position of the On-Screen Display window on your screen. Turn the Select/Adjust knob to move the window to the left or right.

Vert. (vertical position): Changes the vertical position of the On-Screen Display window on your screen. Turn the Select/Adjust knob to move the window up or down.

Recall

Press the Enter button (↵) to return the monitor to its original On-Screen Display settings. Then press the Enter button again, with “Yes” selected in the menu, to confirm the settings. (If you change your mind and don’t want to recall the original settings, turn the Select/Adjust knob to highlight “No” and press the Enter button.)

Language

Turn the Select/Adjust knob to highlight the language you want the On-Screen Display to appear in, then press the Enter button (↵).

Information: Mode, Absence, DDC

Turn the Select/Adjust knob to highlight the category of information you would like to view: Mode, Absence, or DDC. Then press the Enter button again.

Mode: Shows scan frequency and refresh rate settings, and allows you to select a different setting if necessary. Turn the Select/Adjust knob to “Preset Mode” to view preset modes, or to “User Mode” to view any scan frequency and refresh rate modes you may have defined. The mode that the monitor is currently set to is highlighted.

Absence: Displays the signal being received by the computer from the monitor.

DDC: Shows the Data Display Channel settings available to your monitor. By default, this control is set to “Off.” However, if you have a Power Macintosh 9600 computer, if you have an IBM PC-compatible computer, or if you have a graphics card installed in your computer that supports DDC, additional resolution settings may be available by selecting a different setting.

To select a setting, turn the Select/Adjust knob to highlight one of the following options: 2B, 1/2B, or 2AB. Then press the Enter button (↵).

- If you have a 9600 Power Macintosh computer, an IMS (or IX) Twin Turbo graphics card, or an ATI XCLAIM graphics card, select 1/2B.
- If you have a different graphics card or if you have an IBM PC-compatible computer, see the manual that came with your graphics card or computer to learn which DDC setting is supported.

Important After you have reset the DDC control, turn the monitor off and on again by pressing the Power Button in the lower right corner on the monitor, then restart your computer. Doing this ensures that the new DDC setting is enabled.

Exiting the On-Screen Display

When you're finished with the On-Screen Display, you can let the window disappear on its own (by not turning the Select/Adjust knob or pressing the Enter button). Or you can turn the Select/Adjust knob to highlight the Exit icon (↔) and press the Enter button (↔).

Tips and Troubleshooting

This chapter includes information on the care and cleaning of your monitor; protecting your monitor from theft, and troubleshooting.

Care and cleaning

- Do not block the monitor's vents.
- Do not let liquid get on or into the monitor.
- If you will not be using your monitor and computer for a day or more, make sure you turn off the computer and monitor (if the monitor doesn't automatically turn off with the computer).

To clean the case of the monitor:

- 1 Turn your computer and monitor off.
- 2 Disconnect the monitor power cord from the back of the monitor. (Pull the plug, not the cord.)
- 3 Wipe the surfaces lightly with a clean, soft cloth dampened with water.

Don't use aerosol sprays, solvents, or abrasives that might damage the finish on the case.

To clean the screen of the monitor:

- 1 Turn your computer and monitor off.
- 2 Disconnect the monitor's power cord from the back of the monitor. (Pull the plug, not the cord.)
- 3 Use a mild, non-abrasive cleaner on a soft cloth and wipe the screen.

Warning Never spray cleaner directly onto the screen. Liquid could drip inside the monitor and cause electrical shock.

To avoid damage to the screen, do not clean it with a cleaner that contains alcohol or acetone.

Protecting your monitor from theft

The slot on the back of the monitor is for connecting a security lock. It lets you attach a narrow, flexible cable that you can use to secure your monitor (and the rest of your computer system) to prevent theft. Security locks are available from an Apple-authorized dealer or service provider.

