

The background of the cover is a textured, light beige color. It features several embossed geometric shapes: a large rounded rectangle in the center, a large circle on the right, and several smaller squares and rectangles scattered throughout. A horizontal dotted line is positioned below the main title.

# Apple Multiple Scan 15 Display

*User's Guide*

A large, embossed wavy line is located at the bottom of the cover, starting from the left and curving towards the right.

The background of the cover is white with several large, light-colored, textured geometric shapes. These include a large circle with a smaller circle inside it, a large rounded rectangle, a diamond, and several smaller squares and rectangles scattered around. The shapes have a woven or fabric-like texture.

# Apple Multiple Scan 15 Display

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*User's Guide*

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 Apple Computer, Inc.

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This Apple manual was written, edited, and produced on a desktop publishing system using Apple Macintosh computers and QuarkXPress. Technical illustrations were drawn in Adobe™ Illustrator; screen shots were created and modified with system software, Exposure Pro, Aldus SuperPaint, and Adobe Photoshop. Proof pages were created on Apple LaserWriter printers and on QMS and Tektronix color printers. Final pages were output directly to separated film on a PostScript™-driven imagesetter.

Text type is Times®, display type is Helvetica® Narrow, and cover type is Apple Garamond, Apple's corporate font. Ornaments are custom symbols designed for Apple Computer.

PostScript, the LaserWriter page-description language, was developed by Adobe Systems Incorporated.



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## Communications regulation information

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. You may find the following booklet helpful: *Interference Handbook* (stock number 004-000-00493-1). This booklet, prepared by the Federal Communications Commission, is available from the U.S. Government Printing Office, Washington, DC 20402.

**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

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# 1

## Setting Up

The Apple Multiple Scan 15 Display is a 15-inch color monitor that supports a variety of resolutions, and has a built-in amplifier and stereo speakers for producing sounds and music. The instructions in this chapter discuss important safety information, setting up and connecting the monitor to your computer, and installing the monitor software on your computer.

### Important safety instructions

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 monitor is exposed to rain or any other excess moisture
- your monitor has been dropped or the case has been otherwise damaged
- you suspect that your monitor needs service or repair
- you want to clean the case (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 monitor when you need to.

Be sure that you always do the following:

- Keep your monitor away from sources of liquids, such as wash basins, bathtubs, shower stalls, and so on.
- Don't remove the cover of the monitor.
- Don't set anything on top of the monitor (such as a book or cup).
- Keep the monitor's vents free from obstruction.
- Protect your monitor from dampness or wet weather, such as rain, snow, and so on.
- Read all the installation instructions carefully before you plug your monitor into a power source.
- Keep these instructions handy for reference by you and others.
- Follow all instructions and warnings dealing with your system.

**WARNING** 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?

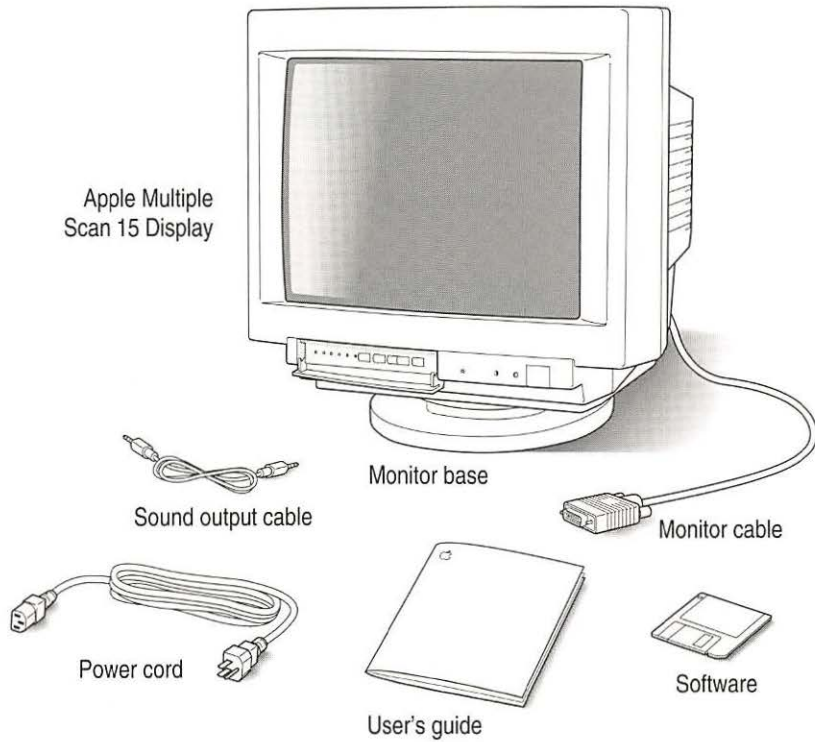
There has been recent public discussion of the possible health effects of prolonged exposure to extremely low frequency (ELF) and very low frequency (VLF) electromagnetic fields. Such fields are associated with electromagnetic sources such as television sets, electrical wiring, and some household appliances—as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

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 monitors do not pose a health risk.

