



Developer Note

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# Improved Power Macintosh Computers

Power Macintosh 7200/100 Computer  
Power Macintosh 7200/120 Computer  
Power Macintosh 7600/120 Computer  
Power Macintosh 8500/132 Computer  
Power Macintosh 8500/150 Computer  
Power Macintosh 9500/150 Computer



**Developer Note**

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# About This Developer Note

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This developer note describes the improved models of the Power Macintosh 7200, 7600, 8500, and 9500 computers. This developer note describes only the changes that make the new models different from their earlier counterparts. For information about the original Power Macintosh 7200, 7500, 8500, and 9500 computers, see *Macintosh Developer Note Number 12* and *Macintosh Developer Note Number 13*, described in “Supplemental Reference Documents,” later in this preface.

**Note**

The Power Macintosh 7600 computer is the improved version of the Power Macintosh 7500. See Chapter 1, “Delta Guide” for details. ♦

This developer note is intended to help hardware and software developers design products that are compatible with the Macintosh products described here. If you are not already familiar with Macintosh computers or if you would simply like more technical information, you may wish to read the supplementary reference documents described in this preface.

This note is published in two forms: an online version included with the reference library editions of the Apple Developer CD, and a paper version available from the *Apple Developer Catalog*. For information about the *Apple Developer Catalog*, see “Supplemental Reference Documents”.

## Contents of This Note

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This note has only one chapter: a delta guide describing the differences between the improved models and the original Power Macintosh 7200, 7500, 8500, and 9500 computers.

## Supplemental Reference Documents

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For information about the original Power Macintosh 9500 computer, developers should have copies of *Macintosh Developer Note Number 12*, ADC part number R0651LL/A. Information about the original Power Macintosh 7200, 7500, and 8500 computers is provided in *Macintosh Developer Note Number 13*, ADC part number R0677LL/A.

Adobe Acrobat PDF (portable document file) versions of developer notes are available on the developer CD distributed as part of the monthly mailing to registered developers. The developer notes for the original Power Macintosh

7200, 7500, 8500, and 9500 computers are on the December 1995 issue and subsequent reference library issues of the developer CD.

For a description of the version of Mac OS that comes with the new models, developers should refer to Technote 1017, "System 7.5 Update 2.0 Macintosh System 7.5.3." The technote is available on the Technote Web site at <<http://dev.info.apple.com/technotes/Main.html>>. Printed copies of the technote are available from Field Copy and Printing, AppleLink FIELDCOPY or telephone 415-323-3155. The technotes are also available on the reference library issues of the developer CD.

Developers should also have copies of the relevant books of the *Inside Macintosh* series, available in technical bookstores and through ADC.

The *Apple Developer Catalog* (ADC) is Apple Computer's worldwide source for hundreds of development tools, technical resources, training products, and information for anyone interested in developing applications on Apple computer platforms. Customers receive the *Apple Developer Catalog* featuring all current versions of Apple development tools and the most popular third-party development tools. ADC offers convenient payment and shipping options, including site licensing.

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## Conventions and Abbreviations

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This developer note uses the following typographical conventions and abbreviations.

## Typographical Conventions

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### **Note**

A note like this contains information that is of interest but is not essential for an understanding of the text. ◆

### **IMPORTANT**

A note like this contains important information that you should read before proceeding. ▲

## Abbreviations

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When unusual abbreviations appear in this book, the corresponding terms are also spelled out. Standard units of measure and other widely used abbreviations are not spelled out.

Here are the standard units of measure used in this developer note:

|     |           |
|-----|-----------|
| GB  | gigabytes |
| MB  | megabytes |
| MHz | megahertz |

Other abbreviations used in this note include:

|        |   |
|--------|---|
| CD-ROM | compact-disc read-only memory             |
| DIMM   | Dual Inline Memory Module                 |
| DRAM   | dynamic RAM                               |
| JEDEC  | Joint Electron Device Engineering Council |
| PDF    | portable document file                    |
| RAM    | random-access memory                      |
| ROM    | read-only memory                          |
| SCSI   | Small Computer System Interface           |



# Delta Guide

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## Delta Guide

Apple Computer has introduced new models of the Power Macintosh 7200, 7500, 8500, and 9500 computers. The new models have higher processor clock speeds and other improvements. This chapter is a delta guide—it describes only the changed or new features.

For complete descriptions of the original Power Macintosh 7200, 7500, 8500, and 9500 computers, see *Macintosh Developer Note Number 12* and *Macintosh Developer Note Number 13*. Electronic versions of those developer notes are also on the December 1995 edition and subsequent reference library editions of the developer CD.

**Note**

Because the microprocessor type has been changed, the improved version of the Power Macintosh 7500 computer is called the Power Macintosh 7600. ♦

## Summary of New Features

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The changes in the improved Power Macintosh 7200, 7600, 8500, and 9500 computers include:

- faster processor speeds: up to 150 MHz
- a second-level (L2) cache for higher performance in most models
- larger sizes of internal hard disks: up to 2 GB
- the latest release of the Mac OS: System 7.5.3

The microprocessor in the Power Macintosh 7600/100 is a PowerPC™ 601. All the other models use a PowerPC 604.

All the improved models of the Power Macintosh 7200, 7600, 8500, and 9500 computers come with a built-in CD-ROM drive.

## Processor Types and Speeds

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The clock speeds for the microprocessors in the improved models of the Power Macintosh 7200, 7600, 8500, and 9500 computers are increased over their earlier counterparts. In addition, the microprocessor in the Power Macintosh 7600 is a PowerPC 604 instead of the PowerPC 601 used in the original Power Macintosh 7500. Table 1-1

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shows the microprocessor types and clock speeds along with the corresponding processor bus speeds.

**Table 1-1** Comparison of processor types and speeds

| <b>Model</b>             | <b>Processor type</b> | <b>Processor clock speed</b> | <b>Processor bus speed</b> |
|--------------------------|-----------------------|------------------------------|----------------------------|
| Power Macintosh 7200/100 | PowerPC 601           | 100 MHz                      | 50.0 MHz                   |
| Power Macintosh 7200/120 | PowerPC 601           | 120 MHz                      | 40.0 MHz                   |
| Power Macintosh 7600/120 | PowerPC 604           | 120 MHz                      | 40.0 MHz                   |
| Power Macintosh 8500/132 | PowerPC 604           | 132 MHz                      | 44.0 MHz                   |
| Power Macintosh 8500/150 | PowerPC 604           | 150 MHz                      | 50.0 MHz                   |
| Power Macintosh 9500/150 | PowerPC 604           | 150 MHz                      | 50.0 MHz                   |

## Second-Level Cache

All the new models except the lowest-priced Power Macintosh 7200 models include a second-level (L2) cache. The L2 cache provides up to 40% better performance.

The L2 cache in the Power Macintosh 9500/150 consists of 512 KB of fast static RAM. The size of the cache in the other models is 256 KB. Table 1-2 on page 4 shows the cache size for each model.

## Hard Disk Sizes

The built-in hard disks in the improved models of the Power Macintosh 7200, 7600, 8500, and 9500 computers are either 800 MB, 1.2 GB, or 2 GB. Table 1-2 shows the sizes of the hard disks in the different models.

## Macintosh System 7.5.3

All the new Power Macintosh models include the latest version of the Mac OS, System 7.5.3. For a description of the new features of System 7.5.3, see Technote 1017, "System 7.5 Update 2.0 Macintosh System 7.5.3."

# Configurations

The new models of the Power Macintosh 7200, 7600, 8500, and 9500 computers come with 8 or 16 MB of main RAM installed in RAM DIMM slots. Most models have a

## Delta Guide

built-in second-level (L2) cache. The size of the internal hard disk is either 800 MB, 1.2 GB, or 2 GB. Table 1-2 shows the configurations of all the new models.

**Table 1-2** Configurations

| <b>Model</b>             | <b>Processor clock speed</b> | <b>Amount of DRAM</b> | <b>Size of hard disk</b> | <b>Size of L2 cache</b> |
|--------------------------|------------------------------|-----------------------|--------------------------|-------------------------|
| Power Macintosh 7200/100 | 100 MHz                      | 8 MB                  | 800 MB                   | —                       |
| Power Macintosh 7200/120 | 120 MHz                      | 8 MB                  | 1.2 GB                   | —                       |
| Power Macintosh 7200/120 | 120 MHz                      | 8 or 16 MB            | 1.2 GB                   | 256 KB                  |
| Power Macintosh 7600/120 | 120 MHz                      | 16 MB                 | 1.2 GB                   | 256 KB                  |
| Power Macintosh 8500/132 | 132 MHz                      | 16 MB                 | 1.2 GB                   | 256 KB                  |
| Power Macintosh 8500/150 | 150 MHz                      | 16 MB                 | 2 GB                     | 256 KB                  |
| Power Macintosh 9500/150 | 150 MHz                      | 16 MB                 | 2 GB                     | 512 KB                  |

**Note**

All the new models of the Power Macintosh 7200, 7600, 8500, and 9500 computers include a built-in CD-ROM drive. ♦

**Note**

Unlike its earlier counterpart, the Power Macintosh 9500/150 includes an accelerated graphics display card, the ATI mach64 card. ♦

## Compatibility

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Except for the changes described in this developer note, the features of the improved Power Macintosh 7200, 7600, 8500, and 9500 computers are the same as those of their earlier counterparts. There should be no compatibility problems with applications and peripherals that operate correctly with the earlier models.

### Machine Identification

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The improved Power Macintosh 7200, 7600, 8500, and 9500 computers have the same machine ID values in their ROMs as their earlier counterparts had. Applications can find out which computer they are running on by using the Gestalt Manager routines. *Inside Macintosh: Overview* describes the Gestalt Manager and tells how to use the `gestaltMachineType` value to obtain the machine name string.

## RAM DIMM Dimensions

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RAM expansion in the new models is the same as in their earlier counterparts. However, Apple Computer has made the following change to the mechanical specification for the RAM DIMM.

**IMPORTANT**

The JEDEC MO-161 specification shows three possible heights for the 8-byte DIMM. For Power Macintosh computers, developers should use only the shortest of the three: 1.100 inches. Taller DIMMs put excessive pressure on the DIMM sockets due to mechanical interference inside the case. ▲

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