Troubleshooting

Warning If you have a problem with your monitor and nothing presented in this manual solves it, consult the service and support information that came with your monitor for instructions on how to contact an Apple-authorized service provider or Apple for assistance. If you attempt to repair the monitor yourself, any damage you may cause to the monitor will not be covered by the limited warranty on your monitor. Contact an Apple-authorized dealer or service provider for additional information about this or any other warranty question.

Never remove the case from the monitor! You could come in contact with hazardous voltage.

Solutions to common problems related to your monitor are described here. Problems related to the computer are covered in the manuals that came with your computer.

If the screen image is dim, flickers, or does not appear

First try these basic checks:

- Make sure that the power cord is plugged in properly.
If the monitor power cord is plugged into your computer, make sure your computer is on and the cord is firmly plugged into the computer and the wall.
- Make sure the monitor cable is plugged into your computer properly.
If you have a graphics card installed in your computer, the monitor cable should be plugged into the port on the graphics card.
If you do not have a graphics card installed in your computer, the monitor cable should be plugged into the monitor port on the back of your computer.
- Make sure the thumbscrews on the monitor cable are tightened securely into the port connector.
- Make sure that your computer and monitor are turned on.

If you still have problems, look for your problem on the following pages and follow the instructions.

No image appears on the screen, or the screen is dim, and the monitor's power indicator light is on.

- The monitor may have gone to sleep, or a screen saver that darkens your screen may be activated. Move the mouse or press a key to restore the image.
- Make sure the brightness (☼) and contrast (●) controls are set correctly. The brightness and contrast controls are located on the underside of the front of the monitor.
- If the monitor cable is properly connected and the amber light is on, you may need to install a graphics card in your computer or use an adapter connector. See Chapter 1, “Setting Up.”

The screen flickers.

- The flickering could be caused by interference from a nearby power line, a fluorescent light, or an electrical device—for example, a radio, a microwave oven, or another computer. Try relocating nearby electrical devices, or moving your computer and monitor.
- If you have more than one monitor attached to your computer, the monitors might be interfering with one another. Move the monitors farther apart or set the monitors at an angle, so their screens are close and their back panels are farther apart. If after moving the monitors more than 16 inches apart you still see flickering, contact an Apple-authorized dealer or service provider.
- If you are using a graphics card that has a refresh rate below 60 hertz, the monitor may flicker. You may be able to change the refresh rate for the card. See the manual that came with your graphics card for more information.

After you attached a new monitor to your computer, the new monitor's screen is blank or shows “garbage” or “snow.”

The computer may not have recognized the monitor. Try the following: Turn off the computer and disconnect the new monitor. Start up the computer with no monitor attached. Wait a minute or so for the computer to finish turning itself on. Turn off the computer again and reattach the new monitor.

Problems with the energy-saving (sleep) mode

Some computers and graphics cards do not support the Energy Saver feature. See the documentation that came with your monitor and graphics card for more information.

Problems with the screen “freezing”

If you use both Energy Saver and a screen saver program and the screen freezes, the screen saver program may be conflicting with Energy Saver. Turn off either the screen saver program or Energy Saver.

Problems with picture quality or placement

No colors appear on the screen, or the colors don't look right.

- Check to make sure that the number of colors is set correctly in the Monitors & Sound control panel or in the Control Strip. For more information, see Chapter 2 and the documentation that came with your computer.
- If you have already changed the number of colors displayed on the screen, try one of the following:
 - Quit the application you're running and start it again.
 - Go back to the number of colors you were using previously.

The screen image is off-center.

- Try changing to another resolution using the Monitors & Sound control panel or the Control Strip (see Chapter 2).
- Adjust the vertical or horizontal position. See "Adjusting the On-Screen Display Controls" in Chapter 3. (Keep in mind that you may have to adjust the picture again if you change resolutions.)

The screen image is too large or too small.

- Try changing to another resolution using the Monitors & Sound control panel or the Control Strip (see Chapter 2).
- Adjust the horizontal or vertical size of the picture. See "Adjusting the On-Screen Display Controls" in Chapter 3. (Keep in mind that you may have to adjust the picture again if you change resolutions.)