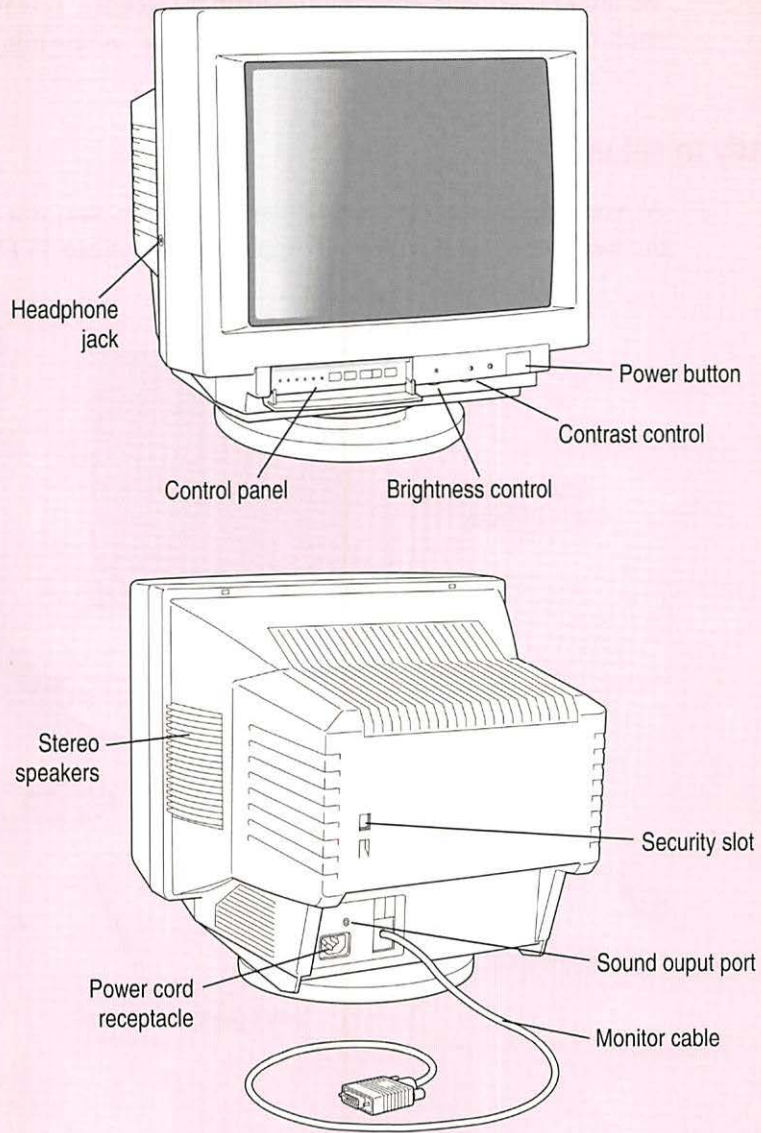
In response to those customers who wish to reduce their exposure to electromagnetic fields, Apple has lowered the emission levels of our products. We are also actively encouraging further scientific research so we can continue to promote the health and safety of our customers and employees.

## Getting ready to set up

As you begin to set up your display system, be sure you have easy access to the items that came with your Apple Multiple Scan 15 Display.



## Your Apple Multiple Scan 15 Display at a glance



## Choosing a good location for your monitor

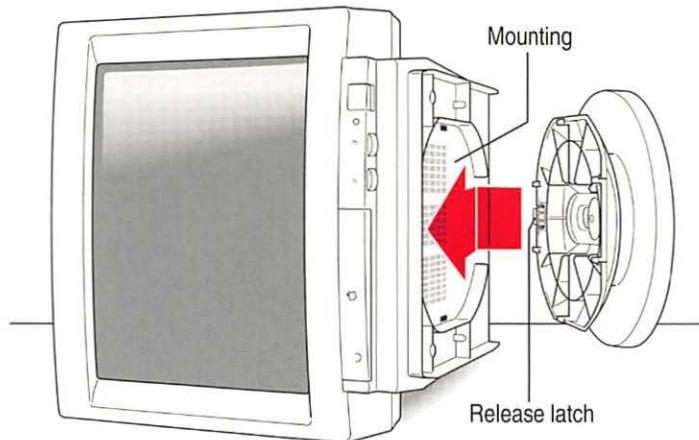
Here are some key factors to consider when determining where to place your monitor:

- Be sure that the desk or table can support the monitor's weight—approximately 30 pounds.
- Make sure that the power cord will reach an available three-hole grounded AC outlet.
- Make sure the monitor cable will reach from the back of the monitor to your computer. The monitor cable should be unobstructed when you swivel and tilt the monitor, so allow at least 6 inches of clearance in the back. If you don't allow enough clearance, the monitor connector might be damaged when the cable hits an obstruction.

## Installing the monitor base

After choosing a good location for the monitor, install the monitor base:

- 1 Place the monitor on its side so that the mounting, where the base will be attached, is exposed.
- 2 Holding the base so that the latch is toward the back of the monitor, insert the base into the mounting.



As you insert the base, fit the hooked tabs into the slots in the mounting.

**3 Slide the base forward to lock it into the mounting.**

Push the base forward about 1/4 inch toward the front of the monitor to seat the base.

With the base now mounted, turn the monitor upright so that it sits upon the base.

If you should ever need to remove the base, press the base latch and then gently pull the base toward the rear of the monitor until you can withdraw the tabs from the mounting.

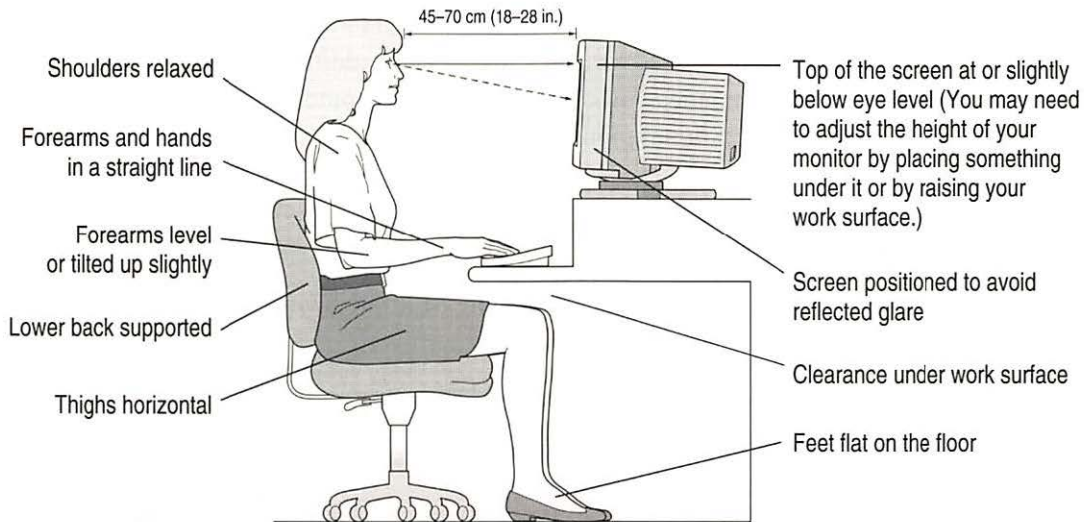
### **Positioning the monitor**

Once your monitor is in place, either on top of your computer or next to it on a desk or table, follow these steps:

- 1 Place the monitor so that the screen faces the user.**
- 2 To slide the monitor, lift the front up slightly and push or pull in the direction you want.**
- 3 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.



### Do you need a video card?

To use the Apple Multiple Scan 15 Display, you need compatible video circuitry built into your computer or a compatible video card installed in your computer. If you are unsure whether your computer has the appropriate built-in video capability, check with an Apple-authorized dealer or service provider.

If your computer does not have the video capability necessary to use this monitor, you need to purchase a video card. (Video cards are available from an Apple-authorized dealer or service provider.) Install the video card before you connect the monitor to your computer. To install a video card in one of the NuBus™ expansion slots inside your computer, see the manual that came with your computer or video card.

*Do you need an adapter connector?* Some models of Macintosh computers with built-in video and some third-party video cards require an adapter connector to connect the monitor to the computer. You can acquire an adapter connector from an Apple-authorized dealer or service provider.

## Using more than one monitor

If your computer has NuBus expansion slots, you can use the Apple Multiple Scan 15 Display with one or more additional monitors connected to your computer. You may need a video card for each additional monitor you are using. See the manuals that came with your computer for information on working with additional monitors.

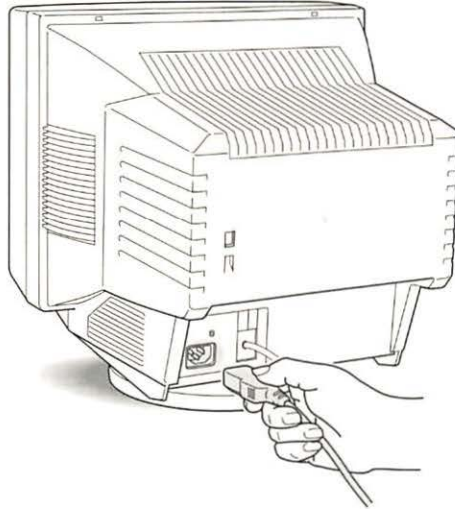
## Connecting the monitor to your computer

Follow these steps to connect the Apple Multiple Scan 15 Display to your computer:

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

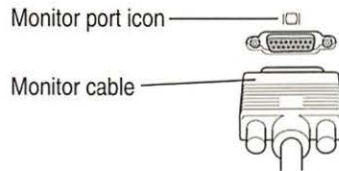
**WARNING** This equipment is intended to be electrically grounded. Your monitor is equipped with a three-wire grounding plug—a plug that has a third (grounding) pin. This plug will fit only a grounded AC outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug!

- 1** Connect the socket end of the power cord to the power cord receptacle on the back of the monitor.



- 2** Plug the other end of the power cord into a three-hole grounded outlet or power strip.  
If your computer has an available power socket, you can use a detachable power cord (listed by a relevant safety agency) to plug the monitor directly into the computer. You can get this cord from an Apple-authorized dealer or service provider.

- 3** Connect the monitor cable to the monitor port (marked with  $\square \square \square$ ) on the back of the computer.





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

- 4** Tighten the thumbscrews on the connection.



You can prevent bad connections and accidental damage by tightening the thumbscrews.



- 5 Attach one end of the included sound output cable to the sound output port (marked by ) on the back of the computer.
- 6 Attach the other end of the sound output cable to the sound output port (marked by ) on the back of the monitor.

## Connecting headphones to your monitor

If you wish, you can plug a pair of headphones (or other sound output device) into the Apple Multiple Scan 15 Display. To plug your headphones into the monitor, follow these steps:

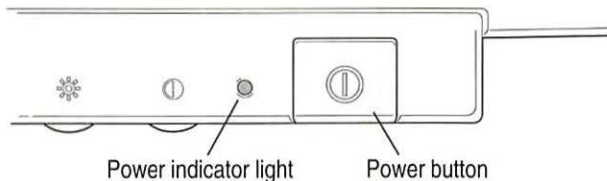
- 1 If your headphones are attached to the sound output port (marked by ) on the back of your computer, unplug them.
- 2 Plug the headphones into the headphone port (marked by ) on the side of the monitor.

When headphones are plugged in, the stereo speakers are disabled, and sound and music play through the headphones only.

## Turning the monitor on

To turn on the monitor for the first time:

- 1 Start up your computer.
- 2 Press the Power button on the front right side of the monitor.



The green power indicator light goes on. If the green light does not go on, press the power switch again. If this doesn't work, make sure you've connected the monitor to your computer properly (see "Connecting the Monitor to Your Computer" earlier in this chapter). Also, make sure your computer is turned on.

*Note:* If the power light is yellow, your Macintosh may need a video card or adapter connector to use the monitor. See “Do You Need a Video Card?” earlier in this chapter.

To make full use of the features available to you with this monitor, install the monitor software.

## Installing the monitor software

*Note:* Be sure you’re acting within the terms of the software license agreement before you install this software on a computer. The license agreement specifies how many copies of the program you can make for yourself and others.

To install the monitor software on a Macintosh computer, follow these steps:

- 1 Insert the *Apple Multiple Scan Software for Macintosh* disk into a floppy disk drive.

The disk’s icon appears on the desktop, as shown in the next step.

- 2 Double-click the disk icon to see what’s on the disk.



- 3 Double-click the Installer icon to start the Installer program.



After a moment, the Installer opens.

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

- 4 **Click the Install button.**



The Installer takes a few minutes to calculate what needs to be done and then begins to copy files.

- 5 **Keep following the instructions on the screen until the installation is complete.**

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

- 6 **Click the Restart button.**

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

*Note:* To change the screen resolution, see “Changing Screen Resolution” in Chapter 2.

# 2

## Using the Monitor Software



This chapter explains how to use the monitor software you have installed to change screen resolutions, save energy, and use ColorSync.

### Changing screen resolution

You can change the resolution of your monitor to zoom in for detail work or to zoom out and see a whole page or more at a time. To change your screen resolution, follow these steps:

- 1** Choose Control Panels from the Apple () menu.

A window opens showing all the control panels.

- 2** Double-click the Monitors icon to open the Monitors control panel.

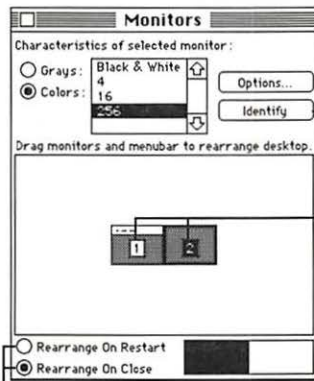


Monitors

Double-click the icon. (If you don't see it, click the scroll bar arrows. If you still can't find it, you may have forgotten to install the software, as described in Chapter 1.)

**3 Make the following choices in the control panel:**

*Note:* The choices you see in this window depend on what hardware you have.



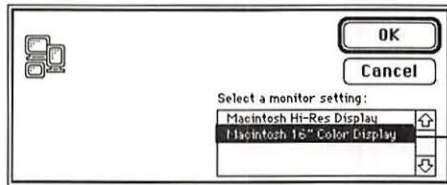
First, if you have more than one monitor, click here to see how your monitors are numbered.

Second, click the icon of the monitor you want to change. (If you only have one monitor, you will only see one choice.)

Third, choose when you want the change to take place—after you close this window or when you restart your computer.

**4 Click the Options button to see what resolutions you can choose.**

**5 Choose a resolution.**



Click the resolution you want. Click the arrows to see if there are more choices. (Your choices may differ from those shown here.)

*Note:* The choices you see in this window depend on what hardware you have.

If you don't see any options for changing resolutions, you may have selected the wrong monitor in the control panel, or your computer and video card cannot support multiple resolutions. Click Cancel, then try step 3 again.

**6 Click OK to return to the main window of the Monitors control panel.**

Depending on which option you selected in the control panel, the new resolution will be displayed either as soon as you close the dialog box or when you restart the computer.

- 7 Close the Monitors control panel by clicking the close box in the upper-left corner.

**IMPORTANT** Make sure you don't leave the Monitors control panel open or your monitors may not behave as you expect.

- 8 If the image is distorted, adjust the controls on the monitor itself as explained in Chapter 3.

## Other things you can do with the Monitors control panel

You can also use the Monitors control panel to

- arrange how multiple monitors work together
- choose how many colors or shades of gray each monitor can display

See the instructions that came with your computer for details.

## Conserving energy

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

You can use the control panel with your Apple Multiple Scan 15 Display or any other Apple monitor that complies with the United States Environmental Protection Agency's Energy Star program. (Look for the EPA Energy Star emblem on the monitor box.)

To use the control panel, follow these steps:

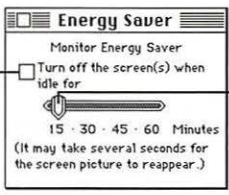
- 1 Choose Control Panels from the Apple () menu.  
A window opens showing all the control panels.
- 2 Double-click the Energy Saver icon to open the Energy Saver control panel.



Energy Saver

Double-click the icon. (If you don't see it, click the scroll bar arrows. If you still can't find it, you may have forgotten to install the software, as described in Chapter 1.)

**3** Make the following choices in the control panel:



The screenshot shows the 'Energy Saver' control panel window. It has a title bar with 'Energy Saver' and a close button. Below the title bar, it says 'Monitor Energy Saver'. There is a checkbox labeled 'Turn off the screen(s) when idle for' which is currently unchecked. Below the checkbox is a horizontal slider control with a circular knob. Underneath the slider are the labels '15 · 30 · 45 · 60 Minutes'. At the bottom of the window, there is a note: '(It may take several seconds for the screen picture to reappear.)'. Two lines of text with arrows point to the checkbox and the slider. The left line says: 'Click here to turn Energy Saver on or off. When there's an X in this box, Energy Saver is on.' The right line says: 'If Energy Saver is on, slide this control to determine how long Energy Saver will wait without activity before darkening the screen.'

**4** Close the control panel.

## 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 anything you type or do with the mouse affect any of your work.

To “wake up” the monitor, move the mouse or press any key on the keyboard. Your computer beeps while the monitor is waking up—about 20 seconds—and you can begin work as soon as the computer stops beeping. (The beep volume cannot be adjusted; it is independent of all system sound controls.)

