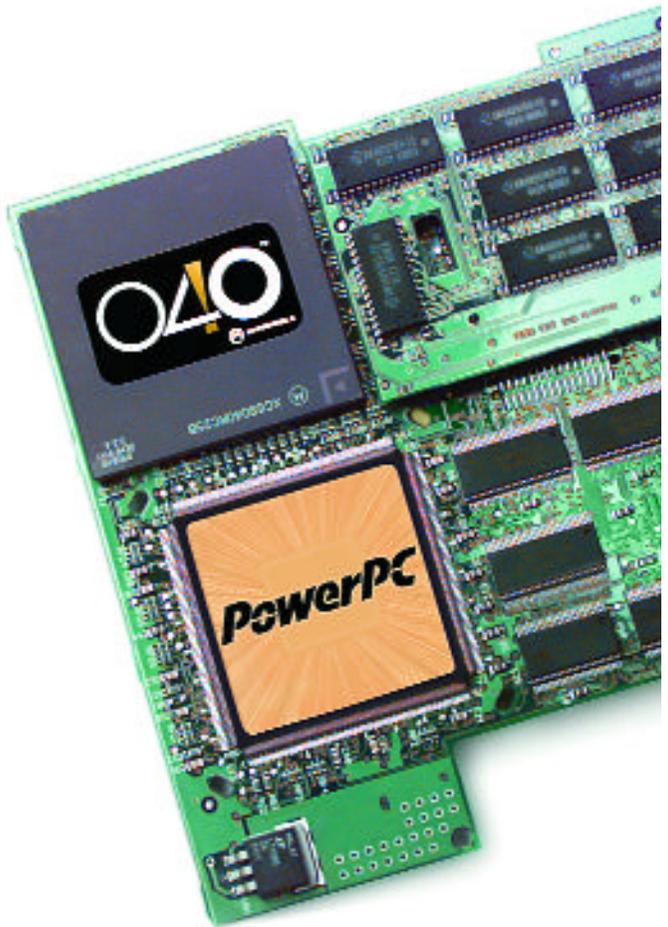


POWERCARD™ 601

P O W E R P C U P G R A D E C A R D



PLEASE NOTE:

The PowerCard is a discontinued product, support is limited to original owner warranty support via DayStar's web site at <http://daystar.com>



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About the PowerCard 601

About PowerPC

About the PowerCard 601

PowerCard 601 software

Complete the warranty card

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About this manual

About PowerPC

The PowerPC is a family of high performance processors developed by Apple, IBM and Motorola. The PowerPC follows a Reduced Instruction Set Computer (RISC) architecture that provides significantly greater performance than the Complex Instruction Set Computer (CISC) architectures found in the original Apple Macintoshes and IBM compatibles.

Applications must be written with the PowerPC in mind to fully utilize its performance capability. Such software is referred to as being “native,” because it is written in the PowerPC’s native language. When running older, non-native software on a PowerPC-equipped machine, it must run in a slower “emulation” mode. This will result in performance comparable to a 68040 Macintosh.

About the PowerCard 601

The PowerCard 601 was designed in a partnership between DayStar Digital and Apple Computer. The PowerCard 601 includes ROMs (Read Only Memory) licensed from Apple for maximum compatibility. The PowerCard 601 also comes standard with a 256K Level 2 cache that allows the card to operate at the maximum possible performance. The PowerCard 601 supports multiple Macintosh models, including the Quadra 605, 630 series, LC 470 series, 570 series, 580 series, 630 series, Performa 470 series, 570 series and 630 series.

The PowerCard 601 provides a simple plug and play installation. Pop in the card and run the system installer to update your software automatically. It’s that easy!

The 100 MHz PowerCard 601 runs at 100 MHz in all of the supported machines. The 50/66 MHz PowerCard 601 runs at a speed that is equal to two times the clock speed of the Mac into which it is installed:

Macintosh Family	Motherboard speed	50/66 MHz PowerCard speed	100 MHz PowerCard speed
Quadra 605, LC 470 series and Performa 470 series	25 MHz	50 MHz	100 MHz
Quadra 630 series, LC 570, 580 and 630 series and Performa 570, 580 and 630 series	33 MHz	66 MHz	100 MHz

The PowerCard 601 gives users the best of both worlds. Native applications can run at full speed using the board's PowerPC processor. Additionally, when applications run slower than 68040 speeds in emulation mode, you can disable the PowerCard 601 and use the motherboard's 68040.

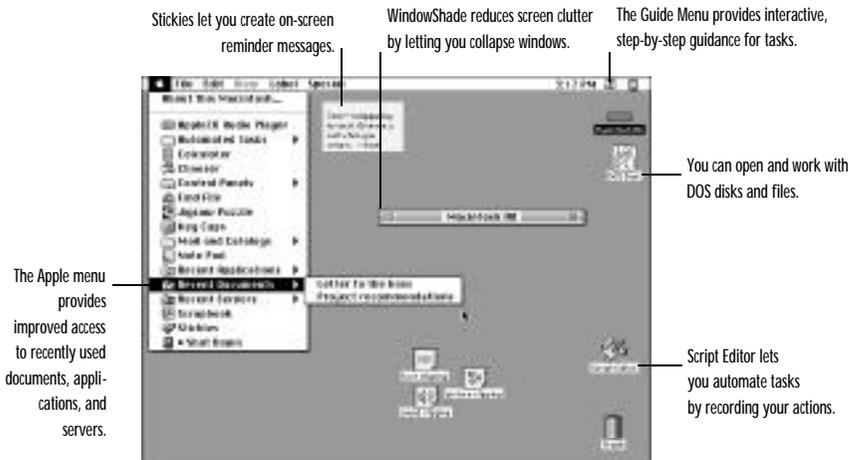
The PowerCard 601 supports Insignia Solutions' SoftWindows, which allows users to run Windows or DOS applications at up to 80486 speeds.

NOTE: You will not be able to use the processor direct slot (PDS) after the PowerCard 601 is installed.

ALSONOTE: We recommend that you remove the PowerCard 601 before shipping or transporting your Macintosh.

System Software 7.5

System 7.5 includes new features that enhance productivity and make it easier to work with other users. System 7.5 provides better compatibility with DOS and Windows files and disks, the ability to move information by dragging and dropping, step-by-step guidance for learning and completing tasks, and the ability to automate tasks. You also get Finder enhancements, such as submenus for the Apple menu, a menu-bar clock, more colorful screen patterns, an improved Find File command, automatic tracking of recently used items and on-screen notes.



NOTE: It is recommend that you have at least 8 megabytes (MB) of random access memory (RAM) and 20 MB of hard disk space to install System 7.5.

PowerCard 601 Software

The PowerCard 601 requires System 7.5 or 7.5.1 with an Enabler file and a Control Panel to operate. The included Installer disks will install the necessary files onto your hard disk. Once you have completed the hardware installation of the PowerCard 601, be sure to follow the instructions in the User's Guide for installing and using the software.

Complete the warranty card

As DayStar continues to improve and enhance its product line, we would like to keep you informed of new product advancements and upgrade opportunities. Please take a moment to complete the product warranty card.

Installation tools required

Installation tools required:

- Phillips screwdriver

Included with your PowerCard 601

The PowerCard 601 is shipped with the following parts:

- PowerCard 601 in an anti-static bag
- PowerCard 601 Installation Manual
- Warranty card
- System disks (9)
- PGA puller
- Heat sink
- Velcro strip
- anti-static wrist strap

We suggest that you retain the PowerCard 601 packaging in the event that the card must be returned for service. If any of the parts listed above are missing when you receive your PowerCard 601, please contact your computer dealer for further assistance. You can also contact DayStar online via the Internet: support@daystar.com

About this manual

This manual provides basic information for installing and using the DayStar PowerCard 601. If you are unfamiliar with using the Macintosh, review the Apple Owner's Guide before installing the board. Here's what you'll find in this manual:

- **Chapter 1:** "Getting Started" lists some precautions you should take before beginning the installation. It also includes quick reference sections for installing the PowerCard 601.
- **Chapter 2:** "Installing the PowerCard 601 - Macintosh Quadra 605, LC and Performa 470 series" includes detailed instructions on preparing and installing PowerCard 601 in a Macintosh Quadra 605, LC or Performa 470 series computer.
- **Chapter 3:** "Installing the PowerCard 601 - LC and Performa 570 & 580 series" includes detailed instructions on preparing and installing the PowerCard 601 in a Macintosh LC or Performa 570 series computer.
- **Chapter 4:** "Installing the PowerCard 601 - Macintosh Quadra, LC and Performa 630 series" includes detailed instructions on preparing and installing the PowerCard 601 in a Macintosh Quadra, LC, or Performa 630 series computer.
- **Chapter 5:** "Installing the System Software" includes detailed instructions on installing the required system software.
- **Chapter 6:** "Using the PowerCard 601 Software" includes detailed instructions on using the PowerCard 601's software.
- **Chapter 7:** "Troubleshooting" includes detailed instructions on troubleshooting problems with the new system software and the PowerCard 601 and also provides tips for improving your performance.
- **Appendix A:** "Using Apple Guide" includes detailed instructions for using the new Apple Guide help feature in System 7.5.
- **Appendix B:** "What's New in System 7.5" includes the detailed instructions on the new features and capabilities of System 7.5 or 7.5.1.
- **Appendix C:** "Product Support" includes the product specifications, warranty and instructions for returning the PowerCard 601 for service.

Getting Started

The danger of static electricity

Precautions

Quick installation reference

Removing the PowerCard 601

The danger of static electricity

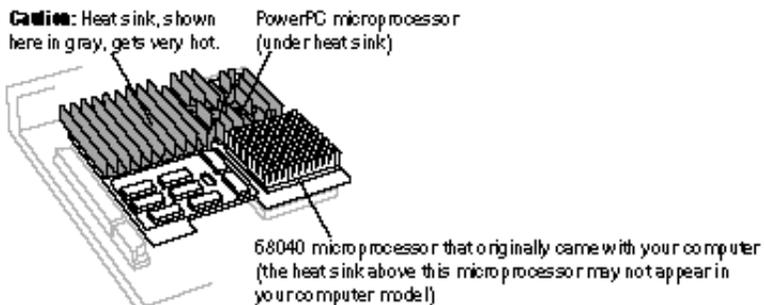
***WARNING:** The DayStar PowerCard 601 uses electronic components that are sensitive to static electricity. When handling and installing the PowerCard 601, you must take care to prevent the components from being damaged by static currents. Always work in an area of low static electricity and connect the anti-static bracelet to a grounded surface to prevent static discharge.*

Precautions

Here is a brief list of precautions that help ensure proper grounding:

- PUT ON THE ANTI-STATIC WRIST STRAP
- DO NOT attempt installation on a carpeted floor.
- DO NOT wear leather shoes—we recommend shoes with rubber soles.
- DO NOT attempt installation in an overly dry environment— spray mist the work area with water prior to installation.
- DO NOT wear silk or polyester clothing while doing the installation—we recommend cotton clothing.
- REMOVE ALL JEWELRY (rings, bracelets, watches, etc.) before installation.

If you open your computer once the PowerCard 601 is installed, don't touch the heat sink on the card. It can get very hot.



Quick installation reference

Please read all of the instructions before you start the installation procedure. If you are not experienced in the installation of the PowerCard 601, we suggest that you follow the detailed instructions in the following chapters. If you are familiar with installing the PowerCard 601, you may follow these steps:

1. Back up all hard drives.
2. Turn off the Macintosh and remove all connectors and the power cord.
3. Remove the Mac cover (470 & 630 series) or upgrade panel (570 & 580 series).
4. Put on the anti-static wrist strap following the instructions on the package.
5. Remove the motherboard (570, 580 & 630 series only).
6. Remove any add-in cards from the motherboard PDS slot.
7. Remove the battery from the Velcro strip (570, 580 & 630 series only), and disconnect the battery cable from the motherboard (570 & 580 series only).
8. Using the PGA puller, remove the 68040 CPU from the motherboard.
9. Remove the cache from the PowerCard 601 (570 & 580 series only).
10. Install the 68040 CPU onto the PowerCard 601.
11. Move the clock jumper on the PowerCard 601 to the two pins closest to the edge of the card (100 MHz PowerCard in 470 and 605 series only).
12. Remove the protective foam from the PowerCard 601's pins.
13. Place the foam directly beneath the motherboard's CPU socket during installation for cushioning (570, 580 & 630 series only).
14. Orient the PowerCard 601 over the motherboard CPU socket and press down firmly over the CPU socket.
15. Install the heat sink on the 68040 CPU (470 series only).
16. Reinstall the battery cable on the motherboard (570 & 580 series only).
17. Install the cache back onto the PowerCard 601 (570 & 580 series only).
18. Install the included Velcro strip to the motherboard (570 & 580 series only).

19. Attach the battery to the Velcro strip on the motherboard (570, 580 & 630 series only).
20. Reinstall the motherboard (570, 580 & 630 series only).
21. Replace the cover/upgrade panel and attach the power cord and other remaining cables.
22. Check your hard drive with Disk First Aid and also make sure that blind transfers are disabled.
23. Run the provided installer application, selecting the Easy Install option, to place the necessary system software on your hard disk.