The screen appears greenish, the screen image is unreadable, or there is "snow" on the screen.

- Make sure the monitor cable is connected firmly to the correct port on the back of the computer.
 - If you do not have a graphics card installed in your computer,* the monitor cable should be plugged into the monitor port on the back of your computer.
 - If you have a graphics card installed in your computer,* the monitor cable should be plugged into the port on the graphics card.

Problems with eyestrain

If you are having problems with eyestrain, adjust the screen contrast by turning the contrast knob underneath the front of the monitor. In a bright room, contrast is usually best set at maximum; in a dim room, lower contrast is usually more comfortable. Also, be sure to take occasional breaks to focus your eyes on a distant object.

Problems with changing the resolution

After you change the screen resolution, a window is partly off the screen or missing, or you can't see the whole screen.

Try one of the following:

- If you changed the resolution in the control panel, make sure the control panel is closed before trying to use another window.
- Quit the application whose window is missing and then open it again.
- If the application has a Windows menu, use it to hide the problem window and then show it again.
- Go back to the resolution you were using, close the window, change the resolution, and then reopen the window.
- Try another resolution.

If you have problems with a particular application, contact the publisher of that application. Not all applications take advantage of the new features of the Apple Multiple Scan Display.

After you change the screen resolution, icons move.

Changing the screen resolution affects how information can be displayed on your screen. The display software may automatically reposition icons after you change the screen resolution.

You see two resolution options labeled 640 x 870 (75 Hz).

If you're using the Macintosh 24Ac graphics card, you may see two apparently identical resolution selections. The first option sets your monitor to display millions of colors, and the second option sets your monitor to display 256 colors.

When you select a different resolution, the monitor goes blank, and the resolution does not change.

If your monitor is connected to the Macintosh 24Ac graphics card, the monitor may go blank for 15 seconds when you select a resolution that does not work with your monitor. Try selecting another resolution.

Problems finding the Control Strip

- You may have hidden the Control Strip. Open the Control Strip control panel and click the button labeled "Show Control Strip."



Technical Information

Picture tube

- 17-inch diagonal flat square CRT, 16.0-inch diagonal viewable image size
- Anti-static, anti-glare surface treatment
- 0.28 millimeter (mm) dot pitch

Input signals

- Red, green, and blue signals; separate horizontal and vertical sync

Power-saving and environmental features

- *NUTEK compliant*

This monitor is equipped with energy-saving features that allow the monitor to conserve energy when the computer is not in use. The color of the power indicator light on the front of the monitor indicates the operating mode:

DPMS Mode	Mac OS Energy Saver mode	Power consumption	Power indicator
On	Normal	<120 W	Green
Stand by/Suspend	Monitor sleep	<30 W	Amber
Off	System sleep	<8 W	Amber

For instructions on adjusting the system and monitor sleep settings and additional energy-conservation information, see “Conserving Energy” in Chapter 2. You can also see Macintosh (Mac OS) Guide or Help.

- *TCO 95 compliant*

This product has been certified by TCO (the Swedish confederation of Professional Employees) to meet global standard safety tests and have energy-saving features such as automatic power-saving mode and reduced electromagnetic fields.

- *MPR II compliant*

This product has reduced electromagnetic and electrostatic emissions.

- *Energy Star compliant*

This product complies with the United States Environmental Protection Agency's Energy Star criteria for energy-efficient office products. The EPA Energy Star Office Equipment program is a partnership program to promote energy-efficient personal computers, monitors, printers, fax machines, and copiers. Reducing the energy consumption from this equipment can help combat smog, acid rain, and climate change by decreasing emissions from electricity generation.

- *DPMS compliant*

This product's power-saving features comply with the Video Electronics Standards Association's (VESA) Display Power Management Standard (DPMS). (The computer must also be VESA DPMS compliant to use DPMS features.)