**IMPORTANT** The Energy Saver control panel works with Apple monitors (such as this one) that comply with the EPA's Energy Star program. Other monitors will darken after the specified inactivity period has passed, but they won't save energy.

## Using Energy Saver with a screen saver

Screen savers are programs you can purchase that put moving patterns on your monitor. Both screen saver programs and the Energy Saver control panel prevent screen “burn-in.” Energy Saver also conserves energy.

If you wish, you can use both Energy Saver and a screen saver program. Set the screen saver to come on before Energy Saver, so if you're away from the computer for a short while, you can return to work immediately—without waiting for the monitor to warm up—and if you're gone for a while longer the monitor won't use as much energy.

## Using ColorSync

ColorSync is Apple's unique color-matching software that ensures that Apple color printers accurately print colors just as they appear on your monitor 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. ColorSync maintains consistent colors between color input, your monitor, and color printing devices so that the colors of your original image are accurately reproduced on screen and when printed.

The ColorSync software works automatically in the background. When you install the monitor software, your computer is automatically set to use ColorSync with your Apple Multiple Scan 15 Display.

If you use more than one color monitor with your Macintosh and want to print a color image from a specific monitor, you can obtain the best color matching by setting ColorSync to use a specific monitor.

To set up ColorSync for a specific monitor:

- 1 Choose Control Panels from the Apple () menu.

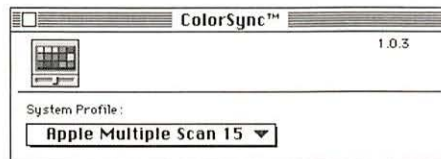
A window opens showing all the control panels.

- 2 Double-click the ColorSync icon to open the ColorSync control panel.



ColorSync™

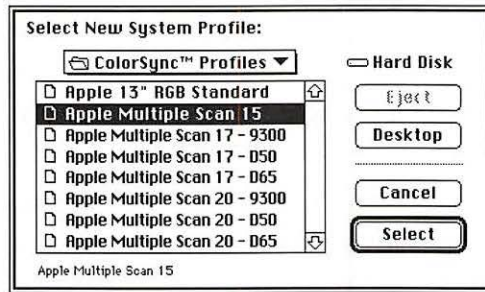
The ColorSync control panel appears.





- 3 Choose Set System Profile from the System Profile menu.

A dialog box appears that enables you to select the name of the monitor you want to use.



- 4 Click a monitor name to select it.
- 5 Click Select to return to the main window of the ColorSync control panel.
- 6 Close the ColorSync control panel by clicking the close box in the upper-left corner.

# 3

## Adjusting the Picture



In most cases, you won't need to make any adjustments to the picture. However, you can fine-tune the screen display to suit your preferences using the controls on the front of the monitor. After setting the controls, your monitor will use your settings each time you turn on the computer.

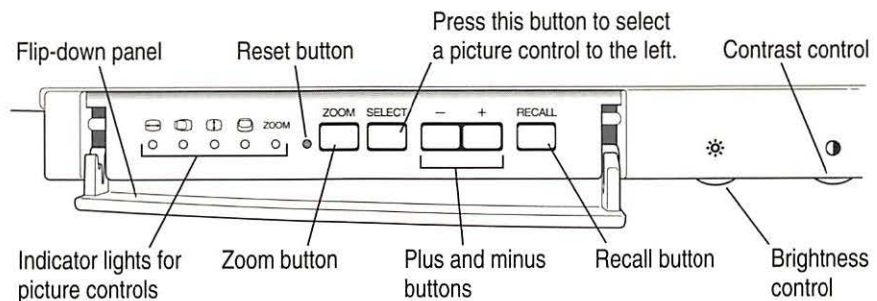
### Accessing the monitor's controls

A flip-down panel covers some of the controls on the front of the monitor.

- To open the panel so the monitor's controls are accessible, gently push down on the panel.

It opens and flips down. You can now use the controls to adjust the picture.

- To close the panel, flip the panel up and gently push it till the door latches.



## Making adjustments to the picture

### Adjusting the brightness of the picture

Use this control



Follow this step

Move the brightness control to increase or decrease brightness.

### Adjusting the contrast of the picture

Use this control



Follow this step

Move the contrast control to increase or decrease contrast.

## Adjusting the center of the picture

### Use these controls

### Follow these steps

SELECT



- 1 Press and hold down the Select button on the monitor until the indicator light for the vertical center icon goes on, then release the button.



- 2 Adjust the vertical center of the picture.

Press the – and + buttons to move the center of the picture down or up.

SELECT



- 3 Press and hold down the Select button on the monitor until the indicator light for the horizontal center icon goes on, then release the button.



- 4 Adjust the horizontal center of the picture.

Press the – and + buttons to move the center of the picture left or right.

When the picture is centered properly, there is an equal border around all edges of the picture.

## Adjusting the size of the picture

### Use these controls

### Follow these steps

SELECT



- 1 Press and hold down the Select button on the monitor until the indicator light for the width icon goes on, then release the button.



- 2 Adjust the width of the picture.

Press the – and + buttons to narrow or widen the picture.

SELECT



- 3 Press and hold down the Select button on the monitor until the indicator light for the height icon goes on, then release the button.



- 4 Adjust the height of the picture.

Press the – and + buttons to decrease or increase the height of the picture.

## Zooming

You can instantly zoom the picture so that it fills the entire screen. (The black borders around the picture disappear.) Zooming the picture to take up the full screen is useful when using the monitor for multimedia presentations or for displaying TV images. (To display TV images on your monitor, your computer must have TV capabilities.)

To zoom the picture, press the Zoom button.



To restore the picture to the previous monitor settings, press the Zoom button again.

## Resetting controls to the factory settings

The picture controls for your monitor are set at the factory. You can fine-tune the picture and make adjustments if necessary. The monitor will use your adjusted settings each time you turn on the computer. If you later decide you want to revert to the factory settings, press the Recall button.



*Note:* If you pressed the Zoom button to enlarge your picture, pressing the Recall button has no effect. Press the Zoom button again to turn off zooming, and then press the Recall button.

## Replacing the factory settings with your own settings

After changing the settings of the monitor, you can permanently replace the original factory settings with your own. Once the monitor is set to your liking, take the point of a ballpoint pen or straightened paper clip and press it into the small hole beside the Zoom button. The original factory settings are then permanently replaced with your current settings.

**IMPORTANT** Once you have stored your settings, you cannot recall the original factory settings. Pressing the Recall button only restores the last settings you stored.

# 4

## 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 long period of time (a day or more), make sure you turn off the computer (and your monitor, if necessary).

To clean the case of the monitor:

- 1 Turn your computer and monitor off.
- 2 Disconnect the monitor's power plug 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 plug 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. Don't spray the cleaner onto the screen, because the liquid may drip inside the monitor.

## 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.

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

**WARNING** Never remove the cover from the monitor, or you may come in contact with hazardous voltage levels.

### **The monitor's power indicator light doesn't come on.**

- Make sure that the power cord is plugged in properly.

*If the monitor power cord is plugged into a wall outlet, make sure the cord is firmly plugged in. Check to see whether power to the outlet has been interrupted. You can test the outlet by plugging in something that you know works—such as a desk lamp or radio. If the test appliance works, but the monitor doesn't, contact an Apple-authorized dealer or service provider.*

*If the monitor power cord is plugged into your computer, make sure your computer is on and the cord is firmly plugged in.*

- Make sure the monitor cable is plugged into your computer properly.

*If you have a video card installed in your computer, the monitor cable should be plugged into the port for the video card.*

*If you do not have a video 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.

### **No image appears on the screen and the monitor's power indicator light is on.**

- Make sure the monitor cable is connected to the correct port on the back of the computer.

*If you have a video card installed in your computer, the monitor cable should be plugged into the port for the video card.*

*If you do not have a video 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 the brightness (☼) and contrast (●) controls are set correctly. See “Adjusting the Brightness of the Picture” and “Adjusting the Contrast of the Picture” in Chapter 3.
- If the power indicator light is yellow, check that your monitor cable is properly connected to the computer. If the cable is properly connected and the yellow light is on, you may need to install a video card in your computer or use an adapter connector. See “Do You Need a Video Card?” in Chapter 1.

### **The screen is dark or appears dim.**

- Make sure that your computer and monitor are turned on.
- Make sure that the power cord and the monitor cable are securely connected at both ends.
- Increase the brightness of the picture. See “Adjusting the Brightness of the Picture” in Chapter 3.
- The Energy Saver option may be activated. Move the mouse or press any key on the keyboard to reactivate the monitor. In approximately 20 seconds (or until you no longer hear the beep), the monitor is reactivated.
- A screen saver that darkens your screen may be activated. Move the mouse or press any key on the keyboard to reactivate the monitor.

### **The screen flickers.**

- Make sure the monitor cable is connected firmly to the correct port on the back of the computer.