Removing the PowerCard 601

NOTE: If you wish to transport or ship your PowerCard equipped Macintosh, we recommend that you first remove the PowerCard 601.

If you must remove the PowerCard 601, follow the instructions below:

1. Turn off the PowerCard 601 in the “601 Processor Upgrade” Control Panel.
2. Follow the “Quick installation reference” for opening your particular Macintosh.
3. Remove the PowerCard 601 from the motherboard following the “Quick installation reference.”
4. Remove the 68040 CPU from the PowerCard 601. Align the CPU so that pin 1 on the chip aligns with pin 1 on the motherboard CPU socket and reinstall the 68040 CPU.
5. Replace the cover and make sure all cables are properly connected. This concludes removal of the PowerCard 601.

Installing the PowerCard 601- Quadra 605, LC and Performa 470 Series

Preparing the Macintosh for installation

Removing the CPU chip

Installing the PowerCard 601

Testing the installation

Preparing the Macintosh for installation

DayStar designed the installation of the PowerCard 601 to be easy. You must, however, take certain precautions:

1. Back up all hard drives before beginning the installation.
2. Turn off the Macintosh and remove the power cord and all accessory cables from the back of the Macintosh.
3. Press the power switch on the rear of the Macintosh three times to drain the power supply.
4. Place the Macintosh on an unobstructed flat work area with the front of the Macintosh facing you.
5. Open the Macintosh (This procedure is detailed in the Apple Getting Started reference guide).
6. Put on the anti-static wrist strap following the instructions on the package.
7. Locate the PDS connector and remove any card that may be installed there.

NOTE: European LC 475 Owners

Some European LC 475 machines require a replacement power supply in order to reliably use the PowerCard 601. To check your power supply:

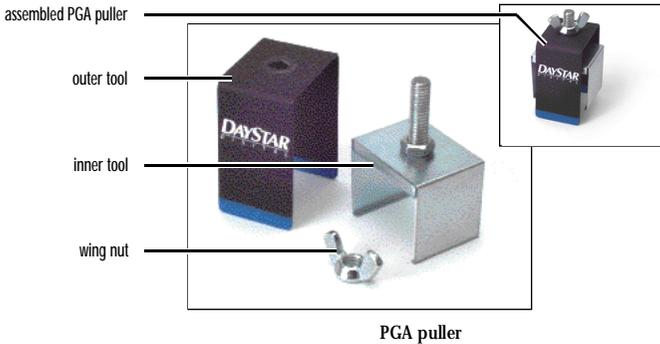
1. Remove the power cord and the case cover.
2. Locate the power supply on the right hand side of the machine.
3. A specifications label should be visible on its top. The output for the unit at +5V (volts) should be 3.75A (amps) or greater.

If your power supply needs to be upgraded, contact an Apple service provider for a replacement. Once you have replaced the power supply, or have verified that it is the correct model, you may proceed with the installation.

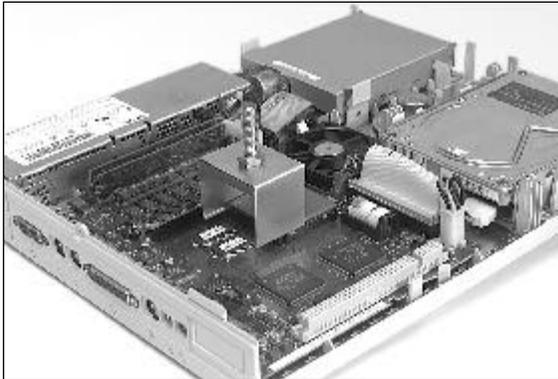
Removing the CPU chip

The PowerCard 601 installs into the motherboard's CPU socket. For this reason, the Macintosh's original 68040 CPU must be removed using the provided Pin Grid Array (PGA) Puller.

1. Remove the wing nut from the top of the PGA Puller. Separate the Puller into three parts: the outer tool, the inner tool and the wing nut.

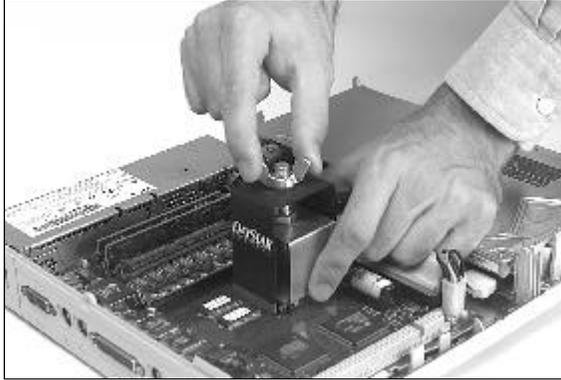


2. Locate the 68040 CPU in the center portion of the machine.
3. Gently slide the inner tool over the 68040 processor on the side shown below. Make sure the teeth of the inner tool are between the CPU and the socket and NOT between the socket and the motherboard.



Inner tool sliding over the 68040 processor

- Place the outer tool at a 90 degree angle over the inner tool. The tool should rest on the motherboard and not on any other chips. While maintaining gentle pressure on the sides of the inner tool, slowly turn the wing nut clockwise. This will lift the CPU from its socket evenly.



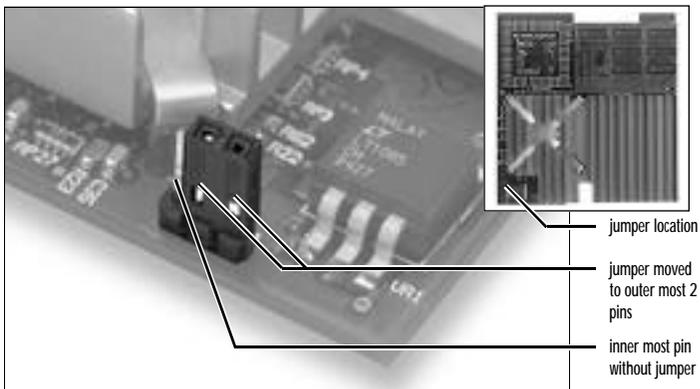
Removing the processor

Preparing the 100 MHz PowerCard 601

100 MHz PowerCard 601 only

You will need to move the clock jumper in order to have the card run at the appropriate clock speed.

- Move the jumper shown below, from the top two pins to the bottom two pins.

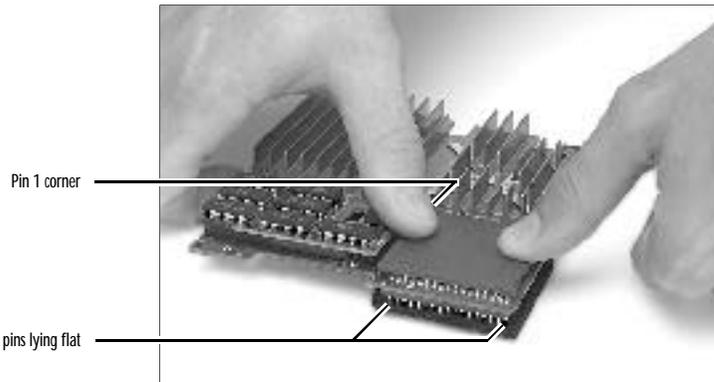


Moving the jumper on the PowerCard 601

If the jumper is too stiff to remove by pulling, slide a fingernail under the jumper and carefully pry up on the plastic portion of the jumper.

Installing the PowerCard 601

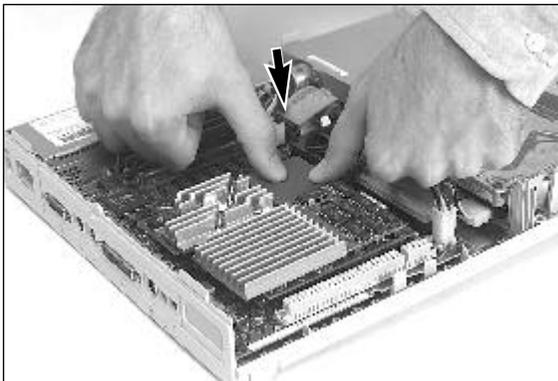
1. Hold the PowerCard 601 so that the pins on its underside are lying against a flat non-metallic surface. Align the 68040 chip that was removed from the motherboard over the socket on the PowerCard 601, being sure that pin 1 on the CPU (denoted by \blacktriangle) aligns with pin 1 on the socket (located near the innermost part of the PowerCard 601). Press over the center of the CPU and then repeat around the edges to ensure that it is fully and evenly seated.



Installing the 68040 onto the PowerCard 601

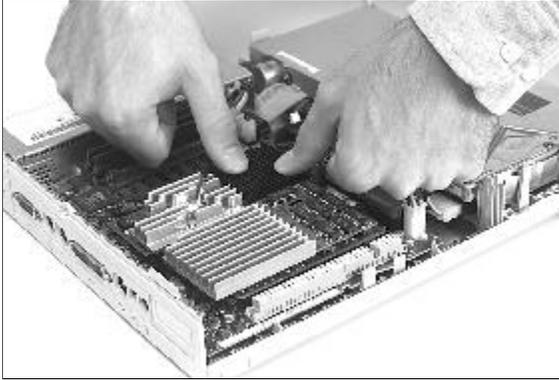
2. Remove the protective foam from the PowerCard 601's pins and orient the PowerCard 601 over the motherboard CPU socket as shown below. Be sure that the pins on the PowerCard 601 align with the socket on the motherboard and then press down firmly over the CPU until it is fully seated.

Note:
To properly align the PowerCard 601's pins over the motherboard CPU socket, your viewing angle should be from the far side of this photograph as shown.



Installing the PowerCard 601

3. Locate the provided heat sink and remove its adhesive backing. Attach the heat sink to the center of the 68040 CPU, being sure to press down firmly to obtain a good bond.



Installing the heat sink on the 68040

4. Replace the case cover and reattach all the cables you removed.

Testing the installation

You must now test the installation and install the system software. Please be sure to read all of this section before you test the installation.

Turn the Macintosh on. You should hear the customary “BONG.”

YES! I hear the “BONG.”

You are now ready to install the software. Please go to Chapter 5, “Installing the System Software,” for instructions on installing System 7.5 or 7.5.1. Also be sure to consult Chapter 6, “Using the PowerCard 601 Software,” for instructions on operating the PowerCard 601.

NO! I DO NOT hear the “BONG.”

There is no response when the Macintosh is turned on.

or

A different sound (the failure tone) is heard when power is turned on.

If you experience either of the above, remove the power cord from the back of the Macintosh. Then, do the following:

1. Review the instructions and make sure the PowerCard 601 is firmly seated in the motherboard CPU socket and that the 68040 is firmly seated in the PowerCard 601's socket.
2. Plug the power cord into the back of the Macintosh and restart as before.

If the startup process continues to fail, the board may have been damaged during installation or shipment. Contact your computer dealer or contact DayStar online via the Internet: support@daystar.com or <http://daystar.com>

Installing the PowerCard 601- LC and Performa 570 & 580 Series

Preparing the Macintosh for installation

Removing the CPU chip

Installing the PowerCard 601

Testing the installation

Preparing the Macintosh for installation

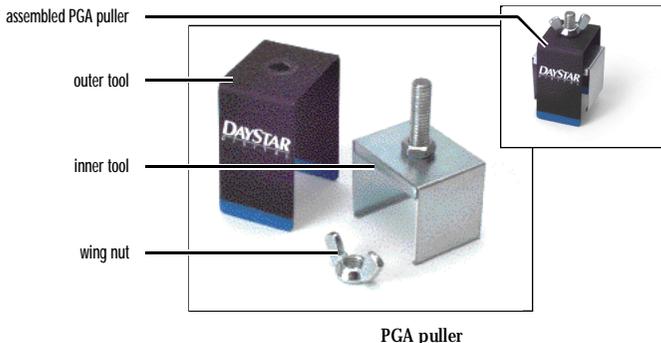
DayStar designed the installation of the PowerCard 601 to be easy. You must, however, take certain precautions:

1. Back up all hard drives before beginning the installation.
2. Turn off the Macintosh and remove the power cord and all accessory cables from the back of the Macintosh.
3. Press the power switch on the rear of the Macintosh three times to drain the power supply.
4. Place the Macintosh on an unobstructed flat work area with the rear of the Macintosh facing you.
5. Remove the upgrade panel on the rear of the Macintosh. (This procedure is detailed in the Apple “Getting Started” reference guide.)
6. Put on the anti-static wrist strap following the instructions on the package.
7. Remove the motherboard by carefully sliding it out of the Macintosh.
8. Locate the PDS connector and remove any card that may be installed there.
9. Remove the battery. Disconnect the battery’s connector from the motherboard and pull the battery away from its Velcro connection on the motherboard.

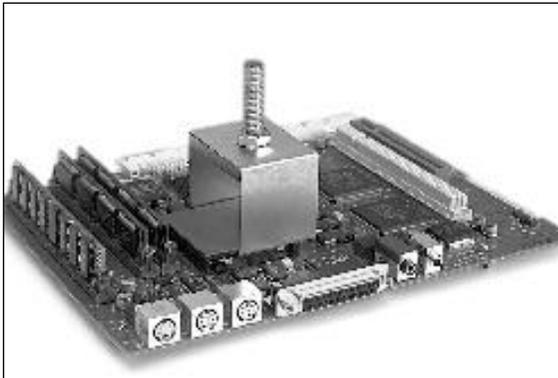
Removing the CPU chip

The PowerCard 601 installs into the motherboard's CPU socket. For this reason, the Macintosh's original 68040 CPU must be removed using the provided Pin Grid Array (PGA) Puller.

1. Remove the wing nut from the top of the PGA Puller. Separate the Puller into three parts: the outer tool, the inner tool and the wing nut.

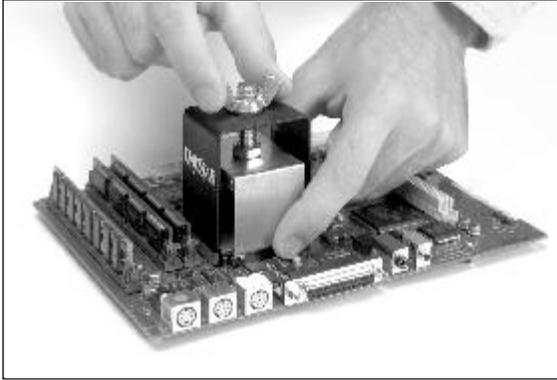


2. Locate the 68040 CPU in the center portion of the motherboard.
3. Gently slide the inner tool over the 68040 processor on the side shown below. Make sure the teeth of the inner tool are between the CPU and the socket and NOT between the socket and the motherboard.



Inner tool sliding over the 68040 processor

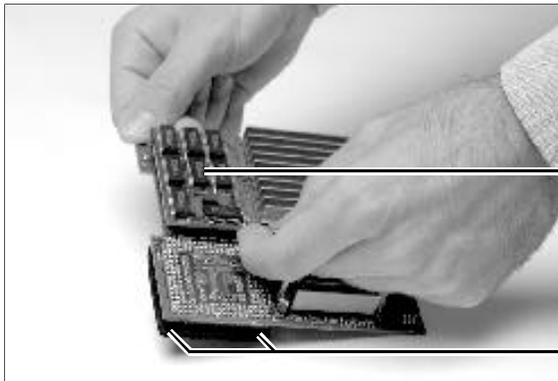
4. Place the outer tool at a 90 degree angle over the inner tool. The tool should rest on the motherboard and not on any other chips. While maintaining gentle pressure on the sides of the inner tool, slowly turn the wing nut clockwise. This will lift the CPU from its socket evenly.



Removing the processor

Installing the PowerCard 601

1. Carefully remove the cache daughter card from the PowerCard 601, being sure not to bend the pins on the underside of the PowerCard 601.



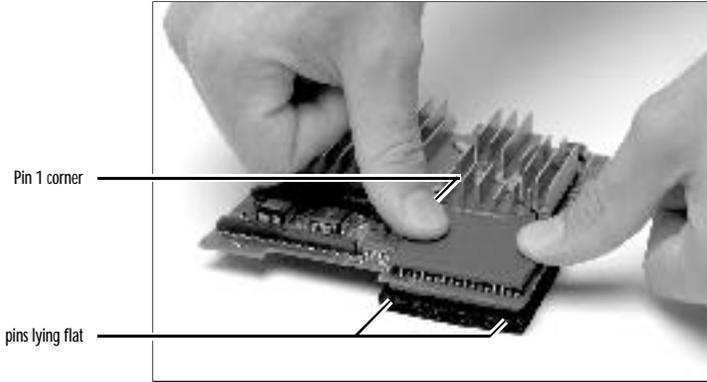
cache daughter
card

don't bend the
PowerCard 601's
pins

Removing the cache from the PowerCard 601

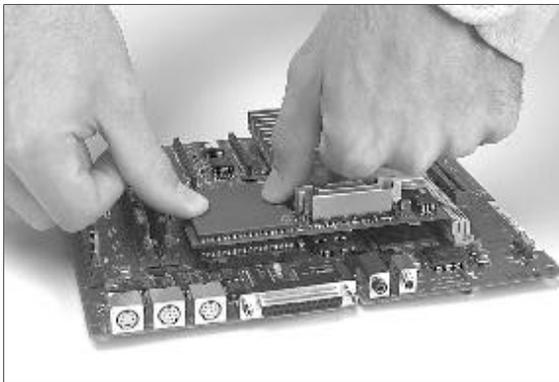
3 INSTALLING THE VALUE 601—LC AND PERFORMA 570 & 580 SERIES

2. Hold the PowerCard 601 so that the pins on its underside are lying against a flat non-metallic surface. Align the 68040 chip that was removed from the motherboard over the socket on the PowerCard 601, being sure that pin 1 on the CPU (denoted by \blacktriangle) aligns with pin 1 on the socket (located near the innermost part of the PowerCard 601). Press over the center of the CPU and then repeat around the edges to ensure that it is fully and evenly seated.



Installing the 68040 onto the PowerCard 601

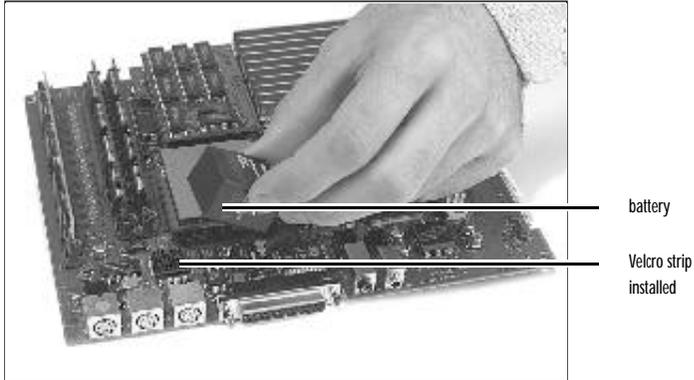
3. Remove the protective foam from the PowerCard 601's pins and place the foam directly beneath the motherboard's CPU socket during the installation for cushioning. Orient the PowerCard 601 over the motherboard CPU socket as shown below. Be sure that the pins on the PowerCard align with the socket on the motherboard and then press down firmly over the CPU until it is fully seated.



Installing the PowerCard 601

4. Reinstall the battery cable and the cache daughter card.

5. Install the provided Velcro strip onto the chip on the motherboard as shown below and then attach the battery to the Velcro.



Installing the battery and Velcro

6. Reinstall the motherboard into the computer. Reattach the upgrade panel and all the cables you removed.

Testing the installation

You must now test the installation and install the system software. Please be sure to read all of this section before you test the installation.

Turn the Macintosh on. You should hear the customary “BONG.”

YES! I hear the “BONG.”

You are now ready to install the software. Please go to Chapter 5, “Installing the System Software,” for instructions on installing System 7.5 or 7.5.1. Also be sure to consult Chapter 6, “Using the PowerCard 601 Software,” for instructions on operating the PowerCard 601.

NO! I DO NOT hear the “BONG.”

There is no response when the Macintosh is turned on.

or

A different sound (the failure tone) is heard when power is turned on.

If you experience either of the above, remove the power cord from the back of the Macintosh. Then, do the following:

1. Review the instructions and make sure the PowerCard 601 is firmly seated in the motherboard CPU socket and that the 68040 is firmly seated in the PowerCard 601's socket.
2. Plug the power cord into the back of the Macintosh and restart as before.

If the startup process continues to fail, the board may have been damaged during installation or shipment. Contact your computer dealer or contact DayStar online via the Internet: support@daystar.com or <http://daystar.com>

Installing the PowerCard 601- Quadra, LC and Performa 630 Series

Preparing the Macintosh for installation

Removing the CPU chip

Installing the PowerCard 601

Testing the installation

Preparing the Macintosh for installation

DayStar designed the installation of the PowerCard 601 to be easy. You must, however, take certain precautions:

1. Back up all hard drives before beginning the installation.
2. Turn off the Macintosh and remove the power cord and all accessory cables from the back of the Macintosh.
3. Place the Macintosh on an unobstructed flat work area with the rear of the Macintosh facing you.
4. Remove the cover and the upgrade panel on the rear of the Macintosh. (This procedure is detailed in the Apple Getting Started reference guide.)
5. Put on the anti-static wrist strap following the instructions on the package.
6. On the rear of the Macintosh, remove the two screws on the motherboard panel and carefully slide the motherboard out of the Macintosh.



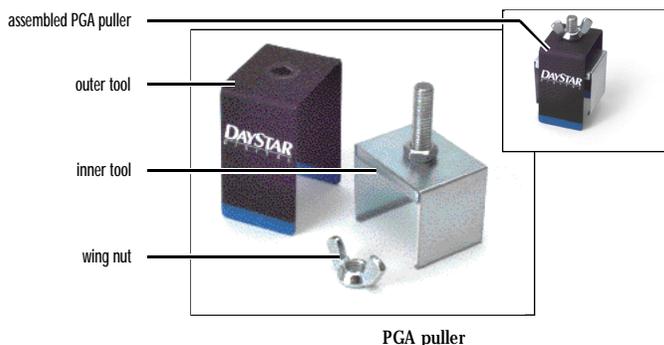
Removing the motherboard

7. Locate the PDS connector and remove any card that may be installed there.
8. Pull the battery away from its Velcro connection on the motherboard and set it to the side.

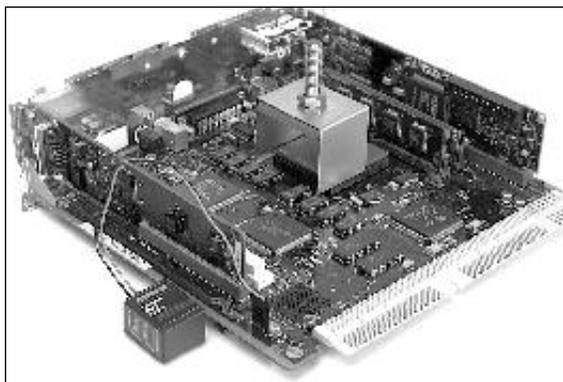
Removing the CPU chip

The PowerCard 601 installs into the motherboard's CPU socket. For this reason, the Macintosh's original 68040 CPU must be removed using the provided Pin Grid Array (PGA) Puller.

1. Remove the wing nut from the top of the PGA Puller. Separate the Puller into three parts: the outer tool, the inner tool and the wing nut.

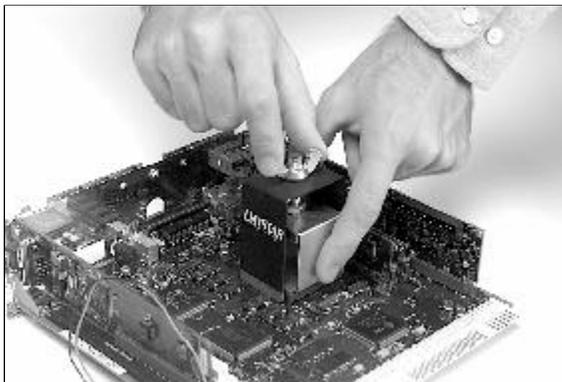


2. Locate the 68040 CPU in the center portion of the motherboard.
3. Gently slide the inner tool over the 68040 processor on the side shown below. Make sure the teeth of the inner tool are between the CPU and the socket and NOT between the socket and the motherboard.



Inner tool sliding over the 68040 processor

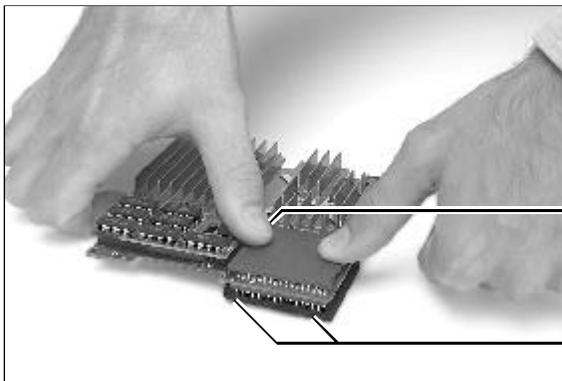
4. Place the outer tool at a 90 degree angle over the inner tool. The tool should rest on the motherboard and not on any other chips. While maintaining gentle pressure on the sides of the inner tool, slowly turn the wing nut clockwise. This will lift the CPU from its socket evenly.



Removing the processor

Installing the PowerCard 601

1. Hold the PowerCard 601 so that the pins on its underside are lying against a flat non-metallic surface. Align the 68040 chip that was removed from the motherboard over the socket on the PowerCard 601, being sure that pin 1 on the CPU (denoted by \perp) aligns with pin 1 on the socket (located near the innermost part of the PowerCard 601). Press over the center of the CPU and then repeat around the edges to ensure that it is fully and evenly seated.



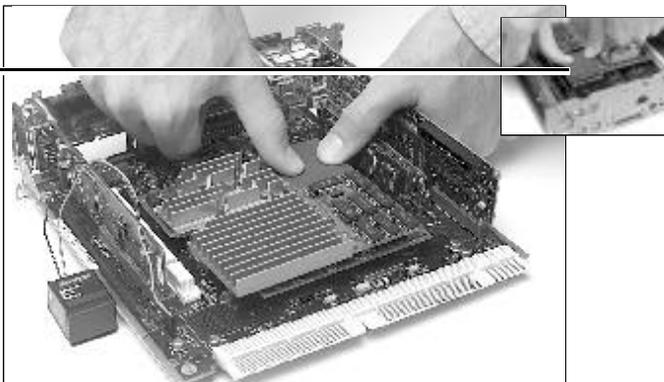
Installing the 68040 onto the PowerCard 601

4 INSTALLING THE POWERCARD 601—QUADRA, LC AND PERFORMA 630 SERIES

2. Remove the protective foam from the PowerCard 601's pins and place the foam directly beneath the motherboard's CPU for cushioning. Orient the PowerCard 601 over the motherboard CPU socket as shown below. Be sure that the pins on the PowerCard 601 align with the socket on the motherboard and then press down firmly over the CPU until it is fully seated.

Note:

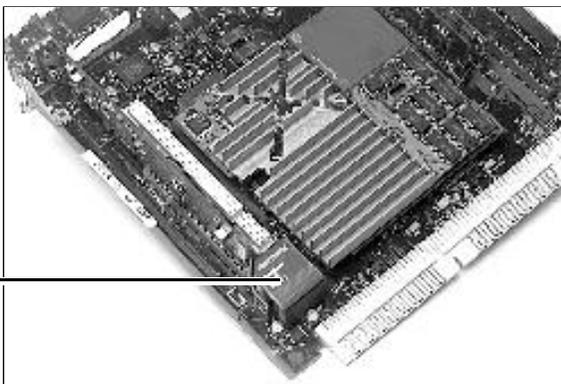
To properly align the PowerCard 601's pins over the motherboard CPU socket, your viewing angle should be from the rear of the motherboard.



Installing the PowerCard 601

3. Attach the battery onto the Velcro strip on the motherboard.

battery placed back onto Velcro strip



Installing the battery and Velcro

4. Reinstall the motherboard into the computer. Reattach the cover and all the cables you removed.

Testing the installation

You must now test the installation and install the system software. Please be sure to read all of this section before you test the installation.

Turn the Macintosh on. You should hear the customary “BONG.”

YES! I hear the “BONG.”

You are now ready to install the software. Please go to Chapter 5, “Installing the System Software,” for instructions on installing System 7.5 or 7.5.1. Also be sure to consult Chapter 6, “Using the PowerCard 601 Software,” for instructions on operating the PowerCard 601.

NO! I DO NOT hear the “BONG.”

There is no response when the Macintosh is turned on.

or

A different sound (the failure tone) is heard when power is turned on.

If you experience either of the above, remove the power cord from the back of the Macintosh. Then, do the following:

1. Review the instructions and make sure the PowerCard 601 is firmly seated in the motherboard CPU socket and that the 68040 is firmly seated in the PowerCard 601's socket.
2. Plug the power cord into the back of the Macintosh and restart as before.

If the startup process continues to fail, the board may have been damaged during installation or shipment. Contact your computer dealer or contact DayStar online via the Internet: support@daystar.com or <http://daystar.com>

Installing the System Software

Installing system software

Using the Installer

Using the custom install option

Performing a clean installation

Testing for compatibility

Installing system software

Note: You must install the PowerCard 601 before installing the software.

The PowerCard 601 requires version 7.5 of the Apple system software. This chapter explains how to install System 7.5 or 7.5.1 and other software. It also discusses how to perform special installations, how to reinstall system software and how to test software for compatibility problems.

Note: If you already have System 7.5 or 7.5.1, you should reinstall using the disks that came with your PowerCard 601 to ensure that the appropriate software is installed on your machine. If you experience problems with your system software and need to reinstall it, see the section “Performing a Clean Installation,” later in this chapter.

Step 1: Check your hard drive

To ensure a smooth upgrade to the new system software, it's important that you check your hard drive for problems and update the hard disk driver.

1. Shut down your computer.
2. Insert the *Disk Tools* disk into the floppy disk drive.

Note: Be sure to use the *Disk Tools* disk that came with the upgrade card.

3. Turn on your computer.

The Disk Tools icon appears on your screen.

4. Double-click the Disk Tools disk icon to open it.
5. Double-click the Disk First Aid icon and follow the instructions on the screen.

Disk First Aid checks your hard drive for any problems.



Disk First Aid

6. When you are finished, choose Quit from the File menu.
7. If you have a computer with a non-SCSI internal hard disk—such as a Quadra 630, an LC 630, or a Performa 630—skip to step 11. Otherwise, continue with step 8.

8. Double-click the Apple HD SC Setup icon and follow the instructions on the screen. Apple HD SC Setup allows you to update the hard disk driver.



Apple HD SC Setup

NOTE: If you used a non-Apple utility (e.g. Hard Disk Toolkit, Silverlining, etc.) to format your hard drives or removable media, make sure that the version of the formatter you are using is compatible with Power Macintoshes. We also suggest that you disable the “blind transfers” option. Blind transfers allow the drives to communicate to the computer in a CPU speed-dependent manner. Changing the CPU speed may cause blind transfers to fail and jeopardize the integrity of your data. Because the PowerCard 601 allows you to switch back and forth between the motherboard 68040 to the faster PowerPC, we generally recommend that blind transfers be disabled prior to enabling the PowerCard 601.

A list of the more well known formatters and the appropriate version numbers follows.

FWB's Hard Disk Toolkit	1.6.1 or later, blind transfers off
LaCie's Silverlining	5.6.1 or later, with default settings
Casa Blanca Works Drive 7	3.5 or later, blind transfers off
TranSoft SCSI Director	3.11 or later, blind transfers off

9. Click Update.
10. When you are finished, click Quit.
11. Choose Restart from the Special menu to restart your computer.

Using the Installer

If you have updated your hard disk driver, you're ready to install the system software. Make sure any virus protection software is turned off.

To install the new system software from floppy disks, follow these steps:

1. Shut down your computer.
2. Insert the *Install Me First* disk into a floppy disk drive.
3. Turn on the computer.
4. Open the *Install Me First* disk by double-clicking its icon.

All system software files are compressed. The Installer program will expand them during installation. Do not drag them to your hard disk.

5. Open the Installer by double-clicking its icon.



6. When you see the Installer's welcome screen, click Continue.

The Easy Install dialog box appears.



Installing a customized system: We strongly suggest that you perform an Easy Install for the PowerCard 601. Easy Install installs the files needed for your particular model of Macintosh. If you want to create a system that works with other Macintosh computers, or if you want to add specific components after installation, see “Using the Custom Install Option” later in this chapter.

7. Make sure that the destination disk indicated on the screen is the one on which you want to install system software.

If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.

8. Click Install.

The Installer updates the software in the System Folder on your hard disk.

If you have any problems while installing: See Chapter 7 “Troubleshooting.”

9. Follow the instructions on the screen.

On-screen messages tell you when you need to insert other disks. It takes several minutes to complete the installation.

10. When the installation is complete, restart your computer.

If for some reason the installation was not successful, try the installation again.

If you can't restart the computer: See Chapter 7 “Troubleshooting.”

11. Your installation is now complete. Finish setting up the software as described in Chapter 6 “Using the PowerCard 601 Software.”

Using the custom install option

While we suggest that you first use the Easy Install option (shown earlier in this chapter), the custom install allows you to add specific components after installation or it can be used to create a system that works with other Macintosh models.

- After using Easy Install, you can use Custom Install to add software. For example, you can install utilities, additional printer drivers, or MacTCP.
- You can create a “universal” system, with software that works on other Macintosh computers, including both 68000-family and PowerPC models.

To use the Custom Install option for System 7.5 or 7.5.1, follow the steps on the next pages.

1. Quit any open application programs or desk accessories.
2. Insert the *Install Me First* diskette.

All system software files are compressed. The Installer program will expand them during installation. Do not drag them to your system.

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



4. When you see the Installer's welcome screen, click Continue.

The Easy Install dialog box appears.



5. Open the pop-up menu and choose Custom Install.

The Custom Install dialog box appears.



6. Select the software to install.

To install software, click the checkbox to put an X in the box. For example, put an X in the Printing box to install the printing software.

To see a detailed listing of the software included in an item, click the triangle (next to the item) so it points down. For example, when the triangle next to Printing points down, you can select specific printer drivers to install.

To see information about an item, click the information box (marked with an i) across from it.

7. Make sure that the destination disk listed is the one on which you want to install software.

If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.

8. Click Install.

The Installer begins to install the software you have selected.

If you have any problems while installing: See Chapter 7

“Troubleshooting.”

9. Follow the instructions on the screen.

On-screen messages tell you if you need to insert other disks. It takes a few minutes to complete the installation.

10. After the installation is complete, restart your computer.

If for some reason the installation was not successful, try again.

If you can't restart the computer: See Chapter 7 "Troubleshooting."

Performing a clean installation

This section provides instructions for what is commonly called a "clean" installation of system software onto hard drives.

Clean installation renames your System Folder and installs a new System Folder on your hard disk drive. Any special files you've added to your System Folder remain on your hard disk, and you can install them into your new System Folder after you install the system software.

IMPORTANT You should perform a clean installation only if you suspect that the system software on your startup disk is damaged.

1. Shut down your computer.
2. Insert the *Disk Tools* disk into the floppy disk drive.

Be sure to use the *Disk Tools* disk that came with the PowerCard 601.

3. Turn on your computer.

The Disk Tools icon appears on your screen.

4. Double-click the Disk Tools disk icon to open it.
5. Double-click the Disk First Aid icon and follow the on-screen instructions.

Disk First Aid checks your hard drive for any problems.



Disk First Aid

6. When you are finished, choose Quit from the File menu.

7. If you have a computer with a non-SCSI internal hard disk—such as a Quadra 630, an LC 630, or a Performa 630—skip to step 11. Otherwise, continue with step 8.
8. Double-click the Apple HD SC Setup icon.



Apple HD SC Setup

9. Click Update to update the hard disk driver.
10. When you are finished, click Quit.
11. Choose Restart from the Special menu.
12. When you see the blinking question mark icon, insert the *Install Me First* disk into a floppy disk drive and open the disk by double-clicking its icon.
All system software files are compressed. The Installer program will expand them during installation. Do not drag them to your hard disk.
13. Open the Installer by double-clicking its icon.



Installer

- When you see the Installer's welcome screen, click Continue.

The Easy Install dialog box appears.



- Make sure that the Destination Disk indicated on the screen is the one on which you want to install system software.

If the wrong disk name appears, click the Switch Disk button until the correct disk name appears.

- Hold down Shift-⌘-K to start the clean installation.

The following dialog box appears.



- Click the Install New System Folder button and click OK.

The dialog box closes. In the Easy Install dialog box, the Install button changes to Clean Install.

- Follow the instructions on the screen.

On-screen messages tell you when you need to insert other disks. It takes a few minutes to complete the installation.

19. When you see a message reporting that the installation was successful, you may need to click Restart.

You need to restart only if you installed software onto the startup disk.

20. You may want to copy some files (such as screen savers or other personalized items) from the “Previous System Folder” into the new System Folder.

Be sure to test these items for compatibility by following the instructions in the next section.

Testing for compatibility

If your Macintosh does not start up properly or behaves erratically, you may have a startup program (also known as a system extension or control panel) that’s incompatible with your system software.

This section tells you how to remove startup programs that are incompatible with System 7.5 or 7.5.1.

Remove incompatible startup programs

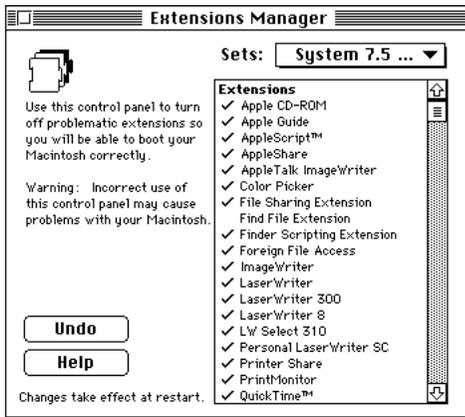
To verify that you have a compatibility problem and test individual programs, follow the steps below.

Verify the problem

1. Start up your computer, holding down the space bar.

Holding down the space bar opens the Extensions Manager control panel during startup.

2. Release the space bar when the Extensions Manager control panel opens.



3. Open the Sets menu and choose “System 7.5 or 7.5.1 only.”
This turns off all extensions and control panels except those installed with System 7.5 or 7.5.1.
4. Close the Extensions Manager to continue startup.
5. When the computer is ready, try the same actions that caused the problem.
If the problem no longer occurs, you probably have an extension or control panel that doesn’t work with System 7.5. Continue with the next section.

Test individual extensions and control panels

1. Start up your computer, holding down the space bar.
Holding down the space bar opens the Extensions Manager control panel during startup.
2. Release the space bar when the Extensions Manager control panel opens.

3. To turn on one of the extensions or control panels, click its name to put a check beside it.
4. Close the Extensions Manager to continue startup.
5. When the computer is ready, try the same actions that caused the problem.
If the problem does not occur again, then the item is probably compatible with System 7.5 or 7.5.1.
If the problem occurs again, the program is probably incompatible. Open the Extensions Manager and click the program's name to remove the check.
6. Repeat steps 1 through 5 for each item you want to test.

Using the PowerCard 601 software

Turning on the PowerCard 601

Turning on the Modern Memory Manager

Installing new application programs

Shared libraries

Using older Macintosh programs

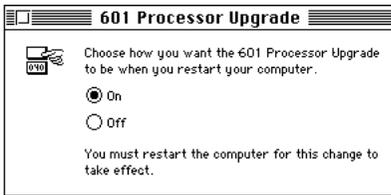
Turning on the PowerCard 601

You use the 601 Processor Upgrade control panel to turn the card on or off.

1. Choose Control Panels from the Apple menu.
2. Open the 601 Processor Upgrade panel by double-clicking its icon.

If you don't see the 601 Processor Upgrade icon, use the scroll bars in the Control Panels window. If you still can't find it, the system software may not be installed. To install the system software, see Chapter 5.

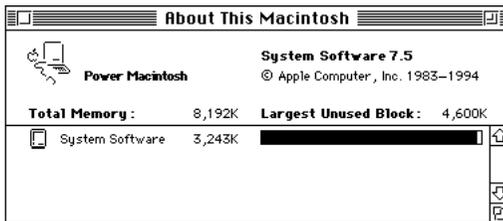
3. Click the On button.



4. Close the 601 Processor Upgrade window by clicking the close box in the upper-left corner.
5. Choose Restart from the Special menu.

How to tell which processor the computer is using: When the computer restarts, you may notice that your computer's startup sound is different. The startup sound depends on the processor the computer uses.

You can also open the About This Macintosh window from the Apple () menu to see which processor the computer is using.



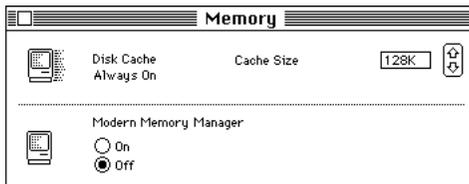
Turning on the Modern Memory Manager

For best performance when using programs designed for the PowerPC micro-processor, you should turn on the Modern Memory Manager. Follow these steps:

1. Choose Control Panels from the Apple (🍏) menu.
2. Double-click the Memory control panel to open it.

The Memory control panel window appears.

3. Turn on the Modern Memory Manager.



If you don't see the Modern Memory Manager, you may not have turned on the upgrade card, as described in the previous section, or you may not have restarted the computer.

4. Close the Memory control panel window by clicking the close box in the upper-left corner.
5. Choose Restart from the Special menu.

Installing new application programs

Once you have followed the steps earlier in this chapter, the full capabilities of the new PowerPC processor are in effect.

Your upgraded Macintosh is compatible with most software intended for use with Macintosh computers. Certain application programs (sometimes called “native applications”) are designed especially for computers with the new PowerPC microprocessor. These programs take best advantage of your computer’s speed.

If you purchased a program designed for use with the PowerPC microprocessor, or if you received any programs with the PowerCard 601, you can install them now by following the instructions that came with them. Be sure that you are running with the PowerCard 601 turned on during the installation to insure that the PowerPC version of the program is installed.

If you have problems installing a program, see the manual that came with the program or call the software publisher for assistance.

Using application programs designed for use with the PowerPC

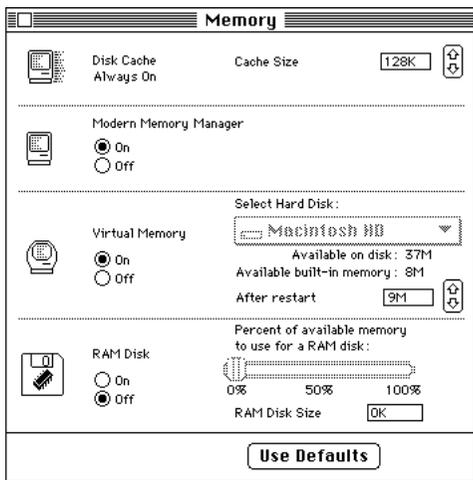
Some of the new PowerPC programs may require more memory (RAM) to work than other programs. If you run out of memory when you use these programs, you can use space on your computer’s hard disk as additional memory. This feature is called *virtual memory*.

Turning on virtual memory increases the amount of available memory, but it may slightly reduce your programs’ speed. If maximum speed is important, you can install more memory in your computer.

To turn on virtual memory, follow these steps:

1. Choose Control Panels from the Apple () menu and open the Memory control panel.

2. Turn on Virtual Memory.



3. Set the virtual memory size (in the “After restart” box) to the size of the available built-in memory plus 1.
4. Close the control panel by clicking the close box in the upper-left corner.
5. Choose Restart from the Special menu.

Shared libraries

Programs designed for the new PowerPC chip use special files called *shared libraries*. Any necessary shared libraries are installed automatically in the System Folder when you install these programs.

If a program requires a shared library and there is not enough memory available for the shared library, you see a message that the program could not be opened because there is not enough system memory available for the shared library.

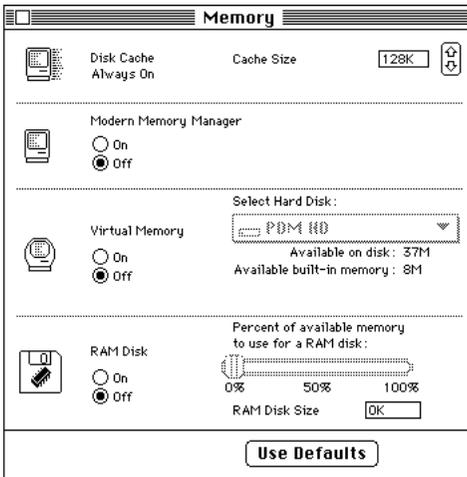
You can solve this problem by turning on virtual memory as described in the previous section, “Using application programs designed for use with the PowerPC.”

If a required shared library is missing, you see a message that the program could not be opened because the shared library could not be found. If this happens, reinstall the program, following the directions that came with it. If the shared library is still missing, contact the program’s publisher for assistance.

Using older Macintosh programs

If you experience problems using an older Macintosh program, the program may be incompatible with your upgraded Macintosh. You may be able to use your older program if you turn off the Modern Memory Manager in your Memory control panel. Follow these steps:

1. Choose Control Panels from the Apple () menu and open the Memory control panel.
2. Turn off the Modern Memory Manager.



3. Close the Memory control panel by clicking the close box in the upper-left corner.
4. Choose Restart from the Special menu.

When you are finished using the program, open the Memory control panel again and turn the Modern Memory Manager back on (You must restart the computer for the change to take effect).

For best performance, contact the program's publisher for an upgrade. If an upgrade is not available for a program, and if turning off the Modern Memory Manager doesn't help, try turning off the PowerCard 601 by using the 601 Processor Upgrade control panel.

Troubleshooting

Problems installing System 7.5 or 7.5.1

Problems using System 7.5 or the PowerCard 601

Performance notes

This chapter helps you solve some problems you may encounter with the PowerCard 601 or while installing or using System 7.5 or 7.5.1.

Problems installing System 7.5 or 7.5.1

This section helps you solve problems you might encounter while installing System 7.5 or 7.5.1 and related software.

Apple HD SC Setup doesn't show my internal hard disk

When you run the Apple HD SC Setup program to install the new driver on your internal hard disk, the program can't find the hard disk. The Apple HD SCSetup program works only with SCSI hard disks from Apple Computer. Some Apple computers, such as the Quadra 630, the LC 630, and the Performa 630, come with non-SCSI hard disks.

- You don't need to update the driver for non-SCSI hard disks. To control non-SCSI hard disks, use the Internal HD Format program that came with your computer.

Not enough memory to use the Installer

When you try to use the Installer, you see a message that the Installer is out of memory. Usually this means that your disk cache or RAM Disk is set too high.

- Quit all open application programs. Open the Memory control panel, set your disk cache to the lowest possible setting and turn on Virtual Memory.

Not enough memory to install the software

When you try to use the Installer, you see a message that your computer doesn't have enough memory to install the software. This means that your Macintosh has less RAM (random-access memory) than is required to use System 7.5.

- Contact your reseller for information on purchasing additional memory.

Not enough disk space

When you try to use the Installer, you see a message that there is not enough disk space available to install the software.

- Make more space available on your hard disk by removing some files from the disk. Make backup copies of the files, if necessary, and then drag them to the Trash and choose Empty Trash from the Special menu.
- If you are installing from floppy disks, you can also try starting up your Macintosh using the *Install Me First* disk. Using the Installer this way requires less disk space.

Difficulty modifying the System file

When you try to use the Installer, you see a message that the System file cannot be modified (or repeated messages asking if it's okay to modify the System file).

- If virus-protection software is turned on, turn it off by dragging it out of the System Folder and restarting your computer. You can turn it back on after installation.
- Try disabling your extensions by holding down the Shift key while you restart the computer (If you are installing over a network, you cannot use this solution).
- Your System Folder may be protected, or the System and Finder files may be locked. To turn off System Folder Protection, use the Performa control panel or the General Controls panel (depending on your version of system software). To see if your System file or Finder file is locked, select the file's icon, then open the File menu and choose Get Info. To unlock the file, click the Locked checkbox to remove the X. Restart your computer and make sure that the System file and Finder file are unlocked.

Problems using System 7.5 or the PowerCard 601

This section helps with problems you might encounter using the computer after installing System 7.5 or 7.5.1 or the upgrade card.

You can't start up the computer

When you turn on your computer, you see a "bomb" message.

- You probably have an incompatible item in the System Folder. To turn off potentially incompatible items in the System Folder, hold down the Space bar while you restart your computer. When the Extensions Manager opens, choose "System 7.5 or 7.5.1 Only" from the Sets pop-up menu. Close the Extensions Manager to resume startup. All extensions are turned off, except those installed with System 7.5 or 7.5.1. Once you have started up the computer, you need to determine which startup program is causing the problem. For instructions, see "Testing for Compatibility" in Chapter 5 of this book.
- Your system software may be damaged. Start up the computer using the *Disk Tools* disk that came with the upgrade card. When you have restarted the computer, follow the instructions in "Performing a Clean Installation" in Chapter 5 of this book.

You often encounter problems that require you to restart the computer

As you work in an application program, you often encounter problems that require you to restart the computer.

- You may have an incompatible item in the System Folder, or your application program may be incompatible with System 7.5 or 7.5.1. To turn off potentially incompatible items in the System Folder, hold down the Space bar while you restart your computer. When the Extensions Manager opens, choose "System 7.5 or 7.5.1 Only" from the Sets pop-up menu. Close the Extensions Manager to resume startup. All extensions are turned off, except those installed with System 7.5 or 7.5.1.

For compatibility information on application programs, contact the publisher.

You can't open a program, it quits unexpectedly, or you see a message that not enough memory is available to open the program.

The program needs more memory, or the Macintosh ran out of memory.

- Quit the programs that you have open and then open the program you want to use. If that doesn't work, restart your Macintosh.
- Use the program's Info window to give the program more memory. (Quit the program if it's open, select the program's icon, choose Get Info from the File menu, and increase the numbers in the "Minimum size" and "Preferred size" boxes at the lower right.)
- Turn on virtual memory in the Memory control panel.
- Install more RAM in your computer.
- If the program is not designed specifically for use with the PowerPC, use the 601 Processor Upgrade control panel to turn off the PowerCard 601.

You see a message that your application program can't be opened because a file can't be found.

Programs designed specifically for the PowerPC microprocessor use special files called *shared libraries*. Any necessary shared libraries should be automatically installed in the System Folder when you install these programs.

- Follow the directions that came with your program to reinstall the program. If the shared library is still missing, contact the program's manufacturer for assistance.

You can open a program but it doesn't work properly, or you see messages reporting system errors.

The PowerCard 601 has been tested extensively with existing programs.

However, a few older programs may have compatibility problems.

- Read the section "Using Older Macintosh Programs" in Chapter 6.
- You may need to turn off the card when using the program. Use the 601 Processor Upgrade control panel to turn off the card, then restart the computer.

A program runs more slowly than it did before installing the card.

- Some programs are designed to run optimally with your new 601 processor. These programs are referred to as being native or “Accelerated for Power Macintosh.” Other non-native programs may run faster if you turn off the card when you use them. Use the 601 Processor Upgrade control panel to turn off the PowerCard 601.
- If the program is not PowerPC native, contact the program’s manufacturer to see whether a PowerPC upgrade is available.
- If the program is PowerPC native, make sure that the PowerCard 601 was turned on during the program’s installation. Some program installers detect which processor is being used and only install a version for that processor.

You run out of memory when using programs designed for the PowerPC microprocessor.

- Turn on virtual memory in the Memory control panel to make more memory available. For the best performance while using virtual memory, set the virtual memory size in the Memory control panel to the size of the available built-in memory plus 1.
- Install more memory in your computer.

The pointer movement on screen is jerky.

- Clean the mouse or trackball.
- Use the Memory control panel to turn off virtual memory.
- Install more memory in your computer.

The computer behaves strangely or has problems starting up with the PowerCard 601 card turned on.

It may help to clear out all the computer’s settings (PRAM).

- Hold down the -Option-P-R keys simultaneously while the computer is starting up. (Make sure the Caps Lock key is not pressed.) You will need to turn on the PowerCard 601 using the 601 Processor Upgrade control panel. You may need to use other control panels to adjust your settings for the date, time, monitors, and file sharing, and you may need to reselect your printer in the Chooser.

Performance notes

Here are a few tips to get the most from your PowerCard 601:

- Whenever possible, keep the Modern Memory Manager enabled.
- Upgrade your non-native applications, control panels and extensions to PowerPC versions as they become available.
- If the application that you are running is not native (emulated), it may run faster by turning off the PowerCard 601.
- The Apple licensed ROMs on the PowerCard 601 include the improved SCSI Manager 4.3. To get the best hard disk performance, be sure to update the driver on each of your disks to versions optimized for use with SCSI Manager 4.3. The included Apple HD SC Setup application will update any disks formatted with the Apple formatter. If you used a third party formatter, contact the publisher for the version that will install 4.3 specific drivers. A list of the more well known formatters and the appropriate version numbers follows:

FWB's Hard Disk Toolkit	1.6.1 or later, blind transfers off
LaCie's Silverlining	5.6.1 or later, with default settings
Casa Blanca Works Drive 7	3.5 or later, blind transfers off
TranSoft SCSI Director	3.11 or later, blind transfers off

- Vary the size of the Apple Disk Cache, located in the Memory control panel, to find an optimal setting for your system. Some hard drives and specific applications perform better with the cache set to its minimum.
- Keep the number of control panel and system extension files that you have in the System Folder to a minimum. If you find that you are not using the features of such a file, turn it off with the Extension Manager. Not only can these files cause conflicts with one another, they can also rob the system's performance, especially if they are not written in the native PowerPC format.

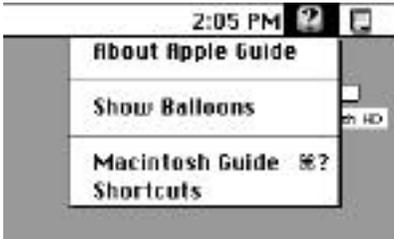
Using Apple Guide

Getting answers to your questions

Identifying objects on the screen

Learning useful shortcuts

System 7.5 or 7.5.1 comes with Apple Guide, which is your main source of information when you're working with your computer. The menu is identified by a question mark (?) in the upper-right corner of the screen.



Macintosh Guide provides step-by-step guidance for new or complex tasks. When you request help from Macintosh Guide, it displays instructions on your screen and walks you through a task one step at a time.

Getting answers to your questions

When you have a question while working with your computer, you can get the answer by choosing Macintosh Guide from the Guide menu.

1. Pull down the Application menu (in the upper-right corner of the screen) and choose Finder to make it the active application program.

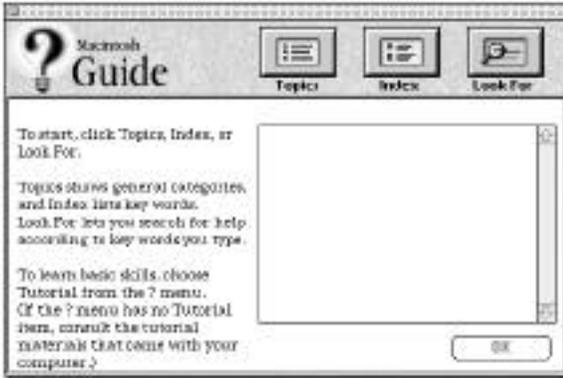


A checkmark in the menu indicates that the Finder is the active program.

2. Pull down the Guide menu (marked with the ? icon) and choose Macintosh Guide.



The Macintosh Guide window appears.



Whenever you use Macintosh Guide, its window remains in front of other windows. If the window gets in your way, you can move it by dragging its title bar (the gray bar across the top of the window).

3. Notice the three buttons at the top: Topics, Index, and Look For.



Macintosh Guide gives you three ways to find information:

- **Topics** lets you choose from a list of general subjects; it is like the table of contents in a book.
- **Index** lets you choose from an alphabetical list of more specific subjects; it is like the index in a book.
- **Look For** lets you search for information related to a specific word or phrase that you type.

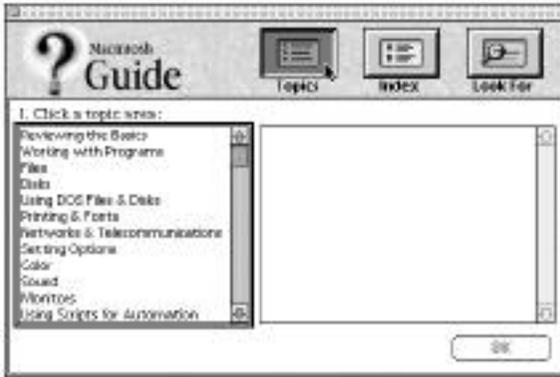
In the following sections you will practice using each method.

If you have problems while using Macintosh Guide, see “Tips for Using Macintosh Guide” later in this section.

Getting answers with the Topics button

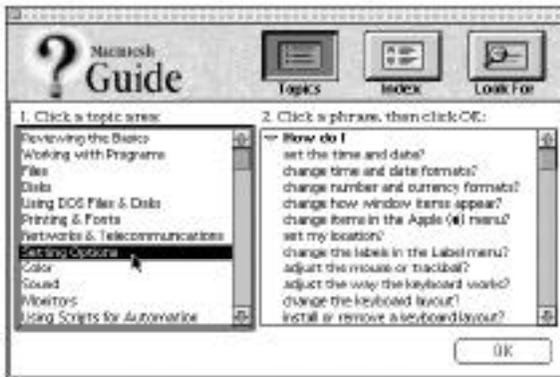
1. In the Macintosh Guide window, click the Topics button.

A list of general topics appears on the left side of the Macintosh Guide window. (Depending on the hardware and software you have, the list of topics may look different.)



2. Click "Setting Options" in the list of topics.

When you click any topic area, a list of related questions appears on the right side of the Macintosh Guide window.



3. Click the question “How do I set the time and date?” and then click OK. Or double-click the question.

A small window appears with instructions for you to follow.



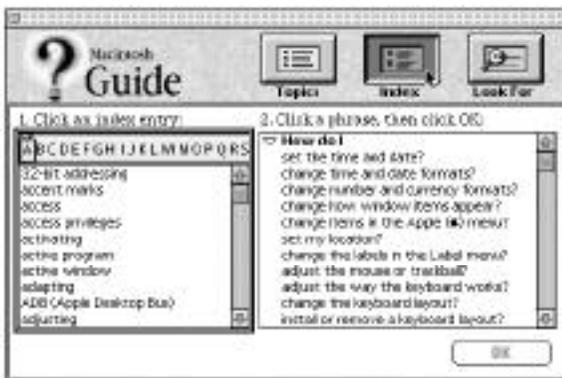
4. Read and follow the instructions in this window.
Macintosh Guide provides step-by-step instructions to answer the question you selected. When you have completed each step, click the right arrow in the lower-right corner to see the next step.
5. When you have completed all the steps, click the Topics button in the lower-left corner to return to the main Macintosh Guide window.

Now continue with the next section.

Getting answers with the Index button

1. In the Macintosh Guide window, click the Index button.

An alphabetical list of subjects appears on the left side of the window.

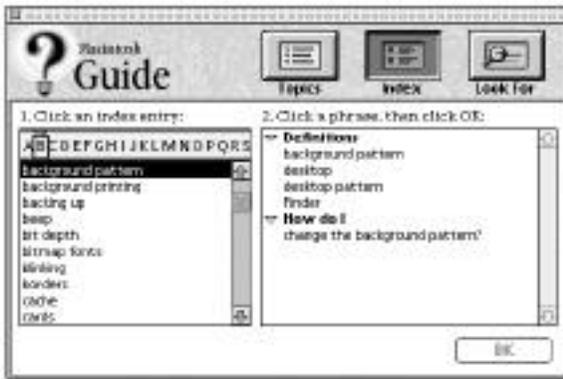


2. Scroll through the alphabetical list until the phrase “background pattern” is visible.

You can scroll through the list either by dragging the slider to the letter *B* or by using the scroll bar at the right of the list.

3. Click the phrase “background pattern” in the alphabetical list.

When you click any index entry, a list of related questions appears on the right side of the Macintosh Guide window.



4. Click the question “How do I change the background pattern?” and then click OK. Or double-click the question.

A small window appears with instructions for you to follow.



5. Read and follow the instructions in the window.

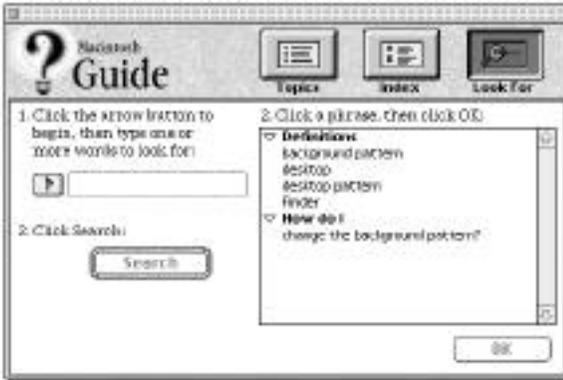
Macintosh Guide provides step-by-step instructions to answer the question you selected. When you have completed each step, click the right arrow in the lower-right corner to see the next step.

6. When you have completed all the steps, click the Topics button in the lower-left corner to return to the main Macintosh Guide window.

Getting answers with the Look For button

1. In the Macintosh Guide window, click the Look For button.

A small box appears on the left side of the window, where you can type text.



2. Click the arrow button to activate the text box.
3. Type “sound” in the text box and then click Search.

When you click Search, a list of questions related to the word or phrase you typed appears on the right side of the Macintosh Guide window.

- Click the question “How do I change the beep sound?” and then click OK. Or double-click the question.

A small window appears with instructions for you to follow.



- Read and follow the instructions in the window. Macintosh Guide provides step-by-step instructions to answer the question you selected. When you have completed each step, click the right arrow in the lower-right corner to display the next step.
- When you have completed all the steps, click the close box in the upper-left corner to close Macintosh Guide.

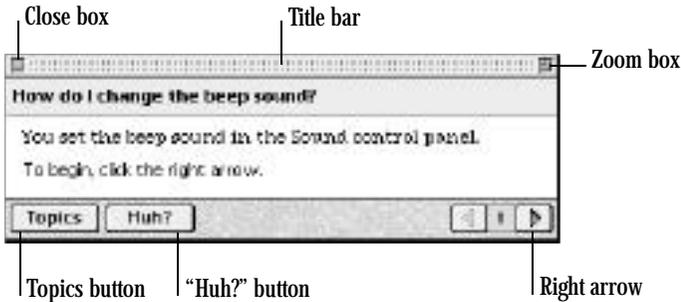
Tips for using Macintosh Guide

Here are a few tips for using Macintosh Guide effectively:

- Macintosh Guide is available only when you are in the Finder—the desktop area where you can see the icons of disks, folders, and files. (Other programs may have their own on-screen “guides” available in the Guide menu, however.) If you don’t see Macintosh Guide in the Guide menu, pull down the Application menu (to the right of the Guide menu) and choose Finder.
- Follow the steps as instructed; don’t skip ahead or read ahead. That way the computer can check to make sure you’ve done each step correctly.
- Unlike most windows, the Macintosh Guide window stays in front of other windows on the screen so that your instructions are never covered. If you need to move the Guide window out of the way, drag it by the title bar at the top of the window.

You can also move the window out of the way by clicking the zoom box. Click the box once to shrink the window; click it a second time to expand the window to its original size.

- If you need more information about an instruction or a term, click the button labeled “Huh?” to get further explanation. (The “Huh?” button is dimmed when no additional information is available.)
- If you want to return to the main Macintosh Guide window, click the Topics button in the lower-left corner of the Guide window.
- When you’re finished using Macintosh Guide, click the close box in the upper-left corner of the window.



Identifying objects on the screen

Sometimes you'll see an unfamiliar item on the screen and ask yourself, "What's that?" You can get an answer by using a Macintosh feature known as Balloon Help.

Balloon Help explains the functions of icons, menus, commands, and other items on the Macintosh screen in balloons like those you see in comic strips.

Follow these steps to use Balloon Help:

1. Pull down the Guide menu (marked with the ? icon) and choose Show Balloons.



2. Point to any object on the screen that you want to identify.

A balloon appears next to the object. In the following illustration, for example, pointing to the Trash displays a balloon that explains how to use the Trash to throw items away.



Although balloons appear next to items when you point to them, the way you work does not change; you can still select icons, choose commands, and so on.

3. When you're finished using Balloon Help, choose Hide Balloons from the Guide menu.

Learning useful shortcuts

You can perform many tasks in the Finder more quickly if you use keyboard or mouse shortcuts. For example, instead of clicking an icon and choosing Open from the File menu, you can simply double-click the icon to open it.

Follow these steps to learn keyboard and mouse shortcuts:

1. Pull down the Guide menu (marked with the ? icon) and choose Shortcuts.

The main Macintosh Shortcuts window appears.



2. Click one of the category buttons.

Another window appears, describing shortcuts for that category.



3. Read about the shortcuts available for the category you selected.

Click the right arrow in the lower-right corner of the window to display the next window (if there is one).

4. When you finish, click the Topics button in the lower-left corner to return to the main Macintosh Shortcuts window.

Or click the close box in the upper-left corner to close the window.

What's New in System 7.5 or 7.5.1

In addition to Macintosh Guide (described in Appendix A), the Macintosh System Software version 7.5 upgrade includes more than fifty new features that enhance productivity and make it easier to work with others. Features include:

- built-in compatibility with MS-DOS and Windows files and disks
- Finder enhancements, such as an improved Find File command, submenus for the Apple menu, date and time display on the menu bar, electronic stick-on notes, and more colorful screen patterns
- the ability to automate tasks
- enhancements that make doing basic tasks easier
- other new features that provide energy savings, audio CD controls, and TCP/IP networking support

The following pages describe the new features.

Note for Performa users

Many of the options previously found in the Performa control panel (such as opening the Launcher at startup, and protecting the System Folder and the Applications folder) are now found in the General Controls panel. See “Simplifying Basic Tasks” in this Chapter.

Compatibility with DOS and Windows files

Your Macintosh can open disks and files that are formatted for IBM-compatible personal computers. You can exchange disks and documents with DOS and Windows computers. Your computer can also initialize disks for either the Macintosh or DOS computers.

Floppy disks formatted for IBM-compatible personal computers have this icon:



You can open the DOS disk just as you would open a Macintosh disk and open files on the disk just as you open Macintosh files. Your computer uses “translators” and your application programs to open documents created in DOS applications.

To assign a Macintosh program to open each type of DOS file, open the Apple (🍏) menu and choose Control Panels. Then open the PC Exchange control panel.



PC Exchange



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and see the items in the “DOS files and disks” topic. For more information on control panel items, choose Show Balloons from the Guide menu.

Improved file opening

With Macintosh Easy Open, you can open most Macintosh, DOS, and Windows files even if you don't have the program that created the document. Your computer uses “translators” and your programs to open documents created with programs you do not have.



Macintosh Easy Open Setup

To set Easy Open options, open the Apple () menu and choose Control Panels. Then open the Macintosh Easy Open Setup control panel.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the “Working with Programs” topic and see “How do I open an unknown item?” For more information on control panel items, choose Show Balloons from the Guide menu.

Macintosh Drag and Drop

You can move text, graphics, sounds, and QuickTime movies without using the Copy and Paste commands. With programs that support Macintosh drag and drop, you can drag an item within a document or between two open documents.

You can also drag an item from a document onto the desktop to create a “clipping.” A clipping is a file that can be dragged into another document later. For example, you may save your business address as a clipping and drop it into letters and other documents.



text clipping



sound clipping



picture clipping

To use the drag-and-drop feature, select the item, then drag it to a new location. You can practice using this feature with the Note Pad, SimpleText, Scrapbook, and Stickies.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the “Files and Disks” topic and see “How do I copy an item between programs?,” “How do I copy an item?,” and “How do I use a clipping file?”

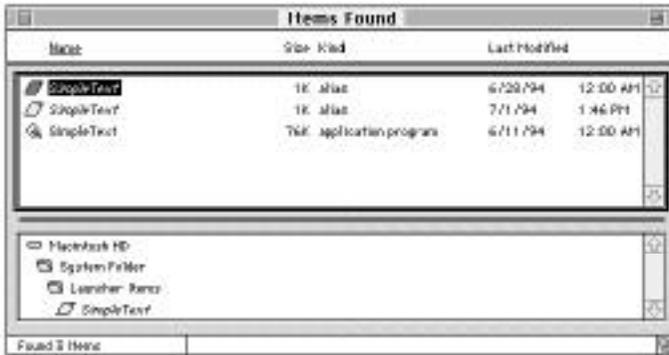
Find File

Find File lets you search for a file based on information such as location, name, size, date created or modified, and version.

To find an item, open the Apple () menu and choose Find File.



The list of matching items appears in the Find File Results window. You can work with items directly in this window. For example, you can move or copy a file, open a folder, or get information about an item.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the “Files and Disks” topic and see “How do I find a file or folder?” For more information on items in the Find File window, choose Show Balloons from the Guide menu.

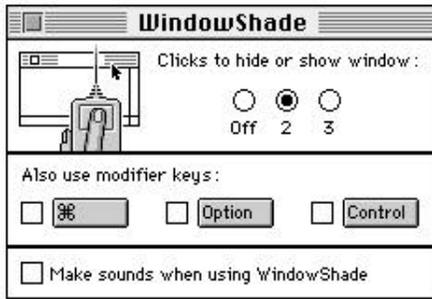
WindowShade

The WindowShade control panel lets you reduce screen clutter by shrinking windows. You can shrink a window by clicking the title bar (you set the number of clicks it takes to roll the window up). To show the full-size window, you click the title bar again.



WindowShade

To turn WindowShade on and set options, open the Apple () menu and choose Control Panels. Then open the WindowShade control panel.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the "Setting Options" topic and see "How do I adjust window shrinking?" For more information on control panel items, choose Show Balloons from the Guide menu.

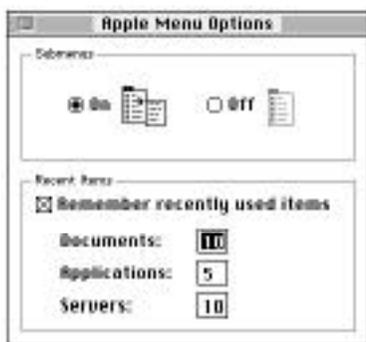
Submenus for the Apple menu

Apple Menu Options lets you quickly access items you use frequently by showing them in submenus in the Apple (🍏) menu. For example, if you put a folder into the Apple menu, items inside the folder appear in a submenu. The Apple menu also shows you the most recently used programs, documents, and shared disks (servers).



Apple Menu Options

To set submenu options, open the Apple (🍏) menu and choose Control Panels. Then open the Apple Menu Options control panel.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the “Setting Options” topic and see “How do I change items in the Apple (🍏) menu?” For more information on control panel items, choose Show Balloons from the Guide menu.

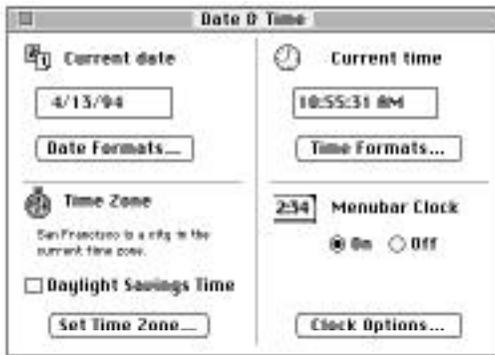
Date and time display

The time and date can be displayed on your menu bar. You use the Date and Time control panel to change the way your clock looks, see the day of the week, and turn on a chime.



Date & Time

To set clock options, open the Apple () menu and choose Control Panels. Then open the Date and Time control panel and click Clock Options.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the "Setting Options" topic and see "How do I change time and date formats?" For more information on control panel items, choose Show Balloons from the Guide menu.

Stickies

You can create notes and “stick” them onto your screen. You can choose colors, fonts, and styles for your notes.

To see your notes or to put a note on the screen, open the Apple () menu and choose Stickies. To create a note, open the File menu and choose New Note. Then type your note or drag in text from a document or clipping.

IMPORTANT Stickies are similar to windows, but they do not have scroll bars. To move through the text, use the arrow keys on the keyboard.



For help

For information on menu items and items in the Stickies window, choose Show Balloons from the Guide menu (marked with the ? icon).

Script Editor and AppleScript

The ability to automate tasks is built into your Macintosh. You can use the Script Editor application program to automate tasks in the Finder and in application programs that support AppleScript.

Using the Script Editor

The Script Editor is a program that lets you write “scripts” (or programs) that automate a series of actions. Using the Script Editor’s “Watch Me” feature, you can create a script by recording actions.



Script Editor

To create your own scripts, use the Script Editor located in the AppleScript folder (inside the Apple Extras folder) on your hard disk. For instructions, see the user’s guide located in the AppleScript folder.

The Scriptable Finder and Automated Tasks

System 7.5 or 7.5.1 includes sample scripts that automate Finder tasks, such as raising and lowering the speaker volume. You can find the sample scripts in the Apple Extras folder on your hard disk.

To try out one of the scripts, open the Apple () menu and choose Automated Tasks.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and see the items in the “Using Scripts for Automation” topic. For more information about items on your screen, choose Show Balloons from the Guide menu.

SimpleText program

SimpleText is a word processor that supports new Macintosh features such as Macintosh drag and drop, fonts, text styling, and QuickDraw GX printing. SimpleText also opens TeachText documents. You can open several SimpleText documents at once. You can also play QuickTime movies.

If your computer supports sound recording, the SimpleText Sound menu lets you record a sound and add it to a document. If PlainTalk is installed on your Macintosh, SimpleText can speak the text you type.



SimpleText



For help

For information about SimpleText menu items, choose Show Balloons from the Guide menu (marked with the ? icon).

Graphing Calculator

Graphing Calculator is an application program that has powerful graphing and problem-solving features. You can find it in the Apple () menu.



For help

While using the Graphing Calculator, choose Graphing Calculator Help from Guide menu (marked with the ? icon). For more information about the items you see on the screen, choose Show Balloons from the Guide menu (marked with the ? icon).

Simplifying basic tasks

You can simplify your Macintosh in the following ways:

- Provide a way to find and open (launch) application programs easily.
- Make it easier to keep track of documents by saving them in a Documents folder on the desktop.
- Hide the desktop (Finder) while you work in an application program.
- Protect programs from being removed or renamed.

One-step program launching

You can use the Launcher to provide easy access to application programs and other items. The Launcher is a special window that contains buttons that open programs with one click.



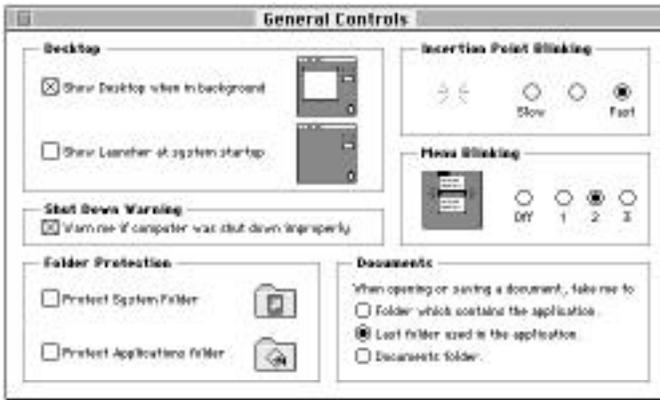
To open the Launcher window, open the Apple (🍏) menu and choose Control Panels. Then choose Launcher.

To automatically open the Launcher when the computer starts up, open the Apple (🍏) menu and choose Control Panels. Then choose General Controls.



General Controls

Opening the Launcher at startup is one of the Desktop options.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Index button. See the items for the index term “Launcher.” For information about items in the control panel, choose Show Balloons from the Guide menu.

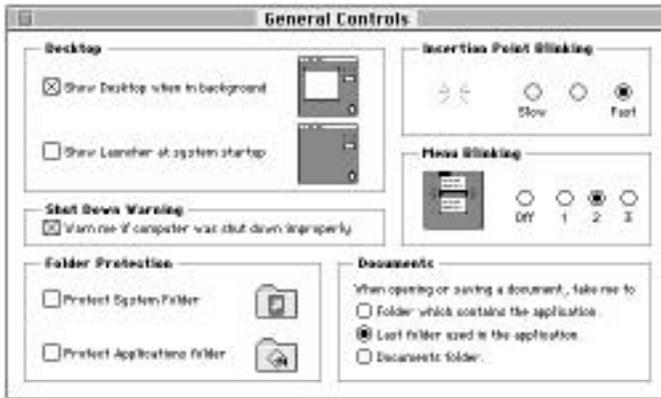
Documents folder

You can make documents easy to find by automatically saving them in a Documents folder on the desktop. When the option is set, the Documents folder is the default location for saving and opening all files, no matter what programs created the files.



Documents

To set up the Documents folder, open the Apple () menu and choose Control Panels. Then choose General Controls.



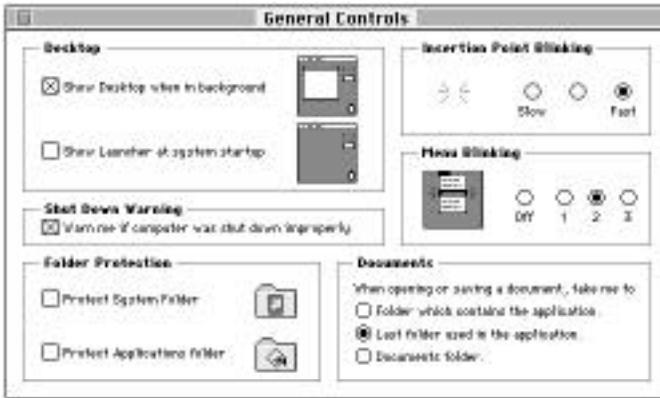
For help

For information about items in the control panel, choose Show Balloons from the Guide menu (marked with the ? icon).