User controls

- Power-on button
- Automatic degauss at power-up; manual degauss with the Degauss control in the On-Screen Display
- Buttons and controls: On-Screen Display Enter, On-Screen Display Select/Adjust, Brightness, Contrast
- Additional picture controls available in the On-Screen Display

Active video image area

- Adjusted at the factory for the following standard modes:

Mode	Resolution	Vertical refresh rate (hertz)	Horizontal scan rate (kilohertz)
Macintosh	640 x 480	66.7	35.0
	832 x 624	75	49.725
	1152 x 870	75	68.681
VGA	640 x 480	60	31.469
VESA	640 x 480	85	43.269
	800 x 600	60	37.879
	800 x 600	72	48.077
	800 x 600	85	53.674
	1024 x 768	60	48.363
	1024 x 768	75	60.023
	1024 x 768	85	68.677
	1280 x 1024	60	63.981

Input electrical requirements

- *Voltage* 100–240 volts (V) AC
- *Frequency* 50/60 hertz (Hz)
- *Amperage* 2.0
- *Power* 120 watts (W) maximum

Weight

- 37.5 pounds (17 kilograms)

Dimensions

- *Height* 17.0 inches (in.) \pm 0.2 in.
431 mm \pm 5 mm
- *Width* 16.2 in. \pm 0.2 in.
412 mm \pm 5 mm
- *Depth* 16.9 in. \pm 0.2 in.
428.5 mm \pm 5 mm

Temperature

- *Operating* 50° to 104° F (10° to 40° C)
- *Storage* 32° to 140° F (0° to 60° C)
- *Shipping* -4° to 140° F (-40° to 60° C)

Humidity (noncondensing)

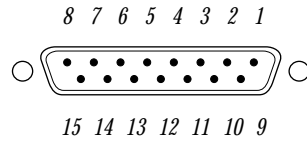
- *Operating* 20% to 95%

Altitude

- *Operating* 0 to 10,000 feet (ft.)
0 to 3,000 meters (m)
- *Shipping* 0 to 35,000 ft.
0 to 10,500 m

Display cable specifications

- 15-pin miniature D-type connector



Pin	Output signal
1	Red video ground
2	Red video
3	Not used
4	ID 1
5	Green video
6	Green video ground
7	ID 2
8	Not used
9	Blue video
10	ID 3
11	V Sync return
12	V Sync
13	Blue video ground
14	H Sync return
15	H Sync
Shell	Shield ground



Apple Computer, Inc.

1 Infinite Loop

Cupertino, California 95014-2084

408-996-1010

<http://www.apple.com>

034-0319-A
Printed in U.S.A.



Apple

Multiple Scan 720 Display

User's Manual

 Apple Computer, Inc.

© 1997 Apple Computer, Inc. All rights reserved.

Under the copyright laws, this manual may not be copied, in whole or in part, without the written consent of Apple. Your rights to the software are governed by the accompanying software license agreement.

The Apple logo is a trademark of Apple Computer, Inc., registered in the U.S. and other countries. Use of the “keyboard” Apple logo (Option-Shift-K) for commercial purposes without the prior written consent of Apple may constitute trademark infringement and unfair competition in violation of federal and state laws.

Every effort has been made to ensure that the information in this manual is accurate. Apple is not responsible for printing or clerical errors.

Apple Computer, Inc.
1 Infinite Loop
Cupertino, CA 95014-2084
408-996-1010
<http://www.apple.com>

Apple, the Apple logo, ColorSync, LaserWriter, Macintosh, and QuickTake are trademarks of Apple Computer, Inc., registered in the U.S. and other countries.

Adobe, Adobe Illustrator, Adobe Photoshop, and PostScript are trademarks of Adobe Systems Incorporated or its subsidiaries and may be registered in certain jurisdictions.

The Energy Star logo is a service mark of the U.S. Environmental Protection Agency.

Helvetica is a registered trademark of Linotype-Hell AG and/or its subsidiaries.