*If you have a video card installed in your computer,* the monitor cable should be plugged into the port for the video card.

*If you do not have a video card installed in your computer,* the monitor cable should be plugged into the monitor port on the back of your computer.

- The flickering could be caused by interference from a nearby power line or 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 video card that has a very low 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 video card for more information.

**No colors appear on the screen.**

- Check to make sure that the number of colors is set correctly in the Monitors control panel. See the manuals that came with your computer for more information.

**The screen image is off center.**

- Adjust the center of the picture. See “Adjusting the Center of the Picture” in Chapter 3.

**The screen image is too large or too small.**

- Adjust the horizontal or vertical size of the picture. See “Adjusting the Size of the Picture” in Chapter 3.
- Try changing to another resolution. See “Changing Screen Resolution” in Chapter 2.
- Check to see whether the Zoom button on the monitor’s control panel has been pressed (the zooming indicator light will be on). Press the Zoom button to turn zooming off.

**Before you finish adjusting the monitor controls, the indicator light goes out.**

- If you pause for 10 seconds or more while adjusting the controls, the monitor assumes you are finished.

**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 have a video card installed in your computer, the monitor cable should be plugged into the port for the video card.*

*If you do not have a video card installed in your computer, the monitor cable should be plugged into the monitor port on the back of your computer.*




**After many hours of use, the screen image appears dim.**

- Increase the brightness of the picture to your preference. See “Adjusting the Brightness of the Picture” in Chapter 3.

**Over time, you experience eyestrain.**

- Adjust the screen contrast. In a bright room, contrast is usually best set at maximum; in a dim room, lower contrast is usually more comfortable. See “Adjusting the Contrast of the Picture” in Chapter 3. Also, be sure to take occasional breaks to focus your eyes on a distant object.

**You don’t hear any sound from your computer.**

- If you have connected a sound output cable to the sound output port (marked by ) on the back panel of your computer, the internal speaker is turned off. You will hear sound from the monitor speakers or from headphones connected to the headphone port (marked by ) on the monitor. If you wish to use the computer speaker, it’s best to disconnect the sound output cable from the sound output port (marked by ) on the back panel of your computer.



## Appendix Technical Information

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### Picture tube

- 15-inch diagonal CRT
- Multiple scan
- Resolution range: 640 x 480 to 1024 x 768

### Screen

- 0.28 millimeter (mm) dot pitch

### Input signals

- Red, green, and blue signals; separate sync

### Power saving feature

- Conforms to the Energy Star program of the United States Environmental Protection Agency

### User controls

- Power-on switch
- Automatic degauss at power-up; manual degauss by turning power switch off, then on (capable of full degauss after monitor is turned off for 20 minutes or more)
- Buttons and controls: Reset, Zoom, Recall, Select, brightness, contrast
- Additional picture controls available using the Select button: horizontal and vertical shift, horizontal and vertical size

### Active video image area

- Adjusted at the factory for the following standard modes:

Mode	Resolution	Vertical refresh rate (hertz)	Horizontal scan rate (kilohertz)
VGA	640 x 480	60	31.77
Macintosh	640 x 480	66.67	35.0
SVGA	800 x 600	60	37.9
SVGA	800 x 600	72	48.1
Macintosh	832 x 624	75	49.7
1024 x 768	1024 x 768	70	56.5

### Input electrical requirements

- Voltage 90–134 volts (V), 198–260 V
- Frequency 47–63 hertz (Hz)
- Power 90 watts (W) maximum

### **Weight**

- Approximately 31 pounds (14 kilograms)

### **Dimensions**

- Height                    424 millimeters (mm)  $\pm$  5 mm
- Width                    405 mm  $\pm$  5 mm
- Depth                    452.3 mm  $\pm$  5 mm

### **Interfaces**

- Headphone/Speaker: One input port and one pass-through output port

### **Temperature**

#### **Celsius (C) and Fahrenheit (F)**

- Operating                10° to 40° C (50° to 104° F)
- Storage                    0° to 60° C (32° to 140° F)
- Shipping                  -40° to 65° C (-4° to 151° F)

#### **Humidity (noncondensing)**

- Operating                20% to 95%

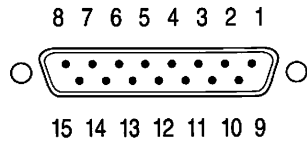
### **Altitude**

- Operating                0 to 10,000 feet (ft.)  
0 to 3000 meters (m)
- Shipping                  0 to 15,000 ft.  
0 to 4500 m



## Monitor 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



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TLX 171-576

030-6309-A  
Printed in Taiwan  
5035111170