Hiding the Finder

You can hide the Finder whenever a program is open. Hiding the Finder prevents you from leaving a program if you accidentally click the desktop. Finder items on your screen—such as the hard disk, Trash, and folders—are hidden until you close the program or choose Finder from the Application menu.

To set this option, open the Apple () menu and choose Control Panels. Then choose General Controls.



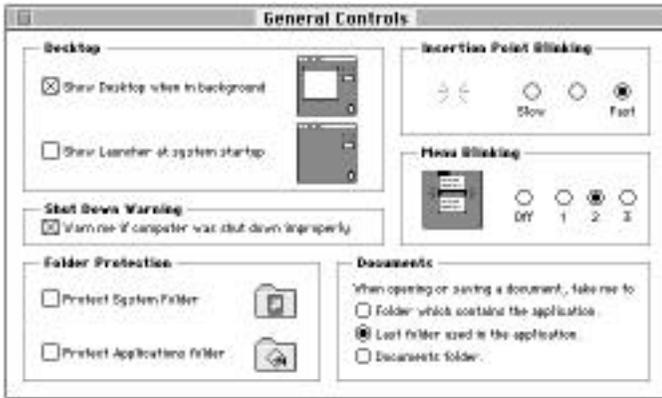
For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Index button. Select the index term “Finder” and see “How do I avoid switching out of a program?” For information about items in the control panel, choose Show Balloons from the Guide menu.

Software protection

You can protect the software that makes your computer operate (the system software) and your application programs by locking the System Folder and Applications folder. When the folders are protected, items inside cannot be removed or renamed. You can still add items to these folders.

To protect the items in your System Folder and Applications folder, open the Apple () menu and choose Control Panels. Then choose General Controls.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Index button. Select the index term “protecting files” and see “How do I protect a file or disk?” For information about items in the control panel, choose Show Balloons from the Guide menu.

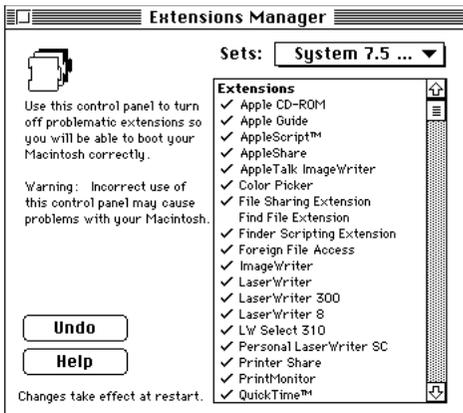
Extensions Manager

The Extensions Manager control panel lets you turn on or off startup programs (also known as system extensions and control panels). You can also use the Extensions Manager to switch between sets of startup programs.



Extensions Manager

To use the Extensions Manager during startup, hold down the space bar as you start up the computer. The control panel opens during startup to allow you to turn extensions on or off. When you close the Extensions Manager, your computer resumes starting up and loads the extensions you selected.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the topic “Setting Options” and see “How do I manage System Folder extensions?” For information about items in the control panel, choose Show Balloons from the Guide menu.

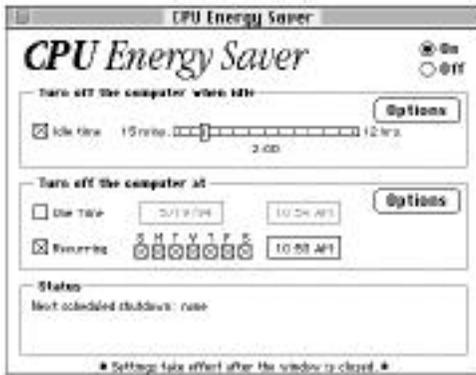
Automatic power off

On some Macintosh computers (including Centris, Quadra, and later models), you can turn the power on and off with the keyboard. If you have this feature, you can use the CPU Energy Saver to shut down the computer automatically. You can set the computer to shut down when it has been idle for a specified amount of time, or at a specific time of day on one or more days of the week.



CPU Energy Saver

To set options, open the Apple () menu and choose Control Panels. Then choose the CPU Energy Saver control panel.



You can also specify conditions that stop the computer from automatically shutting down. The options prevent shutdown if you're connected to a shared disk on the network, if a serial port is being used by a printer or telecommunications program, if a "busy" (watch) pointer is on the screen, or if a sound is playing.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the topic "Setting Options" and see "How do I turn off the computer automatically?" For information about items in the control panel, choose Show Balloons from the Guide menu.

Support for TCP/IP networking

Your Macintosh comes with built-in support for TCP/IP (Transmission Control Protocol/Internet Protocol), an industry-standard communications protocol for UNIX networking. TCP/IP provides the capability to access information on Cray supercomputers, UNIX and Sun workstations, VAX systems, and a variety of other systems.

To use TCP/IP, you need to install a control panel called MacTCP. See Appendix A (“Using the Custom Install Option”) later in this book.



MacTCP



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the topic “Networks and Telecommunications” and see “How do I make a TCP connection?” For information about items in the control panel, choose Show Balloons from the Guide menu.

High-quality audio

The new Sound control panel provides high-quality stereo sound. It allows you to select sound input and output devices and adjust the volume of each device connected to your Macintosh computer.

To set options, open the Apple () menu and choose Control Panels. Then open the Sound control panel.



Sound



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and see items in the “Sound” topic. For information about items in the control panel, choose Show Balloons from the Guide menu.

Audio CD player

Your system software provides built-in support for playing and programming audio compact discs. To use the player, your computer must have a CD-ROM drive attached or installed.

To play an audio compact disc, insert a disc into the CD-ROM drive. Then open the Apple () menu and select AppleCD Audio Player. The player controls appear.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Index button. See items for the index term “CD-ROM.” For information about items in the CD player window, choose Show Balloons from the Guide menu.

More colorful desktop patterns

The Desktop Patterns control panel provides more colorful and texture-rich desktop patterns. You can add your own designs by copying and pasting graphics or photographs (stored as PICT files) into the control panel. Or you can drag and drop a PICT file onto the control panel.

To select or add a pattern, open the Apple () menu and choose Control Panels. Then open the Desktop Patterns control panel.



Desktop Patterns



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Topics button. Select the topic “Setting Options” and see “How do I change the background pattern?” For information about items in the control panel, choose Show Balloons from the Guide menu.

Shut Down command

The Shut Down command is now available in the Apple () menu. You can choose Shut Down from within a program, without returning to the Finder.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) click the Topics button. Select the “Reviewing the Basics” topic and see “How do I turn off the computer?”

QuickTime extension

QuickTime lets your application programs integrate graphics, sound, video, and animation into documents. QuickTime is designed to take advantage of the speed of the PowerPC microprocessor.

The QuickTime extension and the QuickTime PowerPlug extension work as part of your system software, providing new features to your application programs. The specific features of QuickTime that you use and how they are presented depend on the programs you use.



QuickTime™



QuickTime™ PowerPlug



For more information

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and see the index term “QuickTime.”

New Scrapbook

The new Scrapbook supports Macintosh drag and drop. You can drag an item out of the Scrapbook into a document (if the program supports drag and drop), drag it onto the desktop (to create a clipping), or drag it into the Scrapbook.

You can change the size of the Scrapbook by dragging the size box in the lower-left corner of the Scrapbook window.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and see the index term “Scrapbook.” For information about items on the screen, choose Show Balloons from the Guide menu.

New Note Pad

The Note Pad supports Macintosh drag and drop. You can drag an item to a new location on the Note Pad, drag an item onto the Note Pad, drag it from the Note Pad into a document (if the program supports drag and drop), or drag the item onto the desktop (to create a clipping).

You can create larger notes, print Note Pad contents, and search for information by typing a word or phrase.



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and see the index term “Note Pad.” For information about items in the Note Pad window or menus, choose Show Balloons from the Guide menu.

Support for Roman-language keyboards

The Keyboard, Text, and Numbers control panels provide built-in support for languages that use Roman script, such as English, French, and German.

To select language options, open the Apple () menu and choose Control Panels. Then open the Keyboard, Text, or Numbers control panel.



Keyboard



For step-by-step help

Choose Macintosh Guide from the Guide menu (marked with the ? icon) and click the Index button. See items for the index term “keyboard layout.” For information about items in the control panel, choose Show Balloons from the Guide menu.

Button Disabler for sound and contrast

If your computer has sound and screen contrast buttons, you can lock the sound and contrast settings by using the Button Disabler control panel.

To turn off the buttons, open the Apple () menu and choose Control Panels. Then open the Button Disabler control panel.



Button Disabler

Click the Disable Buttons box to put an X in it. The buttons remain off until you turn them on again by clicking the box to remove the X.



For help

For information about items in the control panel, choose Show Balloons from the Guide menu (marked with the ? icon).

Telephone Manager

Your Macintosh has built-in capabilities that let you take advantage of computer-telephone integration. Programs that support the Telephone Manager can link software to telephone functions.

Multitasking support

The Thread Manager allows programs to integrate preemptive and cooperative multitasking.

Support for large storage devices

Your Macintosh can now access hard disks and other mass storage devices up to 4 gigabytes (GB).

PowerTalk and QuickDraw GX

PowerTalk and QuickDraw GX are optional application programs from Apple that work with System 7.5. PowerTalk provides an open collaboration environment with a universal mailbox and other electronic mail services. QuickDraw GX gives your computer more powerful printing and font capabilities.

You'll need to purchase and install these programs if you purchased another program that requires them, or if you want the improved electronic mail and display capabilities. You need at least 8 megabytes of random-access memory (RAM) to use these programs. To purchase the programs, contact Apple (see the service and support information that came with your computer).

Product Support

Product specifications

Product warranty

How to return your board for service

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Product specifications

System Requirements

- Apple® Macintosh Quadra 605 and 630 series, LC 470, 570, 580 and 630 series, Performa 470, 570, 580 and 630 series
- Minimum of 8 MB of random-access memory (RAM)

Processor

- PowerPC™ 601
- 50 MHz, 66 MHz or 100 MHz clock speed

Processor Cache

- Built-in 32KB unified instruction and data cache
- 256K secondary, Level 2 cache

ROMs

- Apple® licensed PowerPC™ ROMs

Memory

- Uses existing motherboard memory

Software (included)

- Apple® System 7.5 or 7.5.1

Three Year Limited Warranty

Product warranty

The software provided with your DayStar PowerCard 601 contains System 7.5. It should be used to upgrade your current version of Macintosh system software to take advantage of PowerPC™ capabilities. It is the same system software provided by Apple Computer with their Power Macintosh Computers and is distributed by DayStar for use with the PowerCard 601 card under license from Apple Computer. Copyright © 1983-1994 DayStar and its Licensors. All rights reserved.

DayStar Digital, Inc. warrants that for no additional charge it will repair or replace, at its option, any defective products properly returned to our factory for a period of THREE (3) FULL YEARS from the date the product is purchased by the original enduser.

This warranty does not apply if the hardware product has been damaged by accident, misuse, abuse, installed with non-compatible products, modified in any way or if the serial number has been removed or defaced. This warranty does not apply to damage or failure of the host computer power supply, analog and/or CPU logic board or any other add-in boards. This warranty is extended only to original endusers.

THE GUARANTEE, WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. DAYSTAR IS NOT RESPONSIBLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR UNDER ANY LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DOWNTIME, GOODWILL, DAMAGE TO OR REPLACEMENT OF EQUIPMENT AND PROPERTY AND ANY COSTS OF RECOVERING, PROGRAMMING OR REPRODUCING ANY PROGRAM OR DATA STORED OR USED WITH DAYSTAR PRODUCTS.

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Communications regulation information

FCC statement

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

Radio and television interference

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

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

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

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

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

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

電気技術標準等委員会規格について

この装置は、第1種電気機器の電界放射は、その規格に適合した製品において認められるべき性能範囲（電界電圧）で指定地域での電界電圧測定を目的とした試験室試験結果を基礎とした電気技術標準等委員会（VCCI）基準に適合しております。

しかし、本装置をラジオ、テレビジョンの受信機に近接してご使用になると、受信感度の低下を招くことがあります。

取扱説明書に従って正しい取り扱いをしてください。

How to return your board for service

If you believe service is needed, please contact DayStar Technical Support via <http://daystar.com> before you return the product. Many times we can solve problems without asking you to send the board in for service. If the board does require service within the first 30 days of purchase, please contact your dealer first.

Items returned for service must have an RA (Return Authorization) number, which will be issued to you or your dealer when you call DayStar's Technical Support Department. Returned items must be sent back in good condition, unmodified and undamaged, with the board packaged in the provided anti-static bag and with shipping charges prepaid. DayStar will repair or replace the board and ship it back to you or your dealer. For each item you return, you must enclose your name, address, telephone number, RA number, a description of the problem and a copy of the bill of sale bearing the appropriate DayStar serial numbers as proof of the original date of purchase.

Please direct all correspondence and technical questions to:

DayStar Digital, Inc.
Technical Support Department
5556 Atlanta Highway
Flowery Branch, GA 30542
Internet (support@daystar.com)
<http://daystar.com>

Contacting DayStar online

Internet:

Our web page is located at <http://www.daystar.com>. Our address is support@daystar.com

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We appreciate comments you may have on this manual. This manual was designed and produced on a Macintosh with DayStar upgrades installed.

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