NuBus is a trademark of Texas Instruments.

PANTONE® and other Pantone, Inc. trademarks are the property of Pantone, Inc. Portions © Pantone, Inc. 1995
Simultaneously published in the United States and Canada.

Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the performance or use of these products.



Contents

Communications regulation information v

1 Setting Up 1

Important safety instructions 1

What about electromagnetic emissions? 2

Getting ready to set up 3

Do you need a graphics card? 3

Using more than one monitor 4

Your Apple Multiple Scan Display at a glance 5

Positioning your Apple Multiple Scan Display 6

Connecting the Apple Multiple Scan Display to your computer 7

Turning the Apple Multiple Scan Display on 8

Finding answers 9

Obtaining online support and updated Apple software 9

2 Installing and Using the Apple Displays Software 11

What's included in the Apple Displays Software? 11

Installing the Apple Displays Software on Mac OS–based computers 12

Installing setup information on Windows-based computers 13

Learning about the Apple Displays Software with Monitors & Sound Guide 14

About the Monitors & Sound control panel 15

Opening Monitors & Sound 15

Monitors & Sound buttons at a glance 16

Using the Control Strip 16

Using DigitalColor Meter 17

Specifying colors using the PANTONE® Color Picker	17
Using ColorSync	18
Conserving energy	18
What happens after you turn on the energy-saving feature?	19
Setting up Energy Saver	19
Using Energy Saver with a screen saver	20

3 Using Manual Controls and the On-Screen Display 21

Using manual controls on your monitor	22
Accessing controls in the On-Screen Display	23
Adjusting the On-Screen Display controls	25
Exiting the On-Screen Display	27

4 Tips and Troubleshooting 29

Care and cleaning	29
Protecting your monitor from theft	30
Troubleshooting	30
If the screen image is dim, flickers, or does not appear	30
Problems with the energy-saving (sleep) mode	31
Problems with the screen “freezing”	31
Problems with picture quality or placement	32
Problems with eyestrain	32
Problems with changing the resolution	33
Problems finding the Control Strip	33

Appendix Technical Information 35

Communications regulation information

FCC statement

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. See instructions if interference to radio or television reception is suspected.

Radio and television interference

The equipment described in this manual generates, uses, and can radiate radio-frequency energy. If it is not installed and used properly—that is, in strict accordance with Apple’s instructions—it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in Part 15 of FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

You can determine whether your computer system is causing interference by turning it off. If the interference stops, it was probably caused by the computer or one of the peripheral devices.

If your computer system does cause interference to radio or television reception, try to correct the interference by using one or more of the following measures:

- Turn the television or radio antenna until the interference stops.
- Move the computer to one side or the other of the television or radio.
- Move the computer farther away from the television or radio.
- Plug the computer into an outlet that is on a different circuit from the television or radio. (That is, make certain the computer and the television or radio are on circuits controlled by different circuit breakers or fuses.)

If necessary, consult an Apple-authorized service provider or Apple. See the service and support information that came with your Apple product. Or, consult an experienced radio/television technician for additional suggestions.

Important Changes or modifications to this product not authorized by Apple Computer, Inc., could void the FCC certification and negate your authority to operate the product.

This product was tested for FCC compliance under conditions that included the use of Apple peripheral devices and Apple shielded cables and connectors between system components. It is important that you use Apple peripheral devices and shielded cables and connectors between system components to reduce the possibility of causing interference to radios, television sets, and other electronic devices. You can obtain Apple peripheral devices and the proper shielded cables and connectors through an Apple-authorized dealer. For non-Apple peripheral devices, contact the manufacturer or dealer for assistance.

DOC statement

DOC Class B Compliance This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled “Digital Apparatus,” ICES-003 of the Department of Communications.

Observation des normes—Classe B Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur : “Appareils Numériques”, NMB-003 édictée par le ministre des Communications.

VCCI statement

情報処理装置等電波障害自主規制について

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づく第二種情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをしてください。