

CHAPTER 1-GETTING STARTED

The Apple Color Printer provides a fast, economical way for you to produce high-quality color graphics and text. You can load it with up to 100 sheets of paper or 5 envelopes at a time (use the special paper that comes with the Apple Color Printer for best results). You can use paper up to 11 inches wide and 17 inches long. And if your Macintosh computer is connected to a network, you can share your printer with other users.

The software that comes with the Apple Color Printer includes ColorSync, a control panel that adds color-matching capabilities to Macintosh computers that can display colors. ColorSync is automatically installed on your Macintosh when you follow the directions in this chapter.

The Apple Color Printer works with Macintosh computers that use system software version 7.0 or later. You must have a hard disk drive with at least 4 megabytes (MB) of available space in order to use the Apple Color Printer. If you're new to the Macintosh, read the books that came with your computer before proceeding. You'll need to know basic operations and vocabulary before you set up and print with the Apple Color Printer.

Your Apple Color Printer works with all fixed-size and TrueType fonts. TrueType allows you to display and print fonts smoothly in virtually any size. A number of TrueType font families (typefaces) are included on the disks that came with your printer. These fonts are automatically installed on your Macintosh when you follow the directions in this chapter. For more information about using fonts, see the books that came with your Macintosh or with your latest system software update.

Important safety instructions

Read all the instructions in this chapter carefully before you plug the Apple Color Printer into an electrical outlet.

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

- Follow all instructions and warnings dealing with your system.
- Keep the Apple Color Printer away from sources of liquids, such as wash basins, bathtubs, and shower stalls.
- Protect the Apple Color Printer from dampness or wet weather, such as rain and snow.
- Don't use devices that produce open flames, such as Bunsen burners or welding torches, near the Apple Color Printer.
- Don't use ammonia-based or alcohol-based cleaners, which can react chemically with the plastic, on or around the Apple Color Printer.
- Don't drink or swallow the ink. It's not toxic, but it's not for human consumption. Keep ink cartridges away from children.
- Avoid getting ink on your clothes. The ink will eventually wash off your hands, but stains on fabrics or clothing are permanent.
- Keep these instructions handy for reference.

!! WARNING: Electrical equipment may be hazardous if misused. Operation of the Apple Color Printer or of 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. !!

Watch for these situations and if one occurs pull the plug!

If you encounter any of these circumstances, disconnect the power plug immediately! (Pull the plug, not the cord.)

- the power cord or plug is frayed or otherwise damaged
- you spill anything into the case
- the Apple Color Printer is exposed to rain or any other excess moisture
- the Apple Color Printer has been dropped, or the case has been otherwise damaged
- you suspect that the Apple Color Printer needs servicing or repair
- you plan to clean the printer

If you suspect your Apple Color Printer is damaged, see the information about service and support that came with it.

Do You Have What You Need?

If you haven't already done so, unpack your printer and the accessory kit that came with it. Be sure you have these items:

Paper guard

Output tray

Apple Color Printer

Power cord

Coated paper

Apple Color Printer documentation

Apple Color Printer software

To connect the printer to your Macintosh computer you also need an Apple Small Computer System Interface (SCSI) cable and a SCSI cable terminator. You can purchase these items from an authorized Apple dealer or service provider. (Be sure to get a SCSI cable terminator that's compatible with your Macintosh. For example, the Macintosh IIfx requires a special terminator.)

Set Up Your Apple Color Printer

To set up your Apple Color Printer in an appropriate location, follow these steps:

1. Choose a location for the printer.

Pick a location near your Macintosh computer that has a grounded electrical outlet and good ventilation, is out of direct sunlight, and never gets damp, very hot, or very cold. The printer works best at

- temperatures between 59 and 86 Fahrenheit (15 and 30 Celsius)
- relative humidity between 10 percent and 70 percent

See Appendix A, "Specifications," for more specific information about the physical requirements of the printer.

2. Remove all the packing material from the printer.

Look for tape on the exterior, clear plastic film on the control panel, and packing foam in the interior.

3. Attach the output tray to the back of the printer.

The output tray snaps into place.

If you want, install the paper guard on top of the output tray. Hold the paper guard so the top edge curves up. Snap the ends of the paper guard into the holes on the sides of the output area.

4. Open the paper tray and the black top cover as shown, then unlock the carriage.

Slide the switch down to unlock the carriage.

Close the top cover. You are now ready to connect the printer to your Macintosh.

Connect the Apple Color Printer to your Macintosh

To complete this procedure you need a SCSI cable and a SCSI cable terminator. To avoid problems, use high-quality shielded cables (available from Apple). There are three types of SCSI cables:

- A SCSI system cable connects a SCSI device directly to the Macintosh.
- A SCSI peripheral cable connects one SCSI device to another.
- A SCSI cable extender connects a SCSI cable to a SCSI device that the cable can't reach.

!! WARNING: Before you connect the Apple Color Printer to your Macintosh, make sure both the printer and the computer are turned off. If the power is on while you connect or disconnect SCSI cables, the computer and SCSI devices could be damaged. !!

1. Use the SCSI cable to connect the printer to your Macintosh (or to a SCSI device connected to the computer).

2. Attach the SCSI terminator to the printer (or to the last SCSI device in the SCSI chain).

The next three illustrations show where the cables and terminators go when

you connect the printer directly to the Macintosh, or to another SCSI device that's connected to the Macintosh.

Tighten the thumbscrew gently.

Devices connected with a cable extender in the chain

SCSI terminator

To secure the connection, flip the diamond-shaped wire clips toward the cable, snapping them into place.

Devices connected without a cable extender

For more information about connecting SCSI devices to your Macintosh, see the documentation that came with your computer.

3. Make sure each SCSI device connected to your Macintosh has a different ID number.

The SCSI ID of the Apple Color Printer is set to 4. If another connected SCSI device is also set to 4, change the ID of that device, or change the ID of the printer. To change the printer's SCSI ID number, see Appendix B, "Control Panel Functions." To find out how to change the SCSI ID of another device, see the documentation that came with it.

Plug in and turn on the Apple Color Printer

Connect the power cord to the Apple Color Printer first, then plug the other end of the cord into a grounded electrical outlet.

!! WARNING: This equipment is meant to be electrically grounded. Do not defeat the purpose of the grounding plug! The Apple Color Printer is equipped with a three-wire grounding plug -- a plug that has a third (grounding) pin. This plug fits only a grounding-type AC outlet. If you are unable to insert the plug into an outlet, contact a licensed electrician to replace the outlet with a properly grounded one. !!

Turn on the equipment in this order:

1. Turn on the Apple Color Printer.
2. Turn on any other SCSI devices connected to the Macintosh.
3. Turn on the Macintosh.

Press I to turn the printer on. The marks on the switch represent the binary character 0 for off and 1 for on.

When you turn on the printer, it takes a few moments to warm up. (The very first time you turn it on, the warm-up period may take a minute or more.) When it is ready, the green On Line light glows steadily and the Ready message appears in the control panel display.

After the printer warms up, the Ready message appears.

Load Paper into the Paper Tray

For best results, load the printer with the special coated paper that came with it. You can also use plain paper (the type you'd use in a copier, for example). To load paper, follow these steps:

1. Insert a stack of paper as shown.

Make sure the edges of the stack line up evenly.

2. Adjust the movable paper guide so that it just touches the edge of the stack of paper.

Your Apple Color Printer is ready to use. Next you need to get your Macintosh ready by installing the software that lets it communicate with the Apple Color Printer.

Print a Test Page

You can print a test page now, if you wish. To print a test page, you use the printer's control panel. See Appendix B, "Control Panel Functions."

Install Your Printer Software

Before you install the printer software, you need to protect the original disks by locking them and making backup copies. Follow these steps:

1. Lock the disks that came with your Apple Color Printer.
2. Make a backup copy of each disk.

You can find instructions for copying disks in the books that came with your Macintosh. You'll need a blank 800 kilobyte (K) floppy disk for each disk you want to copy.

Using the Installer

The Apple Color Printer comes with a program called the Installer that installs printer software onto your hard disk. Follow these steps to install the software:

1. Insert the Apple Color Printer Installation disk into a floppy disk drive.

The disk's icon appears on the desktop.

2. Open the disk by double-clicking its icon.
3. Open the Installer by double-clicking its icon.

When you open the Installer, it displays information about the files to be installed. Click OK.

!! IMPORTANT: If you see a message that the Installer cannot install the printer software, you must upgrade your system software to version 7.0 or later before proceeding. You can purchase a system software upgrade kit from an Apple dealer, or you can get the software for a small fee from a local user group. Call Apple at (800)538-9696 to find a user group near you. !!

4. Click the Install button.

The Installer takes a few moments to calculate what needs to be done and then begins to copy files. The whole process may take several minutes.

5. When the Apple Color Printer Installation disk is ejected, follow the instructions you see on the screen.

You'll have to swap disks a few times. Each time, the Installer ejects one disk and asks you to insert another. Keep following the instructions on the screen until the installation is complete.

Choosing a Printer

Before you use your Apple Color Printer for the first time, you must use the Chooser to let the Macintosh know what printer you want to use.

1. Choose the Chooser from the Apple menu.

The Chooser window opens. (Your Chooser may not look exactly like the illustration, but it should contain the same elements.)

2. Set the Chooser options as shown here:

- 1 Click the Apple Color Printer icon.
- 2 Click the SCSI icon.

3. Click the close box.

The Chooser closes.

!! IMPORTANT: You don't need to use the Chooser every time you print. If the Apple Color Printer is the only printer you're using, this should be the only time you need to use the Chooser to choose the printer. !!

When you have selected the printer in the Chooser, you are ready to start using your Apple Color Printer. Turn to Chapter 2.

CHAPTER 2-USING YOUR APPLE COLOR PRINTER

When your printer is set up (turned on, loaded with paper, and selected in the Chooser), you are ready to print. Printing can be as simple as choosing Print from the File menu. Optionally, when you want to or need to, you can make changes to parts of the printing process. You can:

- load the printer with different kinds of paper, envelopes, or other material

- change your page setup (page size, orientation, and scale)

- choose different printers in the Chooser

- for color documents, set up ColorSync color matching to best print the kinds of color images in your document

If your computer is connected to other Macintosh computers over a network, you can also:

- share your printer with other users on the network
- use a printer someone else has shared on the network

This chapter tells you how to do all of these things.

Getting Help

If you need more information about the choices presented on your screen when you use your Apple Color Printer, click the Help button when you see it. You can also choose Show Balloons from the Help menu.

When you see this button, click it for more information.

Choose Show Balloons from the Help menu.

Overview of the Apple Color Printer

Use the illustration below as a guide to the parts of the printer you need to use.

- Extension tray -- pull out the extension tray when you load the paper tray with paper longer than 11 inches.
- Paper guide -- when you load paper, slide the guide so that it just touches the edge of the paper. The guide ensures that the paper will feed correctly into the printer.
- Paper load marks -- never stack paper higher than the line marked with the type of paper you're using.
- Carriage lock -- make sure the carriage lock is in the unlocked position whenever you use the printer. Lock the carriage only when you move the printer.
- Head position lever -- move the head position lever to the setting indicated by the label under the printer's cover. Leave the lever in position 1 for normal use. For dense graphics (graphics that will need lots of ink), use position 2. Move the lever to position 3 to print on envelopes or heavy (thick) materials.
- Control panel -- the lights and display on the control panel indicate when the printer is on, when it is working, and when certain problems occur. The green On Line light blinks when the printer is printing. You do not need to use the buttons on the control panel in most cases. However, you can use the control panel to change the SCSI ID number, to print a test page, and for other operations. See Appendix B for more information about the control panel.

Loading the Paper Tray

The paper tray holds up to 100 sheets of 20-lb. paper. You can use coated paper (the kind that came with the printer), plain paper, letterhead, or three-hole punched paper. If you use thicker paper, fewer sheets will fit in the paper tray.

!! IMPORTANT: If you use plain paper, its weight should be between 16 and 24 lb.; 20-lb. cotton bond paper is recommended. !!

You can load other materials into the paper tray, including transparencies (one at a time), labels, heavy (thick) paper (up to 28 lb.), and up to 5 business envelopes. Before you load envelopes or thick paper into the paper tray, move the head position lever to position 3.

!! IMPORTANT: Insert only one kind of material at a time into the paper tray. !!

To load the paper tray, follow these steps:

1. If necessary, pull out the paper tray extension.

Use the paper tray extension for paper longer than 11 inches.

2. If necessary, move the head position lever to a different setting.

Use position 1 for normal printing, position 2 for printing graphics that require lots of ink, and position 3 for printing on envelopes or other thick materials.

Envelopes or very thick materials

Dense graphics

Normal

3. Load a stack of paper or other material into the paper tray.

Move the adjustable guide so that it just touches the edge of the stack.

Note: For best results, crease the leading edge of envelopes, as shown, before you load them into the paper tray.

Choosing a Printer

Before you use your Apple Color Printer for the first time, you must use the Chooser to let the Macintosh know what printer you want to use. (If you followed all the steps in Chapter 1, you have already completed this procedure.)

1. Choose the Chooser from the Apple menu.

The Chooser window opens. (Your Chooser may not look exactly like the illustration, but it should contain the same elements.)

2. Set the Chooser options as shown here:

- 1 Click the Apple Color Printer icon.

- 2 Click the SCSI icon.

3. Click the close box.

The Chooser closes.

!! IMPORTANT: You don't need to use the Chooser every time you print. If the Apple Color Printer is the only printer you're using, you probably won't

have to choose it in the Chooser again. !!

Defining Your Page Setup

You use Page Setup to choose the page size you want, the orientation of the page, and the scale (magnification or reduction) of the text or images you print. The most frequently used options are preset for you; you use Page Setup only if you want to change those settings. To change your printing options in the Finder or in an application program, follow these steps:

1. Choose Page Setup from the File menu.

The Page Setup dialog box appears. The dialog box you see may not look exactly like the one shown here, but all Page Setup dialog boxes have many features in common.

2. In the dialog box, make the selections you want.

To make your document print larger or smaller, type or choose a percentage.

Choose a page size from this pop-up menu.

Click here for more information.

This picture changes to indicate your choices.

Click one of these icons to choose normal (portrait) or sideways (landscape) orientation.

Choose the page size you want from the Page Size pop-up menu.

Use the Scaling feature to print your document larger or smaller than normal. Use the pop-up menu to choose a preset reduction percentage, or type a percentage from 5 to 999 in the Scaling box. The percentages listed on the pop-up menu give the best results for printing smaller than 100 percent.

The Orientation icons allow you to print your document in normal (portrait) or sideways (landscape) orientation.

3. When you've made your choices, click OK.

Your document is now set up to be printed.

Printing

You can print documents from within the application programs you used to create them. You can also print documents from the Finder desktop. And with a feature called background printing, you can keep using your Macintosh computer while your documents are being printed.

Printing from within a program or from the desktop

To print a document from within an application program, or from the Finder desktop, follow these steps:

1. Select the document you want to print.

Within an application program, open a document or create a new one.

In the Finder desktop, click to select the icon of the document you want to print.

2. Choose Print from the File menu.

In most cases a Print dialog box appears, with options for printing your document. The dialog box may not look exactly like the one shown here, but it will have the options shown in this one.

Type the number of copies you want in this box.

Click Color to change ColorSync color matching.

Choose Draft for speed, Best for higher quality.

Use this pop-up menu to choose Color/Grayscale or Black & White printing.

Choose the type of material you loaded into the printer.

You can choose:

- the number of copies to print
- the range of pages to print
- Draft quality for faster printing with lower quality or Best quality for finest quality at slower speed
- the type of material you loaded into the printer (plain or coated paper, or transparencies)
- Color/Grayscale or Black & White, to match the type of images in your document (use Black & White for text)
- the notification you want when your document is printed (you can choose to be notified by an Alert message that appears on your screen or by a sound)

3. If you want to change ColorSync color matching, click Color.

The Options dialog box appears.

Choose Default for most documents, Custom to make specific adjustments, or None for no color matching.

When the settings are the way you want, click OK.

Use this pop-up menu to choose the method of color matching that's best for your document.

Use this pop-up menu to specify settings for your printer (for example, coated paper).

Choose None when you do not want ColorSync to make any adjustments, to the color in your document.

Choose Default Color Matching for most color documents. Default adjust the

lightness of colors so the shades look like the original shades of color.

Choose Custom Color Matching to adjust the color matching method using the Matching method pop-up menu. When you use Custom Color Matching, ColorSync adjusts the lightness, the hues (tints), and saturation (vividness of the colors in your document).

- Photographic matching adjusts whites to match the white of paper, and reduces saturation. Colors may become slightly less vivid, but may be more realistic.

- Solid Color matching adjusts whites to match the white of paper, and increases saturation. Colors may become more vivid or vibrant. Colors may become more vivid or vibrant.

- Source Tint matching works by adjusting whites to match the source of your document. The white shown on a color monitor, for example, contains more blue than the white of paper.

Use the Printer Profile pop-up menu when you need to specify a particular type of paper or other material. The Automatic setting sets the profile to what you selected in the Print dialog box (plain paper, coated paper, or transparencies).

4. When the settings are the way you want them, click Print.

Printing while you use your computer

You can print with the Apple Color Printer while continuing to work with one or more programs. This is called background printing. Background printing is automatically turned on when you install your Apple Color Printer software.

!! IMPORTANT: If your Macintosh computer has only 2 megabytes (MB) of random-access memory (RAM), you won't be able to use background printing. If your computer has more than 2 MB of RAM and you have trouble using background printing, turn off the Share this Printer and Background Printing options, or quit one or more of your open application programs. !!

To use background printing, you must turn it on in the Chooser.

1. Choose Chooser from the Apple menu.
2. Click the Apple Color Printer icon.
3. Click the On button under Background Printing.
4. Click the close box.

Once background printing is turned on, it is in effect whenever you print, until you turn it off.

After you click Print in the Print dialog box, a message appears on the screen for a few seconds, then disappears. You can then continue other work. You may notice your Macintosh pause occasionally while it processes the document for printing.

Sharing Your Printer with Other Users on a Network

If your Macintosh is connected to other computers over an AppleTalk network, you can allow other users on the network to print on your Apple Color Printer.

To share your Apple Color Printer with other users, follow these steps:

1. Choose the Chooser from the Apple menu.

The Chooser window opens.

2. Click the Apple Color Printer icon.
3. Click Setup.

The Sharing Setup dialog box opens.

4. Click the Share this Printer checkbox to select it.

If you wish, you can type a name for the printer and a password. If you type a password for the printer, only users who know the password can use the printer from their computers.

5. If you want to keep a record of what is printed on your printer, click the Keep Log of Printer Usage checkbox to select it.

To see what has been printed, you can open and print the log file with the TeachText program, or with a word-processing program. You can find the log file in the Printing Prefs folder. The Printing Prefs folder is in the Preferences folder inside your System Folder.

Note: You can keep a log of your printer usage even if your printer is not shared.

6. Click OK.
7. Click the close box to close the Chooser window.

Other users with Macintosh computers connected to the network can now use your Apple Color Printer (if Apple Color Printer software has been installed on their Macintosh computers as described in Chapter 1).

Note: When other users print on a printer connected to your Macintosh while you are using your computer, you may notice your computer pause occasionally.

Printing on a Shared Printer on a Network

If your Macintosh computer is connected over an AppleTalk network to another Macintosh, and that computer has a connected Apple Color Printer set up to be shared, you can print on that printer. (You must first install Apple Color Printer software on your Macintosh, as described in Chapter 1.)

To Print on a shared printer, follow these steps:

1. Choose the Chooser from the Apple menu.

The Chooser window opens.

2. Click the Apple Color Printer icon.

3. If necessary, click an AppleTalk zone.

If your network does not have zones, the list of AppleTalk Zones does not appear.

Click to select the Apple Color Printer icon.

The available shared printers are listed here.

If your network has zones, click a name to select it.

If you want more information about a shared printer, click here.

4. Click the name of the printer you want to use.

If the printer requires a password, a dialog box appears in which you must type the password.

Note: The fonts you use in your document must be available (installed) on the Macintosh computer that is directly connected to the shared Apple Color Printer. If the fonts you use are not installed, your document may not print properly. Click Get Info for information about fonts available on the shared printer you selected.

5. Close the Chooser window.

You are now ready to print on the shared Apple Color Printer.

Tips for Printing

Try these tips for best results with your Apple Color Printer:

- Coated paper. For best results, use the special coated paper that came with the printer. Additional paper is available from an Apple dealer.

- Large-size paper. When you print on paper longer than 11 inches, take each sheet out of the printer right away. (The output tray is designed for paper no more than 11 inches long.)

- Transparencies. Load only one transparency at a time into the paper tray. Insert the end with the rounded corner first, with the rounded corner on the right. When you print several transparencies, remove each one from the output tray before the next one comes out of the printer. (This eliminates any chance of the ink smearing.)

- Envelopes. Before loading envelopes into the paper tray, crease the top edge to make sure the flap is tightly folded.

CHAPTER 3

MAINTAINING YOUR PRINTER

The Apple Color Printer is designed for trouble-free operation. Maintaining the printer simply means replacing the ink cartridges when they run out, refilling the sheet feeder, and occasionally cleaning the printer and the ink nozzles.

For other service, see the information about service and support that came with your Apple Color Printer.

Safety First

Follow these safety tips to avoid damage to the Apple Color Printer and harm to yourself and other users.

- Don't touch the print head, film bands, or other internal areas of the printer. You can damage delicate mechanical parts.
- Don't shake ink cartridges or hold them with the ink outlet on the bottom. Ink can leak out and cause stains.
- Don't oil the inside of the printer.
- Don't attempt to disassemble the printer.
- Before you unplug the printer, make sure it is turned off. (If the green power light is on, press the power button.) Turning the power off ensures that the carriage has been returned securely to its home position.

Replacing the Ink Cartridges

The ink cartridges last for several hundred pages, depending on the kind of printing you do. If you print a lot of graphic images, you may need to change cartridges more often. A message on your screen or on the printer's control panel tells you when you need a new cartridge (and which one you need).

To replace an ink cartridge, follow these steps:

1. Open the access door at the front of the printer.

Push in an release to open door.

The door flips down.

2. Open the package containing the new ink cartridge and unwrap the cartridge.

Be careful not to touch the sensor area on the new cartridge.

Do not touch these areas.

3. Remove the old cartridge by pulling it straight out.

4. Insert the new cartridge.

Refer to the label on the inside of the ink cartridge door to make sure you put each color cartridge in the correct place.

5. Close the access door.

You have finished replacing the ink cartridge.

Cleaning the Ink Nozzles

If you experience problems with print quality (for example, if you see white streaks in a printed image), cleaning the ink nozzles may improve your results. For more examples of problems you might experience with print quality, see "Image Problems" in Chapter 4, "Troubleshooting."

!! IMPORTANT: Cleaning the ink nozzles consumes a small amount of ink. If you repeat the procedure when you don't have to, you unnecessarily reduce the life of the cartridges. !!

To clean the ink nozzles, start with the printer turned on and the Ready message displayed in the control panel display. Then follow these steps:

1. Press the On Line button.

The green On Line light goes out.

2. Press the Menu button.

The message in the control panel display is Printing.

3. Press the Menu button again.

The message in the control panel display is Cleaning.

4. Press the Enter button.

The message in the control panel display is Cleaning-A.

5. Press the Enter button again.

The message in the control panel display is 08-Cleaning. The cleaning process takes a few moments.

When the cleaning process is finished, the message in the control panel display is Cleaning-A.

6. Press the On Line button.

The green light comes on, and the Ready message appears in the control panel display. You have finished the cleaning process.

Note: If the image problem persists, you may have to repeat this procedure. If it persists after you have cleaned the nozzles two or more times, you may need to use one of the other methods of cleaning the nozzles (the Cleaning-B method or the Flushing method). See Appendix B for instructions on using alternative nozzle cleaning methods.

Cleaning the Exterior

Before you clean the Apple Color Printer, turn it off and unplug the power cord. Then wipe the exterior of the printer with a clean, soft cloth dampened with water. Be careful not to get any liquid in the power cord receptacle.

!! WARNING: Don't use ammonia-based or alcohol-based cleaners on or around the printer -- they may react with the plastic. !!

Cleaning the Interior

Occasionally you may need to wipe off paper dust or spilled drops of ink inside the Apple Color Printer. To clean the inside of the printer, follow these steps:

1. Turn the printer off and unplug the power cord.
2. Remove the top cover by swinging it open and lifting it off.

Do not touch the film band.

3. Carefully wipe the interior with a soft, dry cloth.

Do not touch the plastic film bands.

!! WARNING: Don't use any liquid cleaners or oils inside the printer. !!

CHAPTER 4-TROUBLESHOOTING

This chapter provides solutions to some common problems that you may encounter while using your Apple Color Printer.

As long as you follow the maintenance instructions in Chapter 3, you're not likely to have any problems with your Apple Color Printer. The most common source of trouble is faulty software installation. To avoid these problems, follow the instructions in Chapter 1.

!! WARNING: If you have a problem with your Apple Color Printer and nothing presented in this chapter solves it, see the information about service and support that came with the printer. Do not attempt to repair the printer yourself! !!

Safety Precautions

Follow these safety tips to avoid damage to the Apple Color Printer and harm to yourself and other users.

- Don't touch the print head, film bands, or other internal areas of the printer. You can damage delicate mechanical parts.
- Don't shake ink cartridges or hold them with the ink outlet on the bottom. Ink can leak out and cause stains.
- Don't oil the inside of the printer.
- Don't attempt to disassemble the printer.
- Before you unplug the printer, make sure it is turned off. (If the green power light is on, press the power button.) Turning the power off ensures that the carriage has been returned securely to its home position.

The Chooser Doesn't Show the Apple Color Printer Icon

You use the Chooser desk accessory to identify the printer you intend to use. If the Apple Color Printer icon is missing from the box that identifies different printer types, you probably need to install the appropriate printer software. See the instructions in Chapter 1 for installing your printer

software.

The Macintosh Doesn't Recognize the Apple Color Printer

If you have selected the Apple Color Printer icon in the Chooser, but nothing prints or you get a message that there is no Apple Color Printer connected, one of the following conditions may be the cause:

- The printer has been turned off. Make sure it is plugged in and turned on.
- A plug is loose somewhere. Make sure that all the cables are properly connected. See the instructions in Chapter 1 for setting up your Apple Color Printer.
- If you are trying to use a shared printer connected to another Macintosh, make sure that the computer and shared printer are turned on and connected to the network. Also make sure that the printer is set up to be shared. See the instructions in "Sharing Your Printer With Other Users on a Network" in Chapter 2.
- The printer's SCSI ID number is the same as the SCSI ID of another connected SCSI device. Change the number of one of the devices to another value between 1 and 6. To change the printer's SCSI ID number, see Appendix B.
- There may be a problem with the printer software. Try turning the printer off and then on again.

If you still can't resolve the problem, the printer may not be functioning properly. See the information about service and support that came with your printer.

Text Changes to the Geneva Font

When your Macintosh is low on memory, some fonts may be displayed and printed in the Geneva font. Some text may also look jagged on the edges rather than smooth.

For more information about fonts, and for suggestions on how to free up memory, see the books that came with your Macintosh or with your latest system software upgrade. You can also see an authorized Apple service provider about installing more memory in your Macintosh.

If text changes to the Geneva font when you are printing on a shared printer, the fonts in your document may not be available on the Macintosh computer connected directly to the shared printer. Use only the fonts installed on that Macintosh. For more information, see "Printing on a Shared Printer on a Network" in Chapter 2.

Paper is Jammed

Occasionally a piece of paper may get jammed (stuck) inside the printer during the printing process. To clear a paper jam:

1. If necessary, open the printer to see where the jam is.
2. Clear the jam.

Refer to the next three illustrations to see how to clear a jam that occurs in various areas of the printer.

Paper Feeds Improperly

If paper tears, gets skewed, or comes through the printer crumpled, it may not be entering the printer properly. Try the following steps:

- Make sure you have loaded the paper tray correctly.

See the instructions in Chapter 2 for loading paper.

- Do not overload the paper tray.

The feeder holds up to 100 sheets of 20-lb. paper. If you use heavier paper, fewer sheets will fit in the feeder. Don't insert too much paper in one stack.

- Try to recover any torn or damaged pieces of paper from the printer.

See "Paper Is Jammed" earlier in this chapter.

- Take the paper out of the paper tray and check it.

Try flipping the stack over to print on the other side (most paper has one side that prints better).

Fan the paper to make sure sheets don't stick together.

Make sure none of the sheets are bent or dog-eared.

Make sure the edges of the stack line up evenly.

The Apple Color Printer Won't Print a Particular Document

If you attempt to print a document and no page is printed, try the following steps:

- Check for messages on your Macintosh screen.
- Check the printer.

Does it have paper? (To load paper, see Chapter 2.)

Is the paper jammed? (To clear a jam, see "Paper Is Jammed" earlier in this chapter.)

Do the lights or control panel display indicate a problem? (To check the lights, see the next section.)

- Repeat the printing process.

Sometimes problems disappear when you try to print your document again.

- If you used the control panel to change settings, make sure you changed the settings correctly.

Some of the options you can set with the control panel will make it

impossible to print from your Macintosh computer. If you use the control panel, be sure to follow the instructions in Appendix B, "Control Panel Functions." To see if the settings are correct, use the instructions in Appendix B to print test page A. The settings on the test page should include these:

Printing Mode = Mode-A
 Interface Select = SCSI
 Dump Mode = DUMP OFF

The Lights or Control Panel Display Indicates a Problem

Sometimes the lights on the printer can signal a problem. The following list describes these indications and tells what you should do about them.

Note: When the green On Line light is flashing, it indicates the printer is printing; it does not indicate a problem.

- Both lights are off. Check to make sure the power cord is plugged in properly and the printer is turned on. Make sure there is power to the outlet. If the lights stay off, see the information about service and support that came with the printer.

- The Alarm light glows steadily. Either the printer is out of paper or paper has been misfed. Check your Macintosh screen and the printer's control panel display for messages. See Chapter 2 for instructions on loading the paper tray, or "Paper Is Jammed" and "Paper Feeds Improperly" earlier in this chapter.

The control panel display can also indicate problems. The following list describes the problems that the control panel can indicate, and tells you what you should do about them.

Message	Possible Cause	What to do
10 CHECK PAPER	Printer is out of paper. Paper is not inserted correctly.	Insert new paper. Adjust paper.
12 COVER OPEN	Top cover is open.	Close the cover.
13 CHECK PAPER	Paper is jammed. Printer is dirty.	Clear the jam. Clean the interior (see Chapter 3).
14 NO INK CART	One or more ink cartridges are incorrectly installed.	Make sure ink cartridges are properly installed in the correct positions.
16 NO BLACK INK	Black ink cartridge is empty.	Replace the black ink cartridge.
16 NO YELLOW INK	Yellow ink cartridge is empty.	Replace the yellow ink cartridge.
16 NO MAGNTA INK	Magenta ink cartridge is empty.	Replace the magenta ink cartridge.

16 NO CYAN INK

Cyan ink cartridge
is empty.

Replace the cyan ink
cartridge.

Special service messages

If the printer needs service, the control panel display will display a number from 40 to 87 and the word Service. When a service message appears, the Alarm light may light, and the printer may beep for a few seconds.

If you see a service message, turn the printer off, wait five seconds, and turn it back on. If the service message is still there, make a note of the number displayed in front of the word Service. Then refer to the information about service and support that came with your printer.

Image Problems

Most of these result from problems with an ink cartridge or with your choice of paper. Here is a list of papers to avoid:

- erasable typing paper
- damaged or wrinkled paper
- stapled paper
- multipart forms

For best print quality, use the type of coated paper that came with your printer. If you use plain paper, use 16-lb. to 24-lb. cotton bond paper.

Image is too light or too dark

If printing looks fuzzy because it's too light or too dark, try the following:

- Clean the ink nozzles. If this doesn't help, replace one or more ink cartridges. See "Cleaning the Ink Nozzles" and "Replacing the Ink Cartridges" in Chapter 3 for instructions.
- If the problem occurs on nonstandard paper, try printing on the recommended coated paper.
- Try flipping the stack of paper in the paper tray. Most paper has one side that prints better.
- Make sure that the head position lever is set to the correct position. See "Loading the Paper Tray" in Chapter 2.

Ink smears when rubbed

Don't handle pages before they are completely ejected from the printer and are delivered into the output tray. This allows all the time needed for the ink to dry.

Printing appears on only part of the paper

Make sure you have selected the appropriate paper size in the Page Setup

dialog box.

The ink nozzles may need to be cleaned, or a cartridge may be empty. See "Cleaning the Ink Nozzles" and "Replacing the Ink Cartridges" in Chapter 3 for instructions.

A page prints off center or images are out of place

This problem may be a result of one of the following conditions:

- You may have selected the wrong page size in the Page Setup dialog box.
- The margins may be set incorrectly in the document you are printing.
- The paper tray is too full.
- Paper is not placed properly in the paper tray. See "Paper Feeds Improperly" earlier in this chapter.
- You are not using the recommended paper (16-lb. to 24-lb. cotton bond).

Nothing prints on the paper

If you get a blank page, clean the ink nozzles. See "Cleaning the Ink Nozzles" in Chapter 3.

Unwanted lines or stripes appear

If white lines appear on the page, try the following:

- Clean the ink nozzles. See "Cleaning the Ink Nozzles" in Chapter 3.
- Replace one or more ink cartridges. See "Replacing the Ink Cartridges" in Chapter 3.

Stains appear on printed pages

If stains appear on the backs or tops of printed pages, it may mean that there is ink inside the printer. If so, the ink can transfer to the paper.

Turn the printer off and unplug it. Then remove the top and carefully clean the interior with a soft, dry cloth.

Do not touch the film band.

Image prints wavy or distorted

Make sure you are using the recommended coated paper. Check the setting of the head position lever. If the problem persists, see the information about service and support that came with the printer.

APPENDIX A-SPECIFICATIONS

Marking engine

- Thermal ink jet

Resolution

- 360 dots per inch (dpi) for text and graphics (180 dpi in draft mode)

Speed

- Printing speed depends on the images printed and on the Macintosh used.

Interfaces

- 50-pin SCSI
- 36-pin parallel

Paper feed

- Automatic sheet feeder holds up to 100 sheets of 20-lb. (75 g/m²) paper or 5 envelopes.

Printing materials

- Apple recommends coated paper :
 - A4 coated paper T0545G/A
 - Letter coated paper T0546G/A
 - A3 coated paper T0547G/A
 - Legal coated paper T0548G/A
 - Ledger coated paper T0549G/A
- Plain paper: You can use 17-lb. (64 g/m²) to 24-lb. (90 g/m²) paper.
- Accepts most letterhead and colored stock.
- Accepts medium-weight photocopier labels.
- Use #10 envelopes: 243.5mm x 105.8mm (9.5" x 4.125").
- Apple recommends Apple transparency film:
 - A4 OHP film T0550G/A
 - Letter OHP film T0551G/A

Paper sizes

- U.S. letter: 215.9mm x 279.4mm (8.5" x 11")
- U.S. legal: 215.9mm x 355.6mm (8.5" x 14")
- Ledger: 279.4mm x 431.8mm (11" x 17")
- A4: 210mm x 297mm (8.3" x 11.7")
- A3: 297mm x 420 mm (11.7" x 16.5")
- #10 envelopes: 241.3mm x 104.8mm (9.5" x 4.125")

Dimensions

- Height (without output tray): 169mm (6.7")

- Width: 520mm (20.5")
- Depth (paper tray closed): 410mm (16")

Weight

- Approximately 10 kg (22 lb.)

Ink Cartridges

- Black ink cartridge: M6901G/A
- Yellow ink cartridge: M6902G/A
- Magenta ink cartridge: M6903G/A
- Cyan ink cartridge: M6904G/A

Operating environment

Temperature

- 15° to 30° C (59° to 86° F)

Humidity

- 10 percent to 70 percent, noncondensing

Other

- Keep the printer away from wind, fans, and air conditioners.

Storage environment

Temperature

- 30° to 60° C (-22° to 140° F)

Humidity

- 10 percent to 95 percent, noncondensing

Input electrical requirements

U.S./Canada

- 120 VAC, 60 Hz, 1.0 A

UK/Australia

- 240 VAC, 50 Hz, 0.5 A

Europe

- 230 VAC, 50 Hz, 0.5 A

Power consumption

Operating

- 48 W maximum

APPENDIX B-CONTROL PANEL FUNCTIONS

In most circumstances you do not need to use the printer's control panel; the printer's functions are controlled by your Macintosh computer. However, you can use the control panel to perform a number of functions, including printing test pages, cleaning the ink nozzles in several different ways, and changing the printer's SCSI ID.

!! WARNING: Some of the options you can set with the control panel can make the printer unable to communicate with your Macintosh computer. If you change settings with the control panel, carefully follow the instructions in this appendix. !!

About the control panel

The control panel has a liquid-crystal display, an amber Alarm light, a green On Line light, and five buttons.

To use the control panel, you always start with the printer turned on and the green On Line light lit. When you press the On Line button, the green light goes out. You can use the buttons in the sequences explained later in this appendix to send commands to the printer.

Printing test pages

The Apple Color Printer can print two different test pages and a nozzle check page. Start with the printer turned on and the green On Line light lit.

To print test page A, follow these steps:

Step	Press	Message Displayed
1	On Line	00 READY
2	Menu	PRINTING MODE
3	Menu	CLEANING
4	Menu	TEST PRINT
5	Enter	TEST PRINT-A
6	Enter	01 TEST PRINT

Test page A prints.

To print test page B, follow these steps:

Step	Press	Message Displayed
1	On Line	00 READY

2	Menu	PRINTING MODE
3	Menu	CLEANING
4	Menu	TEST PRINT
5	Enter	TEST PRINT -- A
6	Menu	TEST PRINT -- B
7	Enter	01 TEST PRINT

Test page B prints.

To print the nozzle check page, follow these steps:

Step	Press	Message Displayed
1	On Line	00 READY
2	Menu	PRINTING MODE
3	Menu	CLEANING
4	Menu	TEST PRINT
5	Enter	TEST PRINT-A
6	Menu	TEST PRINT-B
7	Menu	NOZZLE CHECK
8	Enter	01 TEST PRINT

The nozzle check page prints. You can use the nozzle check to determine whether the nozzles need to be cleaned. If the nozzle check pattern looks like the top patterns, the nozzles do not need to be cleaned. If you see gaps in the lines (like those in the bottom pattern), you should clean the nozzles.

Nozzle status OK

Clean nozzle again

Cleaning the ink nozzles

There are four ways to clean the ink nozzles. The printer automatically cleans the nozzles when you turn it on. You can also choose among three methods of cleaning the nozzles. Clean the nozzles only when the nozzle check indicates that it's necessary; cleaning uses ink and reduces the life of the ink cartridges. The three methods use increasing amounts of ink:

- Cleaning-A uses the least amount of ink, and fixes minor clogs.
- Cleaning-B takes longer and uses considerably more ink. Use Cleaning-B only after you've tried Cleaning-A at least twice.

- Flushing takes four minutes and uses a great deal of ink. Use Flushing only when you see wide variations in print quality on a single page.

To clean the nozzles with Cleaning-A, follow these steps:

Step	Press	Message Displayed
1	On Line	00 READY
2	Menu	PRINTING MODE
3	Menu	CLEANING
4	Enter	CLEANING-A
5	Enter	CLEANING

After cleaning is finished, the CLEANING-A message reappears. Press the On Line button.

To clean the nozzles with Cleaning-B, follow these steps:

Step	Press	Message Displayed
1	On Line	00 READY
2	Menu	PRINTING MODE
3	Menu	CLEANING
4	Enter	CLEANING-A
5	Menu	CLEANING-B
6	Enter	CLEANING

After cleaning is finished, the CLEANING-A message reappears. Press the On Line button.

To clean the nozzles with the Flushing method, follow these steps:

1. Start with the printer turned off.
2. Holding down the On Line, Enter, and < buttons at the same time, turn the printer on.

After a moment, a pattern of black squares appears in the display. Then the message 08 FLUSHING appears.

The flushing process takes 4 minutes. When it's done, the 00 READY message appears.

!! WARNING: The flushing process consumes a great deal of ink and reduces the life of the ink cartridges. Use this procedure only after trying the other two cleaning methods. !!

Changing the printer's SCSI ID

To change the printer's SCSI ID number, turn off the Macintosh computer and the printer. Disconnect the printer from the Macintosh, then turn the printer on.

!! WARNING: Before you disconnect the Apple Color Printer from your Macintosh, make sure both the printer and the computer are turned off. If the power is on while you connect or disconnect SCSI cables, the computer and SCSI devices could be damaged. !!

When the printer is turned on and disconnected from the computer, follow these steps to change the SCSI ID:

Step	Press	Message Displayed
1	On Line	00 READY
2	Menu	PRINTING MODE
3	Menu	CLEANING
4	Menu	TEST PRINT
5	Menu	DUMP MODE
6	Menu	INTERFACE SELECT
7	Enter	SCSI
8	Enter	ID#=(the current number)

When you see the message ID#=..., the number increases by 1 when you press Menu, and decreases by 1 when you press <. Use Menu or < to choose the number you want.

9	On Line	SAVE NVRAM=YES
10	On Line	00 READY

You have changed the SCSI ID number (it will stay the same until you change it again). Turn the printer off (make sure the computer is still turned off as well) and reconnect the printer to the Macintosh.

Other functions

While you can use the control panel buttons to select many other printer functions, most of these functions will not have any effect when you use the printer with a Macintosh computer. Some of the functions may cause problems.

The following chart shows the available functions, the control panel display associated with each function, and the settings available for the function.

Printing Mode

This procedure has no effect on printing from a Macintosh computer.

Selects among the following printing modes:

- Mode A: normal (this is the default setting)

- Mode B: transparency film
- Mode C: enhanced black
- Mode D: high-density graphics
- Mode E: high-speed

Cleaning

Selects among two methods of nozzle cleaning.

- Cleaning-A: faster, uses less ink
- Cleaning-B: slower, uses more ink, cleans more completely

Test Print

Selects among two test pages and one nozzle check page.

- Test Print-A: color bars, current printer settings, character modes
- Test Print-B: color chart
- Nozzle Check: series of test patterns

Dump Mode

Switches from character printing to hexadecimal dump mode.

- Dump off: normal character printing is on (this is the default setting)
- Dump on: hexadecimal mode is on

!! WARNING: When dump mode is on, you cannot use the Apple Color Printer with a Macintosh computer. !!

Interface Select

Switches between SCSI and parallel interfaces.

- SCSI: the SCSI interface is activated. Press Enter to select the SCSI ID number.
- Parallel: the parallel interface is activated. Press Enter to specify BSY Timing and ACK width.

!! WARNING: When the parallel interface is selected, you cannot use the Apple Color Printer with a Macintosh computer. !!

Country Code

Selects the language used for the messages in the control panel display.

- Danish, Dutch, English (the default setting), Finnish, French, German, Italian, Japanese, Norwegian, Portuguese, Spanish, Swedish

NVRAM Initialize

Returns the printer to the original factory settings (any changes made with the control panel are deleted).

- Init. No: NVRAM will not be initialized (this is the default setting).
- Init. Yes: NVRAM will be initialized when you press the Enter button.

Media Select

Adjusts the printer for the thickness of the paper you use.

- Normal paper: this is the default setting.
- Envelope/Thick: used for envelopes and thick paper. This does not take the place of adjusting the head position lever.